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May 22, 2018

Washington State Department of Ecology
Toxics Cleanup Program – Eastern Region Office
4601 North Monroe Street
Spokane, Washington 99205

Attention: Huckleberry Palmer

Subject: Cover Letter
Remedial Investigation
Marshall Landfill
Marshall, Washington
File No. 0504-104-00

GeoEngineers, Inc. (GeoEngineers) is pleased to submit one copy of the report, "Remedial Investigation, Marshall Landfill Site, Spokane County, Washington."

We appreciate the opportunity to be of service to the Washington State Department of Ecology. Please contact us if you have questions regarding this report or other aspects of the project.

Sincerely,
GeoEngineers, Inc.

Bruce D. Williams
Principal

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One electronic copy submitted

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Remedial Investigation Report

Marshall Landfill
Spokane County, Washington

for
Washington State Department of Ecology

May 22, 2018

GeoEngineers
Earth Science + Technology

Remedial Investigation Report

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Spokane County, Washington

for
The Washington State Department of Ecology

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Spokane County, Washington

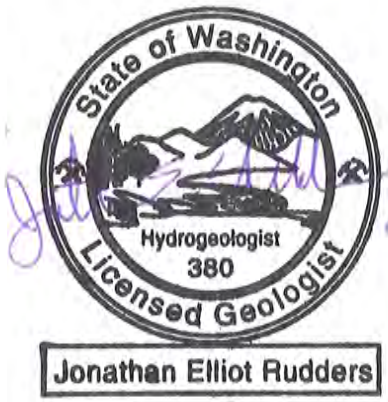
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May 22, 2018

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ABBREVIATIONS AND ACRONYMS

bgs – below ground surface

COC – contaminants of concern

COD – Chemical Oxygen Demand

COPEC – contaminants of potential environmental concern

CRBG – Columbia River Basalt Group

CSM – Conceptual Site Model

CUL – cleanup level

DNR – Department of Natural Resources

DOT – Department of Transportation

Ecology –Washington State Department of Ecology

EPA – Environmental Protection Agency

Fetrow – Fetrow Engineering, Inc.

FS – Feasibility Study

ft/d – feet per day

GeoEngineers – GeoEngineers, Inc.

gpm – gallons per minute

HQ – hazard quotient

IDW – investigation-derived waste

LEL – Lower Explosive Limit

MA – million years ago

µg/kg – micrograms per kilogram

µg/L – micrograms per liter

mg/L – milligrams per liter

MS – mass spectrometer

MSW – municipal solid waste

MTCA – Model Toxics Control Act

NAVD 88 – North American Vertical Datum of 1988

NTU – nephelometric turbidity units

PCBs – Polychlorinated biphenyls

PGG – Pacific Groundwater Group

PID – photoionization detector

PLP – potentially liable person

ABBREVIATIONS AND ACRONYMS (CONTINUED)

ppm – parts per million

PVC – polyvinyl chloride

QAPP – Quality Assurance Project Plan

SL – screening level

TEE – Terrestrial Ecological Evaluation

TOC – total organic carbon

TPH – Total petroleum hydrocarbons

RI – Remedial Investigation

SAP – Sampling and Analysis Plan

SCHD – Spokane County Health District

SVOCs – semi-volatile organic compounds

VOCs – volatile organic compounds

WAC – Washington Administrative Code

WWR – Water Well Reports

EXECUTIVE SUMMARY

GeoEngineers, Inc. conducted a Remedial Investigation (RI) at the Marshall Landfill site (Site) in Spokane County, Washington for the Washington State Department of Ecology (Ecology). The Site is situated northwest of Cheney-Spokane Road about 1 mile southwest of the town of Marshall, Washington and 7 miles southwest of the city of Spokane, Washington. This RI summarizes Site characterization activities as a basis for assessing geologic/hydrogeologic conditions and the extent of subsurface contamination beneath the Site. This RI also includes a Conceptual Site Model (CSM) and provides proposed cleanup standards protective of human health and the environment. A Feasibility Study (FS) currently is being prepared for the Site, and the draft FS has been submitted to Ecology under separate cover.

The Site consists of four primary historic land use areas, including the approximate 25-acre Main Landfill, the Five-Acre Landfill, a gravel pit and the Former Spokane County Landfill. The Former Spokane County Landfill is located adjacent to the southern boundary of the Main Landfill and was operated by Spokane County as a daily-burn landfill from the 1950s until 1970. The Former Spokane County Landfill is considered part of the Site but is not addressed in this document because RI exploration was not possible within the property.

The Main and Five-Acre Landfills received waste during portions of the period from 1970 through 1990. Neither the Main Landfill nor the Five-Acre Landfill is equipped with a bottom liner. In 1990, the Main Landfill and Five-Acre Landfill were planned for closure under Permit No. SCHD SW-MARSH-001. A passive landfill gas venting system and a compacted cap composed of relatively low permeability soil was installed in 1990 at the Five-Acre Landfill; however, the as-built condition of the low permeability cap is not well documented. The Main Landfill was apparently covered with a layer of fine to medium sand; however, we have not encountered associated documentation.

Geologic units underlying the Site include metamorphic and plutonic rocks (basement rocks), the Columbia River Basalt Group (CRBG) and associated sediments, and glaciofluvial/alluvial sediments. An ancestral drainage that fully truncates the CRBG and has been filled with glaciofluvial sediment underlies the southern portion of the Site.

The Site's position near the confluence of the Minnie Creek and Marshall Creek drainages, with upland areas situated to the north, west and south of the Site, suggests the presence of converging groundwater flow conditions within shallow aquifer systems near the Site. Shallow groundwater flow generally mimics topographic conditions and is directed from the area surrounding the Site towards discharge areas situated to the northeast. The Site generally is underlain by a minimum of three hydrostratigraphic units. These units occur within: (1) basement rocks; (2) the CRBG; and (3) glaciofluvial sediments.

Site contamination greater than likely cleanup levels (CULs) is limited to groundwater and landfill gases (volatile organic compounds [VOCs] and methane). RI soil results and the Terrestrial Ecological Evaluation (TEE) indicate that soil at the landfills does not pose a significant risk to human health or the environment. However, observations of the low permeability cap over the Five-Acre Landfill indicated that the cap is not intact over the entire area of the landfill and some waste was exposed. The FS addresses the caps at both landfills and provides remedial alternatives that will meet current regulatory standards.

The results of RI groundwater monitoring (conducted during 2016 and 2017) indicate that the extent of groundwater with analyte concentrations greater than likely CULs beneath the Site is limited, discontinuous and variable between monitoring events. Given the limited and sporadic nature of groundwater with analyte concentrations greater than likely CULs observed within the Site groundwater monitoring wells during the RI investigation, it is logical to conclude that off-site groundwater supply wells are unlikely to be affected by Site-related groundwater contamination. However, a detailed evaluation of this pathway, including sampling of nearby groundwater supply wells, was not within the scope of this RI.

RI results indicate that the boundaries and extent of landfill gas contamination (VOCs and methane) have not been fully delineated for both the Main and Five-Acre Landfills. The primarily concern associated with VOC and methane landfill gas concentrations is the potential for vapor intrusion into overlying or nearby buildings. Vapor intrusion could potentially be a concern for structures built in proximity to the Main and Five-Acre Landfills in the future. Currently, buildings are not present on either landfill. The only existing buildings near either landfill that may be subject to vapor intrusion are the buildings situated between the gravel pit and the Main Landfill. The FS considers the potential for off-site migration of landfill gases (VOCs and methane).

During RI analysis and evaluation, several data gaps related to the nature and extent of subsurface contamination beneath the Site were identified. These are related to the extent of elevated landfill gas concentrations, the extent of damage to existing landfill covers, potential seasonal or other variation in soil gas pressure within landfill waste areas, and soil movement within sloped portions of the landfills.

The summary is provided for general informational purposes and should not be solely relied upon. Please refer to the entire report to obtain a more comprehensive understanding of the RI activities.

1.0 INTRODUCTION

1.1. General Site Information

1.1.1. Introduction

This document presents results of the Remedial Investigation (RI) conducted at the Marshall Landfill site in Spokane County, Washington (herein referred to as "Site"). A Feasibility Study (FS) currently is being prepared for the Site and the draft FS has been submitted to Ecology under separate cover. The RI described herein has been prepared in general accordance with the following documents:

- Washington State Department of Ecology (Ecology) Work Assignment No. C11145YY (dated June 6, 2014) and associated Amendment No. 1 through Amendment No. 6.
- Remedial Investigation/Feasibility Work Plan, Marshall Landfill Site, Spokane County Washington (GeoEngineers 2015). The project Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) form Appendices A and B, respectively, of the Work Plan.
- Ecology Publication No. 16-09-006, Remedial Investigation Checklist (dated May 2016).
- Chapter 173-340-350 of the Washington Administrative Code (WAC).

1.1.2. Location and Topography

The Site is situated northwest of Cheney-Spokane Road about 1 mile southwest of the town of Marshall, Washington and 7 miles southwest of the city of Spokane, Washington. The Site is located within portions of Section 21 and 28 of Township 24 North, Range 42 East, approximately shown in the Vicinity Map, Figure 1. The Site is bounded on the east by South Cheney-Spokane Road, on the south by a former landfill property owned by Spokane County, and on the west and north by privately-owned vacant land. The general Site layout and the locations of groundwater monitoring wells described in this report, are presented in the Site Plan and Groundwater Monitoring Well Location Map, Figure 2.

The Site is located on a terrace elevated above Minnie Creek, an intermittent portion of which is located less than 500 feet from the east Site boundary. Surface water within Minnie Creek adjacent to the Site is controlled by the stage of Queen Lucas Lake, which is located within the Minnie Creek drainage about ½ mile south (upstream) of the Site. When lake elevation exceeds approximately 2,130 feet (Pacific Groundwater Group [PGG] 2005), water overtops the Queen Lucas Lake outlet and flows within Minnie Creek adjacent to the Site. Elevations in this report are provided relative to the North American Vertical Datum of 1988 (NAVD 88) unless otherwise specified. Minnie Creek's confluence with Marshall Creek is located about ½ mile northeast (downstream) of the Site. Both Minnie Creek and Marshall Creek are losing streams (discharge to groundwater) near the Site (PGG 2005).

Topography generally slopes downward to the southeast across the Site, decreasing from an elevation of approximately 2,350 feet in the northwest portion of the Site to 2,200 feet in the southeast portion of the Site. The stage elevation of Minnie Creek, when it contains surface water, is approximately 2,130 to feet, or about 70 to 220 feet lower than ground surface across the Site.

Land use within the Site is zoned for rural conservation use and mineral lands. Surrounding the Site, most land is zoned for rural conservation and rural traditional land use, with mineral land zoning associated with gravel pits situated north of the town of Marshall.

1.2. Site History

1.2.1. General Site Layout and Site History

Four primary historic land use areas within the Site and surrounding area are delineated in Figure 2; these consist of the following:

- The Main Landfill: This approximate 25-acre waste disposal area is located within the south-central portion of the Site. Sand and gravel removed from the Main Landfill were replaced with waste during the period from 1970 through 1990. Thickness of landfilled waste was estimated at 100 feet in the Main Landfill (Fetrow Engineering, Inc. [Fetrow] 1991).
- The Five-Acre Landfill: This approximate 5-acre waste disposal area is located within the northwest portion of the Site. Waste was disposed within the Five-Acre Landfill during the period from 1980 through 1984. Thickness of landfilled waste was estimated at 45 feet in the Five-Acre Landfill (Fetrow 1991).
- The gravel pit: This area is located north of the Main Landfill and east of the Five-Acre Landfill. It currently is operated as a gravel pit by Action Materials, Inc.
- The Former Spokane County Landfill: This property is located adjacent to the southern boundary of the Main Landfill. The property owner is identified by Spokane County's Tax Parcel System (Parcel No. 24282,9002) as Spokane County Engineers. The Former Spokane County Landfill was operated by Spokane County as a daily-burn landfill from the 1950s until 1970. This landfill has no bottom liner (Fetrow 1991).

  The Former Spokane County Landfill technically is part of the Site, as interpreted through practice in the Model Toxics Control Act (MTCA). Although the Former Spokane County Landfill is considered part of the Site, is not addressed in this document because RI exploration was not possible.

Marshall Landfill, Inc. is identified as the property owner for the Marshall Landfill Site by Ecology (2015A). Ecology (2015A) identifies Marshall Landfill Inc, as a potentially liable person (PLP) that is not financially able to contribute toward cleanup costs.

Neither the Main Landfill nor the Five-Acre Landfill is equipped with a bottom liner. As the Main Landfill and Five-Acre Landfills were filled, daily cover material consisting of 6 to 12 inches of sand was placed on the solid waste (Fetrow 1991). As a result, both Site landfills consist of alternating layers of waste material and sand of variable thickness.

Disposal operations ceased on-Site in 1990. At that time, the Main Landfill and Five-Acre Landfill were planned for closure under Permit No. SCHD SW-MARSH-001 (Fetrow 1991). A passive landfill gas venting system and a compacted cap composed of relatively low permeability soil was installed in 1990 at the Five-Acre Landfill; however, the as-built condition of the low permeability cap is not well documented. Observations of the low permeability cap over the Five-Acre Landfill prior to the RI indicated that the cap was not intact over the entire area of the landfill and some waste was exposed. The Main Landfill was

apparently covered with a layer of fine to medium sand; however, we have not encountered associated documentation.

The southern and southeastern boundaries of the Main Landfill were buttressed with what appears to be a berm constructed of sandy materials from the adjacent gravel pit. The buttress berm reportedly was constructed to add additional capacity to the Main Landfill. The design parameters and as-built constructed condition of the buttress berm are not well documented.

1.3. Site Use

1.3.1. Disturbed Land

GeoEngineers performed a review of Washington State Department of Natural Resources (DNR) aerial photographs for the period from 1968 through 2011 as a basis for identifying the growth of disturbed land within the Site (that could be indicative of waste disposal and/or gravel mining) over time. Our observations are summarized in Historic Limits of Disturbed Land Use, Figure 3, and summarized below:

- In 1968, disturbed land was limited to an area within and immediately north of the Former Spokane County Landfill.
- By 1974, the disturbed area associated with the Former Spokane County Landfill had expanded to the east to South Cheney Spokane Road. Most of the Main Landfill, except the northeast corner, had been disturbed by this time.
- By 1979, disturbed areas had extended through most of the northeast portion of the Main Landfill, roughly the southern half of the Five-Acre Landfill, and three relatively small areas within the gravel pit.
- By 1986, disturbed areas had expanded throughout the Five-Acre Landfill and the southwest portion of the gravel pit.
- By 1992, the entire Main Landfill was disturbed, and the disturbed portion of the gravel pit had expanded to the north and east.
- Disturbed areas were relatively static during the period from 1992 to 1994.
- The gravel pit expanded to the north and northeast between 1994 and 2011.

1.3.2. Disposal of Hazardous Materials

Prior to closure, Marshall Landfill received solid waste and demolition debris from southwest Spokane County, including the communities of Cheney, Spangle, Airway Heights, Medical Lake and Colfax, at a rate that exceeded 20,000 cubic yards per month (Fetrow 1991). Between 1975 and 1983, Fetrow (1991) reports that Spokane County Health District (SCHD) files also report the disposal of potentially hazardous liquid waste at the Site. The composition and volume of this disposed liquid waste (and/or soil impacted by liquid waste) has been enumerated by both Fetrow (1991) and PGG (2005) and include:

- 38,000 gallons of oily waste water in 1978.
- 1,000 gallons of containerized latex paint in 1978.
- 22,000 cubic yards of pentachlorophenol-contaminated soil in 1981.
- 2,500 gallons of caustic soda solution in 1981.

- More than 100 gallons of used oil and transformer oil in 1982.
- More than 3,000 gallons of waste liquid used to clean electric motor parts in 1982.
- 15,000 gallons of water and lignin sulfonate in 1983.
- 270 cubic yards of tetrachloroethene-contaminated soil in 1975.
- 100,000 gallons of oil and sludge in 1975.
- 40,000 gallons of jet fuel during the 1970's.
- Potentially 18,000 gallons of waste water used for cleaning boilers in 1991.

Corkill (1993) provides additional detail on disposed waste, though some of the description is similar is nature and volume to the above and it is unclear whether Corkill's information is duplicative.

Fetrow (1991) indicates that the precise locations of liquid waste disposal are unknown, but landfill personnel indicated that liquids were disposed of "at the southern end of the five-acre cell and also in the main cell." The latex paint was described as containerized. However, it is unknown if any of the other disposed liquid waste was containerized. PGG (2005) reports that open, unlined pits were used to store oil and sludge during approximately 1975.

2.0 FIELD INVESTIGATIONS

2.1. Previous Environmental Investigations

2.1.1. Previous Investigations and Documents

Environmental and/or hydrogeologic conditions at the Site have been investigated sporadically from 1982 to present. The components of the previous investigations are briefly summarized below.

Phase I and II Investigations, Shannon and Wilson: In 1982 and 1983, Shannon & Wilson, Inc. conducted a hydrogeologic evaluation of the Marshall Landfill, the results of which were presented in two reports (Shannon & Wilson, Inc. 1983; Shannon & Wilson, Inc. 1984). The Phase I evaluation included a summary of the potential for leachate generation and migration. The Phase II evaluation provided results of groundwater monitoring activities in six existing wells near the Site. Groundwater monitoring results identified elevated concentrations of 1,1,1-trichloroethane in a down-gradient well.

Phase I and II Site Investigations, Ecology: In 1987, Ecology conducted a site investigation of the Marshall Landfill, the results of which were presented by Ecology (1987). Ecology collected groundwater samples from four existing wells near the Site. No contaminants were detected.

Environmental Impact Analysis, Golder Associates, Inc, (Golder) and Century West Engineering Corporation (Century West): In 1989, Golder and Century West drilled, constructed and sampled five groundwater monitoring wells at the Site, the results of which were presented by Golder and Century West (1989). Analytical results identified elevated volatile organic compound (VOC) concentrations in two wells.

Prior to GeoEngineers' RI, three primary investigations have been conducted at the Site since 1991, which are summarized in the following documents:

Marshall Landfill Site Characterization Study Final Report, prepared by Fetrow in 1991 (Fetrow 1991).

Marshall Landfill 2005 Hydrogeologic Summary, prepared by PGG in 2005 (PGG 2005).

Quarterly Groundwater Monitoring Reports prepared by Land and Water Environmental Services, Inc. (Land and Water) for the period from 2005 to 2010.

Collectively, these three documents provide the following information about the Site:

- Estimates of the types and quantities of solid and hazardous wastes disposed;
- Findings associated with the installation and monitoring of 17 on-site groundwater monitoring wells between 1989 and 1991 (well depths ranging from between 50 and 393 feet below ground surface [bgs] and one exploratory boring [CH-1] was advanced about 335 feet bgs).
- Identification of primary water-bearing units underlying the Site.
- Landfill gas data collected in 1990 at locations within the Five-Acre Landfill, Main Landfill and Spokane County Landfill, which indicated the presence of VOCs likely associated with hazardous waste disposal.
- Groundwater quality data collected between 1989 and 2011 (22 years), including data from samples collected from select on-Site groundwater monitoring wells and local water supply wells (Fetrow 1991; LAWS 2010). (Note: groundwater data was not available from the Spokane County Landfill).
- Documentation of contaminant migration (VOCs) in groundwater, with generally decreasing concentrations since 2005.

2.1.2. Existing Groundwater Monitoring Wells

Prior to GeoEngineers' RI, 17 groundwater monitoring wells were installed at the Site as components of previous investigations. These groundwater monitoring wells included MW-1A, MW-2, MW-2A, MW-3, MW-4, MW-4A, MW-5, MW-5A, MW-6, MW-7A, MW-7B, MW-7C, MW-8A, MW-8B, MW-9A, MW-11A and MW-12A. Existing groundwater monitoring well locations are presented in Figure 2. Note that wells MW-6, MW-7A and MW-7C could not be located during RI activities.

A drilling and well construction summary for existing groundwater monitoring wells is provided in Drilling and Well Construction Summary, Table 1. Well logs for existing wells (as well as Core Hole CH-1 [Fetrow 1991]) are provided in Appendix A.

2.1.3. Historic Groundwater Level Data

A database of historic Site groundwater level data was provided to GeoEngineers by Ecology. GeoEngineers reduced the groundwater level data for presentation in the data tables and associated figures provided in Appendix B. Historic Site groundwater elevations are summarized in Historic Groundwater Elevations, Figure B-1, and described in the "Groundwater Occurrence and Flow" section of this report.

2.1.4. Historic Groundwater Analytical Data

A database of historic Site groundwater analytical data was provided to GeoEngineers by Ecology. GeoEngineers reduced the analytical data for presentation in the data tables provided in Appendix C.

2.1.5. Contaminants of Concern

Previous studies identified VOCs as the primary contaminants of concern (COCs) in groundwater at the Site. Fetrow (1991) specified the following VOCs are specific primary Site groundwater COCs:

- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,1-dichloroethane (1,1-DCA)
- Tetrachloroethene (PCE)
- Trichlorofluoromethane (CFC-11)
- Benzene
- Toluene
- 1,2-dichloroethane (1,2-DCA)
- Trichloroethene (TCE)
- 1,2-dichloropropane
- 1,1,2-trichloroethane (1,1,2-TCA)
- Chloroethane

PGG categorized VOCs as either primary or secondary contaminants of concern based on the frequency of detection in Site groundwater samples (PGG 2005). The primary contaminants of concern (those compounds detected at a frequency of 40 percent or more in a given well) identified by PGG included:

- Ethanes: 1,1,1-TCA and 1,1-DCA
- Ethenes: PCE and 1,1-dichloroethene (1,1-DCE)
- Methanes: methylene chloride and CFC-11

Based on information provided by PGG (2005), the primary contaminants of concern were detected in groundwater samples collected from groundwater monitoring wells MW-1A, MW-2, MW-3, MW-5, MW-5A and MW-8B at concentrations greater than the Groundwater Quality Criteria established in WAC 173-200 (Water Quality Standards for Groundwaters of the State of Washington). The primary contaminants were not detected in samples collected from groundwater monitoring wells, MW-4/4A, MW-7A/B/C, MW-9A, MW-11A and MW-12A. The primary contaminants also were not detected in private or community wells at concentrations greater than the WAC 173-200 screening levels. A summary of primary contaminant detections in existing Site groundwater monitoring wells are presented in Historic Data, Primary VOC Groundwater Contaminants, Figure 4.

PGG classified contaminants that were detected at a frequency of 40 percent but not routinely detected in groundwater samples from multiple wells as secondary COCs. PGG identified the following as secondary COCs:

- Ethanes: 1,2-DCA
- Ethenes: TCE, cis-1,2-dichloroethene (cis-1,2-DCE), and total 1,2-dichloroethene (1,2-DCE)

- 1,2-dichloropropane
- Chloroform
- Benzene

Secondary COCs were detected in samples from groundwater monitoring wells MW-1A, MW-5 and MW-11A at concentrations exceeding the WAC 173-200 applicable regulatory levels. Secondary COC detections in Site groundwater monitoring wells are presented in Historic Data, Secondary VOC Groundwater Contaminants, Figure 5.

2.1.6. Other Contaminants

As described above, 1,1,1-TCA was identified by Fetrow as a primary groundwater COC. Because 1,4-Dioxane is frequently used as a stabilizer for 1,1,1-TCA, 1,4-Dioxane is a potential contaminant at sites contaminated with 1,1,1- TCA (EPA 2013; Mohr 2001).

Based on the historic groundwater data compiled by Land and Water (2010), the semi-volatile organic compound bis(2-ethylhexyl)phthalate was detected in samples from three groundwater monitoring wells (MW-1A, MW-3 and MW-5A) at concentrations greater than the WAC 173-200 regulatory level (6 micrograms per liter). Bis(2-ethylhexyl)phthalate also was detected in samples from two additional wells (MW-8A and MW-9A) at concentrations less than the regulatory level. Land and Water (2010) also report that bis(2-ethylhexyl)phthalate has not been detected since March 1995 in well MW-8A.

Dissolved iron and manganese also were reported at concentrations exceeding the WAC 173-200 regulatory level in samples from groundwater monitoring wells MW-1A, MW-3 and MW-9A (Land and Water 2010).

2.2. Site Characterization

2.2.1. Area Water Use

2.2.1.1. General

GeoEngineers conducted a Potential Receptor Evaluation to identify receptors (people and sensitive ecological receptors) that could possibly encounter Site-related contamination. The Potential Receptor Evaluation is provided in Appendix D.

One component of the Potential Receptor Evaluation identifies potential users of water in proximity to the Site. A full discussion of area water use is provided in Appendix D and summarized below.

2.2.1.2. Water Rights

Surface water and groundwater use in Washington State is administered by Ecology through water right allocations. Ecology tabulates water rights within the state through their Water Resources Explorer database. On January 4, 2017, GeoEngineers conducted a search of the Water Resources Explorer database within a 1-mile radius of the approximate center of the Main Landfill (herein termed the water rights inventory area). Search results are compiled in Table D-1.

The water rights inventory area contains totals of three surface water rights and 25 groundwater rights. Of these, 20 are water right claims, seven are water right certificates, and one is a water right change.

The total annual water use claimed and/or allocated within the water rights inventory area is 722.7 acre-feet.

2.2.1.3. Water Well Inventory

Water use within Washington State that is external to the water rights permitting system generally occurs through the Groundwater Permit Exemption (Chapter 90.44.050 of the Revised Code of Washington). The Groundwater Permit Exemption allows for uses of small groundwater quantities (generally less than 5,000 gallons per day) for specific uses. Within the area surrounding Marshall Landfill, this permit-exempt water use generally is for single-home domestic use through small-diameter water supply wells. Numerous single-home domestic wells are located in proximity to Marshall Landfill.

Water well construction within Washington State is reported to Ecology, who tabulates Water Well Reports (WWRs) within their Washington State Well Log Viewer database. GeoEngineers compiled WWRs from Ecology's Washington State Well Log Viewer database within the following Water Well Report inventory area:

- The southwest (SW) quarter of Section 15, Township (T) 24 North (N), Range (R) 42 East (E)
- The southeast (SE) and SW quarters of Section 16, T24N, R42E
- The SE quarter of Section 17, T24N, R42E
- The SE and northeast (NE) quarters of Section 20, T24N, R42E
- Section 21, T24N, R42E
- The SW and northwest (NW) quarters of Section 22, T24N, R42E
- The NW quarter of Section 27, T24N, R42E
- The NE and NW quarters of Section 28, T24N, R42E
- The NE quarter of Section 29, T24N, R42E

The boundaries of the Water Well Report inventory area are shown in Figure D-4, and search results are tabulated in Table D-2. We compiled a total of 168 WWRs, completed in the following hydrostratigraphic units (units are described in detail in Section 2.2.9):

- Six wells are completed within the glaciofluvial unit. Their distribution is scattered throughout the inventory area.
- 98 wells are completed within the Columbia River Basalt Group (CRBG) unit. Most of the wells north and immediately south of the Site are completed in the CRBG unit.
- 51 wells are completed within the basement rock unit. These wells primarily are located west and southwest of the Site.
- 11 wells are completed within both the CRBG and basement rock units.
- Two wells are completed within uncertain hydrostratigraphic units.

WWR's are provided in Appendix D. Approximate WWR locations are shown by hydrostratigraphic unit in Figure D-4. These locations are based on the location information provided in the WWRs and should be considered approximate.

2.2.2. Data Gaps

In 2015 and 2016, GeoEngineers conducted supplemental RI field investigation activities to assist in addressing the data gaps identified in the project Work Plan (GeoEngineers 2015). These data gaps included:

- The nature and extent of the wastes disposed at the Site.
- The extent of soil, landfill gas and groundwater contamination.
- Soil, landfill gas and groundwater at/near the Site boundary with the Spokane County Landfill to better understand potential contaminant sources originating from the Spokane County Landfill.
- The vertical and horizontal extent of buried municipal solid waste (MSW) in the Five-Acre and Main Landfills.
- Components of the hydrogeologic conceptual model for the Site.
- Slope stability of the buttress berm on the southern and southeastern boundaries of the Main Landfill.

2.2.3. Project Explorations

Supplemental explorations associated with GeoEngineers' RI investigation included the following:

New Groundwater Monitoring Wells: Six new groundwater monitoring wells were drilled and constructed (designated MW-7D, MW-14, MW-15, MW-15A, MW-16 and MW-16A). New groundwater monitoring well locations are shown in Figure 2. A drilling and well construction summary for these new and existing groundwater monitoring wells is provided in Table 1.

Soil Borings: 33 soil borings (designated LFB-1 through LFB-6, LFB-6A, LFB-7, LFB-7A, LFB-8 through LFB-17, MW-13, SB-1 through SB-3, SB-3A, SB-4 through SB-7, and SB-9 through SB-13) were drilled on Site. Note that MW-13 was planned as a groundwater monitoring well installation, however no well was installed because of shallower than expected bedrock. Also, a soil boring SB-8 was planned; however, the location was not drilled and no SB-8 exists.

Ten of the landfill borings were completed as landfill gas monitoring wells (LFB-3 through LFB-5, LFB-8 through LFB-11, and LFB-15 through LFB-17).

Soil boring locations associated with the Main Landfill are presented in the Main Landfill Explorations, Figure 6. Soil boring locations associated with the Five-Acre Landfill are presented in the Five-Acre Landfill Explorations, Figure 7.

Test Pits: 71 test pits, the locations of which are shown in Figures 6 and 7.

Field procedures are described in Appendix E. We classified soil encountered in project explorations in general accordance with the Unified Soil Classification System described in Figure E-1. The exploration logs for the monitoring wells, borings, and test pits listed above are provided in Figures E-2 through E-111.

2.2.4. Soil Samples

GeoEngineers submitted a total of 20 soil samples from project explorations for laboratory analysis. Soil samples were analyzed for some or all of the following constituents:

- Gasoline-range hydrocarbons by NWTPH-Gx
- Diesel- and lube oil-range hydrocarbons by NWTPH-Dx
- Metals by Environmental Protection Agency (EPA) Method 6020A
- Cyanide by EPA Method 9012B
- Mercury by EPA Method 7471B
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A
- VOCs by EPA Method 8260B
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C
- Pesticides/Herbicides by EPA Method 8151A/8141B/8081A

Soil sample chemical analytical results are summarized in Soil Analytical Results, Tables 2 through 5.

2.2.5. Groundwater Samples

GeoEngineers collected groundwater samples from project groundwater monitoring wells during four groundwater monitoring events, conducted during August 2016, November 2016, February 2017 and December 2017. Groundwater sampling methods are described in Appendix E.

During each monitoring event GeoEngineers attempted to collect groundwater samples from a total of 20 monitoring wells (MW-1A, MW-2, MW-2A, MW-3, MW-4, MW-4A, MW-5, MW-5A, MW-7B, MW-7D, MW-8A, MW-8B, MW-9A, MW-11A, MW-12A, MW-14, MW-15, MW-15A, MW-16 and MW-16A). Wells that did not contain sufficient water for sampling (were dry) were omitted from the respective sampling event. During the August 2016, November 2016 and February 2017 monitoring events, groundwater samples were analyzed for the following constituents:

- Gasoline-range hydrocarbons by NWTPH-Gx
- Diesel- and lube oil-range hydrocarbons by NWTPH-Dx
- Total and dissolved metals by EPA Method 200.8
- Mercury by EPA Method 245.1
- Anions by EPA Method 300.0
- Ammonia by EPA Method 350.1
- Cyanide by EPA Method 335.4
- Chemical Oxygen Demand (COD) by EPA Method 410.04
- Total Organic Carbon (TOC) by EPA Method 5310C
- E. Coli and total coliform by EPA Method 9223B
- PCBs by EPA Method 8082A
- VOCs by EPA Method 8260C
- SVOCs by EPA Method 8270D

- Pesticides/Herbicides by EPA Method 8151A/8141B/8081B
- Dioxins/furans by EPA Method 8290

The analyte list for the December 2017 sampling event was limited to total and dissolved metals, cyanide, nitrate, VOCs, SVOCs (including 1,4-dioxane) and chlorinated herbicides. This reduced analyte list was based upon previous groundwater analytical results and agreed upon during a meeting between Ecology and GeoEngineers on October 11, 2017.

Groundwater sample chemical analytical results are summarized in Groundwater Analytical Results, Tables 6 through 10.

2.2.6. Surface Water Samples

GeoEngineers collected surface water samples from one location along Marshall Creek during the August 2016, November 2016 and February 2017 monitoring events. The surface water sampling location is shown in Figure 1.

Surface water samples were analyzed for the constituents listed in the preceding section for groundwater samples. Surface water sample chemical analytical results are summarized in Surface Water Analytical Results, Tables 11 through 15.

2.2.7. Landfill Gas Samples

GeoEngineers collected landfill gas samples from landfill gas monitoring wells during four monitoring events, conducted during September 2015, August 2016, December 2016 and February 2017. Landfill gas sampling methods are described in Appendix E.

During each monitoring event, GeoEngineers collected landfill gas samples from a total of 10 landfill gas monitoring wells (LFB-3, LFB-4, LFB-5, LFB-8, LFB-9, LFB-10, LFB-11, LFB-15, LFB-16 and LFB-17). Landfill gas samples were analyzed for VOCs by EPA Air Method Toxic Organics 15. Landfill gas sample chemical analytical results and field-measured methane levels are summarized in Soil Vapor Analytical Results – VOCs, Table 16 and Soil Vapor Analytical Results – Methane, Table 17, respectively.

2.2.8. Landfill Gas Pressure Monitoring

GeoEngineers measured static pressure within landfill gas monitoring wells (LFB-3 through LFB-5, LFB-8 through LFB-11, and LFB-15 through LFB-17) during the December 2017 monitoring event. Landfill gas sampling methods are described in Appendix E. Results are summarized below in Table 18.

TABLE 18. LANDFILL GAS PRESSURE SUMMARY

Landfill Gas Monitoring Well	Static Landfill Gas Pressure (Inches of Water)
LFB-3	0.11
LFB-4	0.21
LFB-5	0.04
LFB-8	-0.02
LFB-9	0.00

Landfill Gas Monitoring Well	Static Landfill Gas Pressure (Inches of Water)
LFB-10	0.09
LFB-11	0.10
LFB-15	0.04
LFB-16	0.01
LFB-17	0.01

Results indicate that, during the December 2017 monitoring event, pressure in each landfill gas monitoring well was minimal. The maximum pressure was 0.21 inches of water, observed in landfill gas monitoring well LFB-4.

2.2.9. Geologic/Hydrogeologic Setting

2.2.9.1. Geology

The Site is situated along the northeast margin of the Palouse Slope structural region, which encompasses the north and north-central portions of the Columbia Plateau and extends from near the confluence of the Columbia and Wenatchee Rivers east to Idaho. The Palouse Slope primarily consists of relatively un-deformed basalt with a gentle, rolling slope with elevation generally declining to the southwest (Kahle et al. 2011). Faults are relatively widely dispersed and of limited displacement. Folding, where present, is northwest-trending with only a few tens of feet of amplitude (Whiteman et al. 1994).

The Site's position near the east margin of the Columbia Plateau, combined with erosional structures associated with Pleistocene-age outburst flood events and more recent alluvial processes, has resulted in complex stratigraphic conditions beneath and adjacent to the Site. Based on our Site explorations, understanding of regional stratigraphy and review of previous Site studies (Fetrow 1991; PGG 2005), we interpret that the Site is underlain by five primary stratigraphic units. From oldest to youngest, these include:

1. *Precambrian-age (greater than about 570 million years ago [MA]) metamorphic rocks associated with the Belt Supergroup*: Near the Site, Belt Supergroup rocks primarily consist of gneiss and schist. These rocks were intruded by granitic plutonic rocks during the Mesozoic (245 to 65 MA) and Tertiary (65 to 1.5 MA). These metamorphic and plutonic rocks are collectively designated "basement rocks" herein. Previous and RI explorations have identified an intensely weathered upper section of basement rock beneath the Site, variably described as clayey silt, micaceous sand, and/or saprolite and observed at thicknesses up to 85 feet in project explorations.
2. *Miocene-age (23 to 5 MA) basalt flows associated with the CRBG*: Basement rocks are stratigraphically overlain by basalt flows associated with the CRBG. Two CRBG Formations, the Grande Ronde overlain by the Wanapum, have been identified within the Marshall area (Drost and Whiteman 1986). The CRBG was deposited during an extended period of Miocene (23 to 5 MA) volcanism that extruded a series of very fluid lava flows. The lava flowed from north-northwest trending fissures as much as 90 miles long which were located primarily in northeastern Oregon and southeast Washington (Hooper 1982). The resulting basalt deposits are hundreds to thousands of feet thick in some areas of eastern Washington and extend throughout the Columbia Plateau. As the basalt flowed into the Spokane area (which is situated near the eastern terminus of the CRBG), it filled preexisting depressions, lapping onto elevated areas of older, uplifted metamorphic and igneous rocks. Steptoes (vertical formations

extending above the surrounding surface) were formed where knobs or ridges of the underlying "basement" rock were completely encircled by the Columbia River Basalt flows.

Because the Site is situated near the eastern terminus of the CRBG, the thickness of the CRBG is relatively thin compared to more central portions of the Columbia Plateau. Near the Site, the CRBG has been completely truncated within some current and ancestral drainages. One such ancestral drainage underlies the southern portion of the Site, where Pleistocene-age (about 2.6 MA to 12,000 years ago) sedimentary deposits directly contact basement rocks at depth.

3. *Miocene-age Latah Formation*. Numerous sedimentary interbeds exist between specific basalt flows and units within the CRBG. Collectively, these sedimentary units are termed the Ellensburg Formation, despite differences in age, location, lithology and continuity (Reidel and Tolan 2013). Interbeds are generally thicker and more frequently encountered near contacts with pre-Miocene basement rocks and are abundant within the CRBG stratigraphic section near Marshall.

   The Latah Formation (which stratigraphically correlates with the Vantage Formation in other portions of the Columbia Plateau) is a sedimentary interbed that underlies, intercalates and overlies the CRBG in eastern Washington and west-central Idaho (Leek 2006). The Latah Formation consists primarily of variably-indurated clay and silt, with locally extensive sand and gravel layers (Whiteman et al. 1994; Kahle et. al. 2011). Near the Site, the Latah Formation generally consists of variably-weathered claystone, sandstone and siltstone (PGG 2005).

4. *Pleistocene-age glaciofluvial (outburst flood) deposits*: Glaciofluvial sediments near the Site primarily consist of unsorted mixtures of silt, sand, gravel and cobbles derived from Pleistocene-age flood events due to repeated failures of ice dams associated with Glacial Lake Missoula. Depending on the location, glaciofluvial deposits overlie and contact both basement rocks and CRBG. Near the Site, glaciofluvial deposits filled ancestral drainages associated with tributaries to Latah Creek such as the ancestral drainage that underlies the southern portion of the Site.

   The top of basement rock and/or CRBG undulates across area surrounding the Site. This topographic relief was reduced by deposition of glaciofluvial sediments during the Pleistocene and recent placement of fill during area development activities. These processes have resulted in a relatively complex distribution in the thickness of sediments overlying bedrock within the study area. Flood deposits observed in project explorations range in thickness from about 11 feet (MW-12A) to more than 259 feet (MW-15A).

5. *Recent alluvial deposits*: Recent alluvial deposits consist of interbedded silt, sand and gravel deposited within the modern Minnie Creek and Marshall Creek drainages.

2.2.9.2. Cross Sections

Based on the boring logs provided in Appendices A and E, GeoEngineers prepared five geologic cross sections (A-A' through E-E') along the section lines shown in Cross Section Transects, Figure 8. Cross sections A-A' through E-E' are provided in Figures 9 through 13 and summarized by the following:

Cross Section A-A', Figure 9: This cross section summarizes interpreted subsurface conditions along a line (shown in Figure 8) roughly oriented north to south and extending from the northwest portion of the gravel pit through the main landfill to South Cheney Spokane Road. The section originates (A) outside of the ancestral drainageway, within an area underlain by shallow CRBG. The CRBG pinches out north of monitoring well MW-7D, where bedrock consists of variably-weathered basement rock. The thickness of the

ancestral drainageway and associated glaciofluvial sediments, increases to the south. Glaciofluvial sediments are saturated below an elevation of about 2,090 feet in monitoring well MW-2A.

Layered sand and MSW associated with the Main Landfill extends from test pit TP-6 to soil boring SB-3/3A. Thickness of the layered sand/MSW is about 68 feet at landfill gas monitoring well LFB-3.

Cross Section B-B', Figure 10: This cross section summarizes interpreted subsurface conditions along a line roughly oriented west to east and extending from monitoring well MW-11A across the southern termini of the Five Acre Landfill and gravel pit to just west of Minnie Creek. The entire section is within the ancestral drainageway and is underlain by glaciofluvial sediment and variably weathered basement rock. However, saturated glaciofluvial sediment appears to occur only east of monitoring well MW-7B. Glaciofluvial sediments are saturated below an elevation of about 2,075 feet in monitoring well MW-5A.

Layered sand and MSW associated with the Five Acre Landfill was encountered between MW-1A and MW-7D. Thickness of the layered sand/MSW is about 7 feet at test pit TP-M-1A.

Minnie Creek is located just west of the eastern section terminus (B'). The approximate streambed elevation (2,140 feet) is about 70 feet higher than the glaciofluvial groundwater elevation in adjacent monitoring well MW-8B (2,070 feet), indicating Minnie Creek is a losing stream adjacent to the Site.

Cross Section C-C', Figure 11: This cross section summarizes interpreted subsurface conditions along a line paralleling South Cheney Spokane Road (oriented southwest to northeast) and extending from the southeast corner of the Former Spokane County landfill to the southeast portion of the gravel pit. The entire section is within the ancestral drainageway and is underlain by glaciofluvial sediment and variably-weathered basement rock. Glaciofluvial sediment thickens to the northeast, increasing from about 78 feet at monitoring well MW-4A to 182 feet at monitoring well MW-6. Saturated glaciofluvial sediment underlies the entire section, with the groundwater table decreasing from an elevation of about 2,100 feet at monitoring well MW-4A to about 2,075 feet at monitoring well MW-5A.

Layered sand and MSW was observed to a depth of 12 feet below ground surface at monitoring well MW-4, which is situated along the east margin of the Former Spokane County Landfill.

Cross Section D-D', Figure 12: This cross section summarizes interpreted subsurface conditions along a line that transects the Main Landfill from southwest to northeast. The entire section is within the ancestral drainageway and is underlain by a thick sequence (in excess of 150 feet) of glaciofluvial sediment underlain by variably-weathered basement rock. Saturated glaciofluvial sediment underlies the entire section, with the groundwater table decreasing from an elevation of about 2,095 feet at monitoring well MW-14 to about 2,080 feet at monitoring well MW-15A.

Layered sand and MSW associated with the Main Landfill was encountered throughout the section northeast of SB-12. Thickness of the layered sand/MSW generally decreases to the northeast, ranging from about 92 feet in landfill gas monitoring well LFB-4 to about 35 feet in monitoring well MW-15A.

Cross Section E-E', Figure 13: This cross section summarizes interpreted subsurface conditions along a line that originates at monitoring well MW-11A and transects the Five-Acre Landfill from south to north. The section originates (E) within an approximately 200-foot-thick, but unsaturated, portion of the ancestral drainageway, within an area underlain by weathered basement rock. An apparent canyon wall of the

ancestral drainageway formed by CRBG is located beneath the approximate center of the Five-Acre Landfill. CRBG was encountered at a depth of about 31 feet in boring LFB-1.

Layered sand and MSW associated with the Five Acre Landfill was encountered throughout the section north of MW-1A. Thickness of the layered sand/MSW ranged from about 5 feet in test pit TP-5B to about 52 feet in boring LFB-2.

2.2.10. Hydrogeology

2.2.10.1. Hydrostratigraphic Units and Occurrence

The Site's position near the confluence of the Minnie Creek and Marshall Creek drainages, with upland areas situated to the north, west and south of the Site, suggests the presence of converging groundwater flow conditions within shallow aquifer systems near the Site (PGG 2005). Shallow groundwater flow generally mimics topographic conditions and is directed from the area surrounding the Site towards discharge areas situated to the northeast.

The Site generally is underlain by a minimum of three hydrostratigraphic units. These units occur within: (1) basement rocks; (2) the CRBG; and (3) glaciofluvial sediments. The basement rock unit is interpreted to underlie the entire area surrounding the Site at depth and, in places, is overlain by the CRBG unit and/or the glaciofluvial unit. The CRBG unit is truncated by the ancestral drainageway and generally occurs within upland areas along the flanks of the drainageway. The glaciofluvial unit occurs within the saturated portion of the ancestral drainageway. The glaciofluvial aquifer likely receives recharge from the CRBG unit along canyon walls.

Because of the relatively complex geologic conditions summarized above, the uppermost aquifer at a given location within and adjacent to the Site could be associated with the basement rock unit, the CRBG unit, or the glaciofluvial unit. The approximate boundaries of the uppermost units, adapted from interpretations presented by Fetrow (1991), are presented in Uppermost Aquifer Boundaries, Figure 14. Surficial geologic conditions also are shown in Figure 14 for comparison.

The glaciofluvial unit forms a southwest to northeast-trending aquifer of limited width that underlies the Former Spokane County Landfill, most of the Main Landfill, and the southeast corner of the gravel pit (Figure 14). The glaciofluvial unit is approximately 2,000 feet in width near the Former Spokane County Landfill but thins to about 500 feet within an apparent constriction located immediately southeast of the gravel pit.

The basement rock unit forms the uppermost aquifer underlying the north portion of the Main Landfill, most of the Five-Acre Landfill, and the central portion of the gravel pit. The CRBG unit is the uppermost aquifer underlying the north portions of the Five-Acre Landfill and gravel pit.

2.2.10.2. Basement Rock Unit

Groundwater occurs in basement rocks in fractured and/or weathered zones; these zones have variable hydraulic continuity. Porosity and permeability are generally low. The yield of water wells completed within the basement rock aquifer system typically are on the order of several gallons per minute (gpm) or less. Recharge to the upper portion of the basement rock aquifer occurs primarily within upland areas to the north, west and south, flowing laterally to discharge areas within the Minnie Creek, Marshall Creek and/or Hangman Creek valleys.

Based on hydraulic conductivity testing in monitoring wells MW-6, MW-7A and MW-7B, Fetrow (1991) reported basement rock hydraulic conductivities on the order of 3 x10^{-3} to 3 x 10^{-4} feet per day. PGG (2005) estimated groundwater velocities within this hydrostratigraphic unit to be about 1 foot per year.

2.2.10.3. CRBG Unit

The CRBG consists of a series of individual basalt flows. Groundwater is most readily transmitted through the broken vesicular and scoriaceous interflow zones that characterize the top of each flow. The interflow zones are separated by the less porous and less transmissive entablature and colonnade, which comprise 90 to 95 percent of the total flow volume (Whiteman et al. 1994). The flows are locally interlayered with sedimentary deposits of the Latah Formation. This system of multiple flows and interlayered sedimentary deposits creates multiple stacked confined to semi-confined aquifers which can yield significant volumes of groundwater to wells.

Within the area surrounding the Site, the CRBG is overlain, in places, by glaciofluvial and/or alluvial deposits. In other locations, the CRBG directly crops out on the surface. Recharge to the CRBG occurs through direct precipitation, vertical infiltration from the overlying unconfined aquifer, and lateral recharge from basement rock. Discharge from the CRBG occurs through leakage to adjacent aquifers, along gaining reaches of streams, and to water supply wells.

Previous investigators (PGG 2005) have separated the CRBG Unit into two sub-units; an upper basalt aquifer and lower basalt aquifer (presumably separated by discontinuous sedimentary deposits associated with the Latah Formation). However, this distinction is based on a paucity of hydraulic head information for the lower basalt unit and, in our judgment, likely oversimplifies the complexity of the geometry of compound flows characteristic of the CRBG system in proximity to the margin of the Columbia Plateau.

2.2.10.4. Glaciofluvial Sediments

Glaciofluvial sediments typically consist of relatively free-draining sand and gravel with relatively high permeability that have filled the Minnie Creek and Marshall Creek drainages. This sedimentary aquifer system generally is unconfined and relatively susceptible to degradation from point and non-point sources of contamination because of the lack of an overlying confining unit and a generally shallow depth to the groundwater table. Recharge is primarily derived from precipitation, losing reaches of Minnie and Marshall Creeks, applied irrigation, septic systems and potentially through leakage from CRBG and basement rock aquifers. Discharge occurs through leakage to adjacent aquifers, along gaining reaches of streams, and to water supply wells.

Golder conducted a single-well pumping test using well GR-2, located about 0.7 miles northeast of the Site in 1989. Based on the pumping test results, which were summarized by Fetrow (1991), Golder estimated a hydraulic conductivity of 256 feet per day (78 meters per day) and a groundwater velocity of 12 feet per day within the glaciofluvial sediments.

2.2.11. Groundwater Occurrence and Flow

2.2.11.1. Historic Groundwater Elevation Data

Historic Site groundwater level data are provided in Appendix B and summarized in Figure B-1. The period of record for Site groundwater level monitoring extends from 1989 through December 2017, although there is a gap in the record from 2011 through 2015.

Review of historic data suggest the following for wells completed within the **glaciofluvial unit** (monitoring wells MW-2, MW-2A, MW-3, MW-4A, MW-5, MW-8B and MW-9A):

- Groundwater elevations in glaciofluvial unit wells generally decrease from southwest to northeast and are in the range of 2,050 to 2,150 feet.
- In individual glaciofluvial wells, the range in observed groundwater elevation for the period of record is as high as approximately 80 feet.
- A pronounced seasonal fluctuation is observed in glaciofluvial wells, with high groundwater elevations generally observed during spring and early summer and low groundwater elevations during fall and early winter. This suggests glaciofluvial aquifer groundwater level is strongly influenced by recharge associated with winter precipitation and snowmelt.
- The magnitude of the seasonal fluctuation in groundwater elevation in individual glaciofluvial wells is high relative to the other hydrostratigraphic units, up to approximately 40 feet.
- No long-term trend in groundwater elevation (increasing or decreasing) is observed.

Only one monitoring well, MW-12A, is completed within the **CRBG unit**. Review of these data suggest the following:

- Groundwater elevations in the CRBG unit well generally are in the range of 2,230 to 2,240 feet, and about 80 to 180 feet higher than glaciofluvial unit wells. This suggests that the CRBG unit discharges to the glaciofluvial unit where they contact each other and are in hydraulic continuity.
- In MW-12A, the range in observed groundwater elevation for the period of record is approximately 63 feet.
- A seasonal fluctuation is present in the CRBG unit well, but muted relative to the glaciofluvial unit. As in the glaciofluvial unit, high groundwater elevations generally are observed during spring and early summer and low groundwater elevations during fall and early winter. However, the magnitude of the seasonal fluctuation is generally less than 5 feet.
- No long-term trend in groundwater elevation (increasing or decreasing) is observed.

Review of historic data suggest the following for wells completed within the **basement rock unit** (monitoring wells MW-1A, MW-6, MW-7A, MW-7B, MW-7C and MW-8A):

- Groundwater elevations in basement rock wells generally are similar to the glaciofluvial unit wells and are in the range of 2,050 to 2,150 feet. This suggests hydraulic connection between the two hydrostratigraphic units.
- In individual basement rock wells, the range in observed groundwater elevation for the period of record is as high as approximately 90 feet.
- Two of the basement rock wells (MW-6 and MW-8A) are situated within the boundaries of the glaciofluvial unit (Figure 14). In these wells, a strong seasonal fluctuation that mirrors the glaciofluvial unit in both timing and magnitude is observed. This also suggests hydraulic connection between the glaciofluvial and basement rock units.

- The other basement rock wells are situated outside of the boundaries of the glaciofluvial unit. In these wells, a seasonal fluctuation is present, but similar to the CRBG unit is muted relative to the glaciofluvial unit.
- No long-term trend in groundwater elevation (increasing or decreasing) is observed.

2.2.11.2. Supplemental RI Groundwater Monitoring

GeoEngineers measured groundwater levels in a total of 20 Site monitoring wells during four groundwater monitoring events, conducted during November 2015, August 2016, November 2016, February 2017, and December 2017. Groundwater levels are presented in Groundwater Elevation Summary, Table 19, and compared to historic data in Figure B-1. Project monitoring wells include 13 wells completed within the glaciofluvial unit, one well completed in the CRBG unit, and six wells completed in the basement rock unit, as identified in Table 19. A general comparison of observed groundwater elevations yields the following observations:

- In November 2015, groundwater levels in each hydrostratigraphic unit were low relative to subsequent monitoring events, though comparable to historic periods of low groundwater elevation (Figure B-1).
- In August 2016, groundwater levels in the glaciofluvial, CRBG and basement rock units increased by averages of 16.86 feet, 5.47 feet and 9.57 feet, respectively, relative to November 2015.
- In November 2016, groundwater levels in the glaciofluvial, CRBG and basement rock units decreased by averages of 6.12 feet, 1.37 feet and 4.80 feet, respectively, relative to August 2016.
- In February 2017, groundwater levels in the glaciofluvial, CRBG and basement rock units increased by averages of 4.82 feet, 2.78 feet and 2.88 feet, respectively, relative to November 2016.
- Precipitation and snowmelt (and associated groundwater recharge) during 2017 resulted in relatively large increases in groundwater levels in the glaciofluvial and basement rock units. In December 2017, groundwater levels in the glaciofluvial and basement rock units increased by 39.26 feet and 33.45 feet, respectively, relative to February 2017. Groundwater level in the CRBG unit, however, decreased by 3.64 feet relative to February 2017.

Groundwater elevations for the November 2015, August 2016, November 2016, February 2017, and December 2017 events are graphically presented in Groundwater Elevations, Figures 15 through 19, respectively. Aquifer boundaries, groundwater elevation contours, and groundwater flow direction are shown for the glaciofluvial unit. For each event, groundwater flow direction within the glaciofluvial unit generally was directed along the axis of the ancestral drainageway to the east and northeast. Hydraulic gradient during the first four monitoring events (November 2015 through February 2017) was relatively consistent in the glaciofluvial unit and on the order of 1×10^{-2} feet per foot (about 50 feet per mile). The elevated groundwater conditions observed during December 2017 coincided with an approximate 50 percent reduction in glaciofluvial unit hydraulic gradient, to approximately 5×10^{-3} feet per foot (about 25 feet per mile).

Based on examination of groundwater elevations in monitoring wells MW-8A, MW-11A and MW-16A, groundwater flow direction in the basement rock unit is to the east, and generally offset from the glaciofluvial unit by about 20 to 40 degrees to the south. Hydraulic gradient in the basement rock unit is consistently in the range of about 1×10^{-2} feet per foot (50 feet per mile).

2.2.11.3. Hydraulic Conductivity Testing

GeoEngineers conducted falling and rising head slug tests in monitoring wells MW-14, MW-15A and MW-16A on November 12, 2015 as a basis for estimating saturated hydraulic conductivity within target water-bearing zones beneath the Site. Slug tests also were planned in monitoring wells MW-2, MW-3, MW-5, MW-15 and MW-16. However, these wells either were dry (MW-2, MW-5, MW-16) or did not contain an adequate water column to induce sufficient change in hydraulic head outside of the well's filter pack (MW-3, MW-15).

Falling and rising head slug tests are performed by rapidly increasing or decreasing, respectively, the water level in a well and measuring the subsequent rate of water level change as head conditions recover. Increasing and decreasing water level is achieved by quickly inserting or removing, respectively a slug (in this case a sealed polyvinyl chloride (PVC) pipe filled with impermeable material) of known volume into or out of the water column. During testing, we recorded water level data with a Model PT2X transducer/data logger manufactured by INW of Kirkland, Washington. After slug testing, we downloaded and reduced pressure data. During data reduction, we observed an oscillatory response to slug testing in each monitoring well, which generally indicates the wells are completed in formation(s) of relatively high hydraulic conductivity. As such, we analyzed project slug test data for hydraulic conductivity using a solution developed by Butler and Garnett (2000) for high-hydraulic conductivity aquifers. This spreadsheet-based solution is an extension of previous and widely-accepted models introduced by Bouwer and Rice (1976) and Hvorslev (1951) and compares the observed head response to a standard damped spring physical solution (Kreyszig 1979).

Slug test data are presented for monitoring wells MW-14, MW-15A and MW-16A in Slug Test Plots, Figures F-1 through F-3, respectively of Appendix F. Three falling head and three rising head tests were performed in each monitoring well. The initial falling head test in MW-14 was not analyzed because the measurement interval was too large to adequately characterize the rapid water level recovery.

A relatively narrow range in water level response to slug testing was observed in the three tested monitoring wells. Water level recovery was very rapid, with full recovery achieved in a few seconds, and the data sets generally were characterized by underdamped oscillatory behavior. The geometric means of the hydraulic conductivity analyses at MW-14, MW-15A and MW-16A were about 93 feet per day (ft/d), 266 ft/d and 99 ft/d, respectively.

These saturated hydraulic conductivity estimates are, on balance, high and generally indicative of permeable aquifer conditions. Results of hydraulic conductivity analyses are summarized in Table 20 below.

TABLE 20. SLUG TEST RESULTS SUMMARY

Well Number	Hydrostratigraphic Unit	Test Designation	Hydraulic Conductivity (feet per day)
MW-14	Glaciofluvial	Rising Head 1	161
		Falling Head 2	88
		Rising Head 2	85
		Falling Head 3	64
		Rising Head 3	91

Well Number	Hydrostratigraphic Unit	Test Designation	Hydraulic Conductivity (feet per day)
		Geometric Mean	**93**
MW-15A	Glaciofluvial	Falling Head 1	246
		Rising Head 1	364
		Falling Head 2	198
		Rising Head 2	303
		Falling Head 3	192
		Rising Head 3	342
		Geometric Mean	**266**
MW-16A	Basement Rock	Falling Head 1	91
		Rising Head 1	137
		Falling Head 2	80
		Rising Head 2	103
		Falling Head 3	83
		Rising Head 3	109
		Geometric Mean	**99**

2.2.11.4. Groundwater Velocity

Groundwater velocity is estimated by the following equation, adapted from Domenico and Schwartz (1990):

$$v = (K/n_e)*dh/dl \qquad \text{Equation 1}$$

where:

v = groundwater velocity; K = hydraulic conductivity; n_e = effective porosity; and dh/dl = hydraulic gradient.

For the glaciofluvial unit, we estimate groundwater velocity is about 5 feet per day (2,000 feet per year), based on the following assumptions:

- K equals 160 feet per day, based on the geometric mean of slug test results from MW-14 and MW-15A.
- n_e equals 0.3, based on typical values for sand and gravel aquifers provided by Domenico and Schwartz (1990).
- dh/dl equals 1×10^{-2} feet per foot.

For the basement rock unit, we estimate groundwater velocity is about 100 feet per day (40,000 feet per year), based on the following assumptions:

- K equals 99 feet per day, based on slug test results from MW-16A.

- n_e equals 0.01, based on typical values for fractured crystalline rock aquifers provided by Domenico and Schwartz (1990).
- dh/dl equals 1 x 10^{-2} feet per foot.

2.2.12. MSW Thickness

GeoEngineers compiled data regarding the thickness of observed MSW in project explorations. These data are presented for the Main Landfill and Five-Acre Landfill in Thickness of Municipal Solid Waste, Figures 20 and 21, respectively. For the purposes of Figures 20 and 21 and this discussion, MSW thickness was assumed equal to the deepest observed MSW in a specific exploration. However, MSW generally is interbedded with layers of sand fill of varying thickness.

MSW thickness within the Main Landfill exceeds 90 feet in boring LFB-4 and LFB-14. As shown in Figure 20, this creates an axis of relatively thick MSW oriented southwest to northeast within the approximate center of the landfill. MSW thickness generally exceeds 40 feet within the entire area located more than 200 feet from landfill boundaries. MSW thickness decreases steeply near Main Landfill boundaries. However, MSW appears to extend between the Main Landfill and Five-Acre Landfill in a deposit that exceeds 10 feet in thickness and about 100 feet in width.

MSW within the Five-Acre Landfill appears to be roughly half the thickness of the Main Landfill. Within the approximate landfill center, MSW exceeds 50 feet in boring LFB-2. MSW thickness attenuates with distance from the landfill center though more gently than the Main Landfill near landfill boundaries.

2.3. Sampling/Analytical Results

2.3.1. Quality of Analyses

A detailed quality assessment of RI laboratory analytical data is provided in the data validation reports in Appendix G. In summary, data quality for GeoEngineers chemical analytical sampling data was found to be acceptable, including where noted or qualified, with a few exceptions. Results for several analytes in one soil sample and four groundwater samples were rejected based on unacceptable quality control results. Based on soil and groundwater results for other samples obtained at the Marshall Landfill, these rejected results, which are discussed below, do not affect the RI conclusions.

- Soil Sample LFB-8 (17-18): benzoic acid was not detected; the reporting limit was rejected based on MS/MSD recoveries.
- Groundwater Samples MW-1A-082516, MW-7B-082516, DUP-082516 and MW-12A-082516: 2,6-dinitrotoluene, 4-chloroaniline and hexachlorocyclopentadiene were not detected (except 2,6-dinitrotoluene in sample DUP-082516); the reporting limits were rejected based on LCS/LCSD recoveries. The positive result for 2,6-dinitrotoluene was qualified as estimated (J).

2.3.2. Results

2.3.2.1. Soil

GeoEngineers collected 20 soil samples between June and August 2015. Soil sampling locations are shown on Figures 6 (Main Landfill) and 7 (Five Acre Landfill). Section 2.2.4 lists the constituents analyzed for and the analytical methods followed.

Soil chemical analytical results are summarized and compared to Model Toxics Control Act (MTCA) Method A or B cleanup levels (CULs) in Tables 2 through 5.

Methylene chloride was the only analyte detected in soil at a concentration greater than a soil CUL. Methylene chloride was detected at soil sample location LFB-4 at a depth of 92 to 93 feet below ground surface at a concentration of 120 J micrograms per kilogram (µg/kg), which is greater than the Method A CUL of 20 µg/kg. The methylene chloride CUL is based on protection of groundwater for drinking water use; methylene chloride was not detected in groundwater in the 19 monitoring wells sampled during the three groundwater monitoring events. Therefore, based on empirical evidence, the soil to groundwater pathway is not complete for methylene chloride and the Method A soil CUL is not appropriate.

The Method B CUL (based on soil ingestion) of 480,000 µg/kg was then used to evaluate observed methylene chloride concentrations in soil. Methylene chloride was not detected at a concentration greater than the Method B CUL and is, therefore, not considered an analyte that exceeds the Method B CUL for the Marshall Landfill Site.

2.3.2.2. Groundwater

GeoEngineers collected groundwater samples from project groundwater monitoring wells during four groundwater monitoring events, conducted during August 2016, November 2016, February 2017, and December 2017. Unless the respective monitoring well was dry upon inspection, during each monitoring event we collected groundwater samples from 20 groundwater monitoring wells (MW-1A, MW-2, MW-2A, MW-3, MW-4, MW-4A, MW-5, MW-5A, MW-7B, MW-7D, MW-8A, MW-8B, MW-9A, MW-11A, MW-12A, MW-14, MW-15, MW-15A, MW-16 and MW-16A). Groundwater sampling locations are shown on Figure 2; quarterly results (analytes and wells with concentrations that exceed the respective CULs) are shown in Chemical Concentrations – Groundwater, Figure 22. Section 2.2.5 lists the constituents analyzed for and the analytical methods followed.

Groundwater chemical analytical results are summarized and compared to MTCA Method A or B CULs in Tables 6 through 10. Analytes that were detected at concentrations greater than CULs are discussed below.

Metals: Total cadmium and lead were detected at concentrations greater than Method A CULs in groundwater samples collected from MW-1A (both metals) and MW-7B (lead only). MW-1A was only sampled in August 2016 because it was dry in September 2016 and February 2017. Total lead was elevated in a duplicate sample obtained from MW-7B in August 2016, but not in the original sample or in samples collected from MW-7B during December 2016 and February 2017. Dissolved cadmium and lead concentrations were less than CULs in all groundwater samples obtained in 2016 and 2017.

Anions: Nitrate was detected at a concentration greater than the Method B CUL in the groundwater sample collected from MW-1A during the August 2016 monitoring event.

Nitriles: Cyanide was detected at concentrations greater than the Method B CUL in groundwater samples collected from MW-5 and MW-5A in August 2016 and December 2016, respectively. Both wells are located at the southeast end of the gravel pit. Cyanide was not detected in MW-5 and MW-5A in February 2017.

Pesticides: 2-methyl-4 chlorophenoxyacetic acid (MCPA) and/or Mecoprop (MCPP) were detected at concentrations greater than Method B CULs in groundwater samples collected from MW-5, MW-7B, MW-8B, MW-12A, MW-14, MW-15A, MW-16 and MW-16A. The concentrations that exceed the respective CULs were

all less than analyte reporting limits (qualified as estimated) and were only from groundwater samples obtained in February 2017. MCPA and MCPP were not detected in any of the groundwater samples obtained during the August 2016, December 2016, or December 2017 groundwater monitoring events.

SVOCs: 1,4-Dioxane, 2,6-dinitrotoluene or bis(2-ethylhexyl)phthalate were detected at concentrations greater than Method B CULs in groundwater samples from the following monitoring wells: MW-11A (1,4-dioxane), MW-7B and MW-8A (2,6-dinitrotoluene), and MW-5, MW-5A and MW-15A (bis[2-ethylhexyl]phthalate). Except for 2,6-dinitrotoluene in MW-7B and MW-8A, these SVOCs were detected at elevated concentrations in only one of the groundwater monitoring events; 2,6-dinitrotoluene was detected at elevated concentrations in MW-7B and MW-8A in three and two rounds of groundwater monitoring, respectively.

VOCs: Methylene chloride was detected at a concentration greater than the Method B CUL in the groundwater sample collected from MW-12A during the December 2017 monitoring event. Methylene chloride was detected in five monitoring wells in December 2017 but was not detected in any monitoring well during the previous RI monitoring events. Although methylene chloride was identified as a primary COC by PGG (2005), the presence of methylene chloride may be the result of laboratory contamination. Methylene chloride is a common laboratory contaminant, though it was not detected in the applicable method blank samples.

As shown in Figure 22, one or more groundwater analytes were observed to exceed project CULs in slightly greater than half of the project groundwater monitoring wells during the RI monitoring period. However, these concentrations that exceed the respective CULs generally occurred in only one of four RI groundwater monitoring events (except for 2,6-Dinitrotoluence in MW-7B, which exceeded twice). This suggests that any groundwater contaminant plume below the Site is discontinuous both spatially and temporally.

2.3.2.3. Surface Water

GeoEngineers collected surface water samples from one location along Marshall Creek (at the northeast end of the City of Marshall) during three monitoring events, conducted during August 2016, November 2016 and February 2017. The surface water sampling location is shown in Figure 1. Section 2.2.5 lists the constituents analyzed for and the analytical methods followed.

Surface water sample chemical analytical results are summarized and compared to MTCA Method B CULs in Tables 11 through 15. The surface water CULs in Tables 11 through 15 are the lowest values of (1) MTCA Method B formula values (WAC 173-340-730, Equation 730-2) based on the human health fish consumption pathway and (2) freshwater water quality criteria (WAC 173-201, national toxics rule and Clean Water Act) based on protection of aquatic life.

Arsenic is the only constituent detected at concentrations greater than surface water CULs. The observed total and dissolved arsenic surface water concentrations range from 0.0014 milligrams per liter (mg/L) to 0.0020 mg/L, which are greater than the CUL of 0.0000982 mg/L.

The arsenic surface water CUL of 0.0000982 mg/L is the MTCA Method B formula value (WAC 173-340-730, Equation 730-2) based on the human health fish consumption pathway. As discussed in Section 3.0 of this report (Conceptual Site Model), the fish consumption pathway is not expected to be complete. Therefore, the arsenic surface water results were also compared to aquatic life water quality criteria (WAC 210A, National Toxics Rule and the National Recommended Water Quality Criteria). The lowest

applicable freshwater aquatic life surface water quality criteria for arsenic is 0.150 mg/L (National Recommended Water Quality Criteria). Arsenic was not detected in surface water at concentrations greater than 0.150 mg/L.

Based on the above discussion, surface water at the Site is in compliance with applicable MTCA Method surface water CULs.

2.3.2.4. Landfill Gas

GeoEngineers collected landfill gas samples from landfill gas monitoring wells during four monitoring events, conducted during September 2015, August 2016, December 2016 and February 2017. The soil vapor sampling locations (LFB-3, LFB-4, LFB-5, LFB-8, LFB-9, LFB-10, LFB-11, LFB-15, LFB-16 and LFB-17) are shown in Figure 6 (Main Landfill), Figure 7 (Five Acre Landfill) and Figure 8 (both landfills). Landfill gas samples were analyzed for VOC concentrations by EPA Air Method Toxic Organics 15. In addition, landfill gas was screened in the field at each location using a handheld GEM 2000+ meter to measure concentrations of methane, carbon dioxide and oxygen (2016 and 2017 events only).

Landfill gas sample chemical analytical results are summarized and compared to MTCA Method B shallow (sub-slab) soil gas screening levels (SLs) in Table 16; methane screening results are summarized in Table 17. The shallow soil gas SLs, which are equal to the MTCA Method B air CUL divided by 0.03 (or multiplied by approximately 33.3), are based on the potential for vapor intrusion into residential homes on, or adjacent to, the landfills.

A total of 12 VOCs were detected at concentrations greater than the MTCA Method B shallow soil gas SLs in at least one sample. Concentrations that exceed the respective SLs were observed in 8 of the 10 landfill gas monitoring wells. These 12 VOCs are primarily petroleum-related compounds or chlorinated solvents. VOCs were not detected at elevated concentrations (that is, greater than soil gas SLs) in wells LFB-15 and LFB-16, which are located at the south end of the Main Landfill (see Soil Gas VOC Summary, Figure 23). The landfill gas results indicate that VOCs are present at concentrations greater than MTCA Method B shallow soil gas SLs throughout both landfills, except for the south end of the Main Landfill.

Methane concentrations measured during the 2016 and 2017 events are shown in Methane Monitoring Results 2016-2017, Figure 24. Observed methane concentrations were greater than the lower explosive limit (LEL) of 5 percent in two of four landfill gas monitoring wells at the Five Acre Landfill and three of six landfill gas monitoring wells at the Main Landfill during at least one monitoring event. Per WAC 173-304-460 (Landfilling Standards), methane concentrations should not be greater than the LEL at the landfill boundary. This criterion has been met at the south and southeastern boundary of the Main Landfill, but not at the west and north boundaries of the Main Landfill or at the Five Acre Landfill.

3.0 CONCEPTUAL SITE MODEL

3.1. General

The Conceptual Site Model (CSM) is a model of the potential contaminant sources, release mechanisms and transport mechanisms currently present at the Site. The CSM also identifies potential receptors and associated exposure pathways for Site contaminants. The CSM does not quantify potential risks to human health or the environment posed by Site-related contamination. It is intended to focus remedial actions (site investigations, monitoring, cleanup actions, etc.) on those areas of the Site that may warrant further

consideration. The CSM is graphically depicted in Conceptual Site Model, Figure 25, and expanded upon below and in Appendix D (Potential Receptor Evaluation).

3.2. Potential Contaminant Sources, Exposure Pathways and Receptors

GeoEngineers conducted a potential receptor evaluation to identify: (1) contaminant sources and (2) potential receptors (people and sensitive ecological receptors) that could encounter Site-related contamination. The Potential Receptor Evaluation is provided in Appendix D.

The source of contamination at the Site is the landfilled waste. Potentially complete exposure pathways, including release mechanisms, exposure points, and exposure routes for contamination contained within the landfill generally are:

- Direct contact with soil impacted by waste and/or leachate from the landfill (dermal contact and inhalation/incidental ingestion of dust and contaminants).
- Inhalation of landfill gases emanating from the landfill.
- Direct contact and/or ingestion of groundwater and/or surface water impacted by leachate from the landfill.

Potential receptors include workers at the Action Materials facility, nearby residents and occasional trespassers. Potential terrestrial ecological receptors include plants, soil biota and wildlife. The MTCA site-specific Terrestrial Ecological Evaluation (TEE), provided in Appendix H, focuses on mammalian and avian wildlife (specifically, shrews, voles and robins) based on the greater availability of toxicity information for these receptors. The shrew, vole and robin are potential receptors at the Site. Other species that may occur at the Site but would likely be less exposed due to their greater home ranges, include resident predatory bird species such as red-tailed hawk (*Buteo jamaicensis*) and bald eagle (*Haliaeetus leucocephalus*). There are also numerous other resident and migratory birds common within the Spokane area; however, the robin conservatively assesses their potential exposure. Smaller mammals likely present at the Site, such as squirrels and chipmunks, are effectively assessed by the vole surrogate. Larger mammals that could use the Site are not directly represented by use of a surrogate; however, mammals such as coyote (*Canis latrans*), porcupine (*Erethizon dorsatum*), white-tailed deer (*Odocoileus virginianus*), and Rocky Mountain elk (*Cervus elaphus nelson*) require large tracks of land for foraging, wintering, breeding and nesting such that their use of the Site would be infrequent or unlikely. The home ranges of these species would be an order of magnitude greater than that of the shrew and vole.

3.2.1. Soil

No analyte was detected in soil at a concentration greater than applicable MTCA Method B soil CULs. Methylene chloride was detected in soil at a concentration greater than the MTCA Method A soil CUL based on the protection of groundwater; however, methylene chloride was not identified as a groundwater contaminant of concern. The methylene chloride soil data were subsequently compared to the MTCA Method B soil CUL based on direct contact (soil ingestion); methylene chloride was not detected in soil at concentrations greater than the direct contact CUL.

Dibutylphthalate, cyanide, lube oil-range petroleum hydrocarbons, selenium and vanadium were identified as contaminants of potential ecological concern (COPEC) in the Site-specific TEE. However, as discussed in

Appendix H, the results of the Site-specific TEE suggest that these analytes are not expected to pose a significant hazard to ecological receptors.

Except for one soil sample, the soil samples were obtained below the standard point of compliance for direct contact (deeper than 15 feet bgs). These deeper soil samples are assumed to conservatively represent shallow soil (that is, soil within the standard point of compliance).

The presence of the soil caps at the two landfills will significantly reduce any potential exposure by people and terrestrial ecological receptors to Site-related contamination. Potential exposure is limited to exposed waste at the two landfills.

3.2.2. Groundwater

The results of recent groundwater monitoring during the RI do not indicate evidence of groundwater contamination that can be reproduced during subsequent monitoring events. Note that this finding does not extend to 1,4-Dioxane results, which only was analyzed for during the December 2007 monitoring event.

RI groundwater analytical results indicate that the extent of groundwater with analyte concentrations greater than CULs is limited, discontinuous, and variable between monitoring events. Observed groundwater analyte concentrations that exceed respective CULs are summarized by the following:

- The groundwater monitoring wells with at least one groundwater analyte concentration that exceeded a CUL during RI monitoring events (MW-1A, MW-5, MW-5A, , MW-7B, MW-8A and MW-8B, MW-12A, MW-14A, MW-15A, MW-16, and MW-16A) are distributed throughout the Site (Figure 22).
- Concentrations of inorganic analytes that exceed respective CULs (cadmium, lead and nitrate) are limited to the west-central portion of the Site, extending from MW-1A along the south boundary of the Five-Acre Landfill to MW-7B along the north boundary of the Main Landfill.
- MCPA and MCPP, were only detected in February 2017, but were more widely-distributed.
- There is some uncertainty associated with the extent of 2,6-dinitrotoluene, MCPA and MCPP groundwater contamination due to elevated reporting limits for these three analytes. However, the laboratory reported the results down to the method detection limits, which only exceed the MTCA Method B groundwater CULs by a factor of two for these three analytes. Therefore, even if these analytes were presented in groundwater samples reported as not detected, the groundwater concentrations would be less than two times the MTCA Method B groundwater CUL. To address the elevated reporting limits for MCPA and MCPP, a mass spectrometer (MS) was used to identify and quantify MCPA and MCPP in groundwater samples collected in December 2017 resulting in reporting limits less than the MTCA Method B groundwater CULs. MCPA and MCPP were not detected in December 2017.

As discussed in “Section 2.2.10. Hydrogeology,” shallow groundwater flow within the glaciofluvial and basement rock units generally mimics topographic conditions and is directed from the area surrounding the Site towards discharge areas situated to the northeast and east. GeoEngineers was not tasked with conducting a survey of active private/community wells. However, based on our review of previous investigations, we estimate that there are a minimum of three groundwater supply or private/community wells within 1,500 feet of the Site. The Marshall Landfill groundwater supply well is located near

groundwater monitoring well MW-3; no detections above groundwater CULs were detected in MW-3 during the 2016/2017 monitoring events. The Countryman A&D well is located around 750 feet east of the Main Landfill and the Beck Well is located approximately 1,500 feet northeast of MW-8A and MW-8B. Given the limited and sporadic nature of analyte concentrations in groundwater that exceed respective CULs observed within the Site groundwater monitoring wells during the RI investigation, it is logical to conclude that these groundwater supply wells are unlikely to be affected by Site-related groundwater contamination. However, a detailed evaluation of this pathway, including sampling of nearby groundwater supply wells, was not within the scope of this RI.

3.2.3. Surface Water

As noted in Section 2.3.2, based on the single surface water sampling location, surface water at the Site is in compliance with applicable MTCA Method surface water CULs. In addition, both Minnie Creek and Marshall Creek, when they contain water, are losing streams (discharge to groundwater) near the Site (PGG 2005). Therefore, the direct contact and/or ingestion of surface water exposure pathways are incomplete.

3.2.4. Soil Vapor

Twelve VOCs were detected at concentrations greater than the MTCA Method B shallow soil gas SLs in at least one sample and in 8 of the 10 landfill gas monitoring wells. These 12 VOCs are primarily petroleum-related compounds or chlorinated solvents. Methane concentrations are greater than the LEL of 5 percent in two of four landfill borings at the Five Acre Landfill and three of six landfill borings at the Main Landfill during at least one monitoring event. The boundaries of landfill gas contamination have not been delineated, except for the following:

- VOC concentrations that exceed respective CULs appear to attenuate before the south boundary of the Main Landfill.
- Methane concentrations that exceed the CUL appear to attenuate before the south and southeast boundaries of the Main Landfill.

A primarily concern associated with VOC and methane landfill gas concentrations is the potential for vapor intrusion into overlying or nearby buildings. Vapor intrusion could potentially be a concern for structures built in proximity to the Main and Five-Acre Landfills in the future. Currently, buildings are not present on either landfill. The only existing buildings near either landfill that may be subject to vapor intrusion are the Action Materials' buildings between the gravel pit and the Main Landfill.

4.0 PROPOSED CLEANUP STANDARDS

Cleanup standards consist of: (1) CULs that are protective of human health and the environment; and (2) the point of compliance at which the CULs must be met. Proposed cleanup standards for remedial alternative evaluation are presented below.

4.1. Soil Cleanup Standards

Soil CULs for the Site are not required. Analytes were not detected in soil at concentrations greater than applicable MTCA Method A or B soil CULs and, as discussed in Appendix H, the results of the site-specific

TEE suggest that analytes identified as COPECs are not expected to pose a significant hazard to ecological receptors.

4.2. Groundwater Cleanup Standards

Groundwater CULs are presented in Summary of Cleanup Levels, Table 21 for analytes detected at concentrations greater than MTCA Method A or B CULS (Bis(2-ethylhexyl)phthalate [BEHP], cadmium, cyanide, 2,6-dinitrotoluene, lead, MCPA, MCPP and nitrate). The groundwater CULs are generally the standard MTCA Method B potable groundwater CUL (WAC 173-340-720[4][b]), obtained from Ecology's "CLARC Master Spreadsheet.xlsx" dated August 2015. However, these values were not selected as groundwater CULs if "sufficiently protective" federal or state criteria were available (BEHP, cadmium, lead and nitrate). According to Ecology (Ecology, 2005), a criterion is sufficiently protective if the "excess cancer risk does not exceed 1 in 100,000 (1×10^5) and the hazard quotient (HQ) does not exceed one (1)."

The standard point of compliance for groundwater under MTCA is throughout the Site.

4.3. Air Cleanup Standards

Air CULs are presented in Table 21 for analytes that were detected in soil gas samples obtained at the Site at concentrations greater than MTCA Method B shallow soil gas screening levels (Ecology 2015B; see analyte list below). The air CULs are based on the protection of human health. The standard point of compliance is ambient air throughout the Site; however, the air CULs may also apply to the Action Materials' buildings located between the gravel pit and the Main Landfill.

Air CULs were established for the following analytes:

- Petroleum Compounds: 1,2,4-trimethylbenzene, 1,3-butadiene, benzene, naphthalene, xylene
- Chlorinated Solvents: 1,2-dichloroethane, trichloroethene, vinyl chloride
- Other: 1,4-dichlorobenzene, 1,4-dioxane, benzyl chloride, chloroethane

4.4. Landfill Gas Standards

WAC 173-340-460 specifies air quality and toxic air emissions standards for explosive gases. Explosive gases (expressed as methane) shall not exceed the following levels (which also are listed in Table 21):

- 25 percent of the LEL (or 1.25 percent methane) in facility structures. There are currently no facility structures on the Main Landfill or Five-Acre Landfill and no structures are expected to be constructed in these locations in the future.
- The LEL (or 5 percent methane) at the property boundary or beyond.
- 100 parts per million by volume of methane in off-Site structures (that is, the Action Material's buildings).

5.0 SUMMARY AND CONCLUSIONS

Contamination greater than CULs is limited to groundwater and landfill gases (VOCs and methane), as summarized above and presented in Figures 22 through 24.

5.1. Soil

The soil results and TEE indicate that soil at the landfills do not pose a significant risk to human health or the environment. However, observations of the low permeability cap over the Five-Acre Landfill indicated that the cap is not intact over the entire area of the landfill and some waste was exposed. The FS considers the caps at both landfills.

5.2. Surface Water

Surface water exposure pathways do not appear to be complete. No further action is required.

5.3. Groundwater

The results of groundwater monitoring in 2016 and 2017 as part of remedial investigation do not indicate significant groundwater contamination. Rather, the results indicate that the extent of groundwater with analyte concentrations greater than CULs is limited, discontinuous and variable between monitoring events.

Given the limited and sporadic nature of groundwater analytes that exceed respective CULs observed within the Site groundwater monitoring wells during the RI investigation, it is logical to conclude that off-Site groundwater supply wells are unlikely to be affected by Site-related groundwater contamination. However, a detailed evaluation of this pathway, including sampling of nearby groundwater supply wells, was not within the scope of this RI. No groundwater remediation appears to be warranted based on the RI results. However, we recommend the Site groundwater monitoring program be continued on a quarterly basis. Because of the fluctuating nature of observed Site groundwater contamination, we recommend that the program initially contain each Site groundwater monitoring well and that the well network be reevaluated periodically as additional data emerge.

Because of its association with 1,1,1-TCA, 1,4-Dioxane was added to the groundwater analytical suite during the December 2017 monitoring event and should be retained for future groundwater monitoring activities. The 1,4-Dioxane detection limit should be less than 0.1 micrograms per liter (µg/L).

5.4. Landfill Gas

These results indicate that the boundaries and extent of landfill gas contamination (VOCs and methane) have not been fully delineated for both the Main and Five-Acre Landfills.

The primary concern associated with VOC and methane landfill gas concentrations is the potential for vapor intrusion into overlying or nearby buildings. Vapor intrusion could potentially be a concern for structures built in proximity to the Main and Five-Acre Landfills in the future. Currently, buildings are not present on either landfill. The only existing buildings near either landfill that may be subject to vapor intrusion are the Action Materials' buildings between the gravel pit and the Main Landfill.

The FS considers the potential for off-Site migration of landfill gases (VOCs and methane) and vapor intrusion at the Action Material's buildings.

Future landfill gas monitoring operations should be augmented by collection of landfill gas pressure measurements.

6.0 DATA GAPS

During RI analysis and evaluation, several data gaps related to the nature and extent of subsurface contamination beneath the Site were identified. These data gaps should be addressed during the remedial design phase and include the following:

- Extent of Elevated Landfill Gas Concentration: The majority of landfill gas monitoring wells were characterized by historic VOC and/or methane concentrations that exceeded CULs. As such, the RI explorations do not bound the extent of landfill gas concentrations that exceed CULs. This should be addressed by installation and monitoring of additional landfill gas monitoring wells prior to remediation.
- Damage to Landfill Cover: Solid waste was observed at ground surface in specific locations within the boundaries of Site landfills, suggesting damage to the landfill covers. However, the extent of the damage to the landfill covers has not been mapped. Depending on the selected remedial alternative, the extent of damage to existing landfill covers should be mapped prior to remedial design.
- Landfill Gas Pressure: Landfill gas pressure within landfill gas monitoring wells was measured during one (December 2017) monitoring event. Pressure measurements should be incorporated into the site landfill gas monitoring program and evaluated for seasonal or other fluctuation in landfill gas pressure.
- Soil Movement: Six survey monuments were installed within sloped portions of the Main Landfill during December 2017. Survey monuments are constructed of 5/8-inch-diameter rebar 30 inches in length and outfitted with a red control cap. The horizontal and vertical locations of the installed monuments are specified in Table I-1 of Appendix 1. Approximate survey monument locations also are presented in Figure I-1 of Appendix I. The extent or absence of creep movement on the slope face is unknown and should be monitored by survey on a semi-annual basis.

7.0 LIMITATIONS

This report has been prepared for the exclusive use of the Washington State Department of Ecology in their evaluation of the Site located in Spokane County, Washington. No other party may rely on the product of our services unless we agree in advance and in writing to such reliance.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions express or implied should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

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TABLES

GeoEngineers

Table 1

Drilling and Well Construction Summary

Marshall Landfill

Spokane County, Washington

	Units	MW-1A	MW-2	MW-2A	MW-3	MW-4	MW-4A	MW-5	MW-5A	MW-6[3]	MW-7A[3]	MW-7B	MW-7C[3]	MW-7D	MW-8A	MW-8B
General																
Consulting Firm		Golder Assoc.	Golder Assoc.	Fetrow	Golder Assoc.	Golder Assoc.	Fetrow	Golder Assoc.	Fetrow	Fetrow	Fetrow	Fetrow	Fetrow	GeoEngineers	Fetrow	Fetrow
Month Construction Completed		Mar-89	Mar-89	Oct-90	Mar-89	Mar-89	Oct-90	Mar-89	Mar-91	Jun-90	Sep-90	Oct-90	Oct-90	Aug-15	Oct-90	Mar-91
Surface Completion Type		Above Ground	Flush Mount	Flush Mount	Above Ground	Above Ground	Above Ground	Flush Mount	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground
Northing[1]	feet	220058.2	219037.9	219054.3	219427.0	218206.8	217940.9	220163.4	220194.6	NA	NA	219993.7	NA	219987.3	220273.2	220288.8
Easting[1]	feet	2460382	2461441	2461450	2461680	2461025	2461003	2462443	2462407	NA	NA	2461014	NA	2460913	2463271	2463290
Ground Surface Elevation[2]	feet NAVD 88	2335.04	2176.26	2175.98	2180.64	2160.44	2157.81	2188.01	2186.15	2178.8	2320.3	2327.00	2318.6	2329.02	2138.32	2137.34
Top of Casing Elevation[2]	feet NAVD 88	2335.52	2176.05	2175.80	2182.30	2161.27	2159.26	2187.91	2187.46	2180.72	2321.50	2327.48	2320.70	2331.70	2139.65	2139.56
Casing Stickup	feet	0.47	-0.21	-0.19	1.66	0.83	1.45	-0.10	1.32	1.92	1.20	0.48	2.10	2.68	1.33	2.22
Total Depth Drilled (from log)	feet	212.0	85.0	116.8	117.0	50.0	80.0	122.0	143.0	254.0	396.0	300.0	227.0	300.0	121.0	91.0
Measured Well Depth (11/16/2015)	feet bgs	210.26	83.23	108.2	118.15	49.50	80.32	121.98	142.25	--	--	299	--	298	122.33	93.87
Comments										Not Found	Not Found		Not Found			
Lithology																
Aquifer		Weathered Basement	Glaciofluvial	Glaciofluvial	Glaciofluvial	Glaciofluvial	Glaciofluvial	Glaciofluvial	Glaciofluvial	Basement	Basement	Basement	Basement	Basement	Basement	Glaciofluvial
Depth to Top of Bedrock	feet bgs	203	--	--	--	--	78	--	--	182	180	183	191	169	83	85
Elevation of Top of Bedrock[2]	feet	2132.0	--	--	--	--	2079.8	--	--	1996.8	2140.3	2144.0	2127.6	2160.0	2055.3	2052.3
Type of Bedrock	feet	Schist	--	--	--	--	Schist/Gneiss	--	--	Schist/Gneiss	Schist/Gneiss	Schist/Gneiss	Schist/Gneiss	Gneiss	Schist/Gneiss	Schist/Gneiss
Thickness of Glacial Sediment	feet	203	>85	>116.8	>117	>50	78	>122	>143	182	180	183	191	169	83	85
Well Construction																
Casing Material		PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC			PVC	PVC
Casing Diameter	inches	2	2	4	2	2	4	2	4	4	4	4	4	2	4	4
Screen Length	feet	10	10	15	10	10	15	10	15	10	10	10	15	15	15	25
Screen Slot Width	inches	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Depth to Top of Screen	feet	199.0	73.0	93.0	106.0	38.0	63.0	109.0	124.5	242.5	382.0	288.5	210.0	283.0	104.5	64.5
Depth to Bottom of Screen	feet	209.0	83.0	108.0	116.0	48.0	78.0	119.0	139.5	252.5	392.0	298.5	225.0	298.0	119.5	89.5
Elevation of Top of Screen[2]	feet NAVD88	2136.0	2103.3	2083.0	2074.6	2122.4	2094.8	2079.0	2061.6	1936.3	1938.3	2038.5	2108.6	2046.0	2033.8	2072.8
Elevation of Bottom of Screen[2]	feet NAVD88	2126.0	2093.3	2068.0	2064.6	2112.4	2079.8	2069.0	2046.6	1926.3	1928.3	2028.5	2093.6	2031.0	2018.8	2047.8
Groundwater Measurement Date		11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	6/18/1990	10/25/1990	11/28/2016	10/25/1990	11/28/2016	11/28/2016	11/28/2016
Depth to Groundwater (feet below top of casing)	feet below TOC	Dry	Dry	91.20	105.67	Dry	63.65	Dry	117.40	106.92	216.20	224.02	202.10	220.43	76.93	76.74
Depth to Groundwater (feet below ground surface)	feet bgs	>209	>83	91.39	104.01	>48	62.20	>119	116.08	105	215	223.54	200	217.75	75.60	74.52
Groundwater/Potentiometric Elevation[2]	feet NAVD88	<2126.044	<2093.258	2084.60	2076.63	<2112.439	2095.61	<2069.014	2070.06	2073.8	2105.3	2103.46	2118.6	2111.27	2062.72	2062.82

	Units	MW-9A	MW-11A	MW-12A	MW-14	MW-15	MW-15A	MW-16	MW-16A
General									
Consulting Firm		Fetrow	Fetrow	Fetrow	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers
Month Construction Completed		Mar-91	Mar-91	Mar-91	Aug-15	Jun-15	Aug-15	Jul-15	Aug-15
Surface Completion Type		Above Ground	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground	Above Ground
Northing[1]	feet	217606.8	219845.1	220932.7	219019.5	219860.1	219875.6	218485.9	218449.8
Easting[1]	feet	2461405	2459984	2460633	2460646	2461932	2461902	2461138	2461131
Ground Surface Elevation[2]	feet NAVD 88	2155.28	2323.58	2351.11	2310.99	2233.52	2234.29	2167.61	2165.04
Top of Casing Elevation[2]	feet NAVD 88	2156.97	2324.51	2353.36	2313.83	2236.04	2237.26	2170.24	2167.89
Casing Stickup	feet	1.69	0.93	2.25	2.83	2.52	2.98	2.64	2.85
Total Depth Drilled (from log)	feet	74.0	245.0	137.0	255.0	177.0	259.0	112.0	150.0
Measured Well Depth (11/16/2015)	feet bgs	72.64	243.28	134.88	255.54	178.64	205.9	89.03	132.18
Comments									
Lithology									
Aquifer		Glaciofluvial	Weathered Basement	CRBG	Glaciofluvial	Glaciofluvial	Glaciofluvial	Glaciofluvial	Basement
Depth to Top of Bedrock	feet bgs	--	205	11.1	--	--	--	109	110
Elevation of Top of Bedrock[2]	feet	--	2118.6	2340.0	--	--	--	2058.6	2055.0
Type of Bedrock	feet	--	Metamorphic	Basalt	--	--	--	Gneiss	Gneiss
Thickness of Glacial Sediment	feet	>74	205	11.1	>255	>177	>259	109	110
Well Construction									
Casing Material		PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC
Casing Diameter	inches	4	4	4	2	2	2	2	2
Screen Length	feet	25	30	30	10	15	10	17	15
Screen Slot Width	inches	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Depth to Top of Screen	feet	43.5	207.5	104.5	242.3	160.0	192.0	69.5	111.0
Depth to Bottom of Screen	feet	68.5	237.5	134.5	252.3	175.0	202.0	86.5	126.0
Elevation of Top of Screen[2]	feet NAVD88	2111.8	2116.1	2246.6	2068.7	2073.5	2042.3	2098.1	2054.0
Elevation of Bottom of Screen[2]	feet NAVD88	2086.8	2086.1	2216.6	2058.7	2058.5	2032.3	2081.1	2039.0
Groundwater Measurement Date		11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016	11/28/2016
Depth to Groundwater (feet below top of casing)	feet below TOC	57.96	221.02	113.83	221.43	162.70	163.86	78.18	75.70
Depth to Groundwater (feet below ground surface)	feet bgs	56.27	220.09	111.58	218.60	160.18	160.89	75.54	72.85
Groundwater/Potentiometric Elevation[2]	feet NAVD88	2099.01	2103.49	2239.53	2092.40	2073.34	2073.40	2092.06	2092.19

Notes:

[1]Northings and eastings are presented relative to Washington State Plane North, North American Datum of 1983 (NAD83) and were obtained from a survey conducted by TD&H Engineering, Inc. on December 9, 2016.

[2]Elevations in this table are presented relative to the North American Vertical Datum of 1988 (NAVD88). Wellhead elevations generally were obtained from a survey conducted by TD&H Engineering, Inc. on December 9, 2016.

[3]Monitoring wells MW-6, MW-7A, and MW-7C were not available for the December 9, 2016 survey. The provided elevations are from Fetrow (1991). Examination of the Fetrow (1991) survey indicates the datum was the National Geodetic Vertical Datum of 1929 (NGVD 29). 3.80 feet was added to correct to NAVD 88.

-- = not applicable; NA = not available.

Table 2

Soil Analytical Results - TPH, Metals, Nitriles and PCBs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location / Sample ID / Sample Date / Depth Interval (Feet) / MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
TPH[3]	Gasoline-range hydrocarbons[4]	mg/kg	30/100[5]	NL	41 U	40 U	39 U	37 U	41 U	38 U	41 U	39 U	39 U	40 U
	Diesel-range hydrocarbons	mg/kg	2,000	NL	100 U	100 U	98 U	93 U	100 U	95 U	100 U	97 U	97 U	100 U
	Lube Oil-range Hydrocarbons	mg/kg	2,000	NL	100 U	100 U	98 U	93 U	100 U	95 U	100 U	97 U	97 U	100 U
Metals[6]	Antimony	mg/kg	NE	32	**0.15 J**	**0.55**	**0.22**	**0.55**	**0.64**	**0.21**	**0.33**	**0.30**	**0.29**	**0.18 J**
	Arsenic	mg/kg	20	NL	**1.9**	**10**	**5.8**	**9.4**	**11**	**2.8**	**4.9**	**8.0**	**5.0**	**3.3**
	Barium	mg/kg	NE	16,000	**82**	**89**	**69**	**86**	**84**	**100**	**170**	**81**	**130**	**68**
	Beryllium	mg/kg	NE	160	**0.28**	**0.38**	**0.31**	**0.45**	**0.48**	**0.33**	**0.51**	**0.34**	**0.41**	0.32 U
	Cadmium	mg/kg	2	NL	**0.20**	**0.14 J**	**0.36**	**0.37**	**0.42**	**0.21**	**0.16 J**	**0.097 J**	**0.16 J**	**0.067 J**
	Chromium	mg/kg	2,000	NL	**9.2**	**8.8**	**7.3**	**9.0**	**12**	**4.4**	**10**	**6.3**	**7.7**	**6.7**
	Copper	mg/kg	NE	3,200	**18**	**11**	**10**	**12**	**20**	**21**	**86**	**13**	**15**	**14**
	Iron	mg/kg	NE	56,000	**48,000**	**20,000**	**24,000**	**26,000**	**28,000**	**45,000**	**31,000**	**20,000**	**33,000**	**19,000**
	Lead	mg/kg	250	NL	**2.0**	**9**	**5.3**	**7.3**	**13**	**5.8**	**7.8**	**6.0**	**6.7**	**4.3**
	Manganese	mg/kg	NE	11,200	**720**	**340**	**330**	**500**	**560**	**700**	**400**	**470**	**510**	**210**
	Mercury[7]	µg/kg	2,000	NL	**3.7 J**	**13 J**	37 U	**3.9 J**	**38 J**	**3.6 J**	**4.9 J**	**27 J**	**5.1 J**	**11 J**
	Nickel	mg/kg	NE	1,600	**14**	**11**	**8.0**	**10**	**13**	**12**	**11**	**8.7**	**9.5**	**8.3**
	Selenium	mg/kg	NE	400	**1.4**	**0.69 J**	**0.71 J**	**0.51 J**	**0.7 J**	**2.0**	**1.5**	**0.76 J**	**1.6**	**0.78 J**
	Silver	mg/kg	NE	400	**0.015 J**	**0.061 J**	**0.027 J**	**0.036 J**	**2.2**	**0.024 J**	**0.051 J**	**0.024 J**	**0.028 J**	**0.03 J**
	Thallium	mg/kg	NE	0.8	0.38 U	**0.11 J**	0.44 U	0.4 U	**0.14 J**	0.41 U	0.42 U	0.31 U	0.37 U	0.40 U
	Vanadium	mg/kg	NE	400	**55**	**26**	**37**	**38**	**40**	**85**	**57**	**25**	**66**	**26**
	Zinc	mg/kg	NE	24,000	**62**	**73**	**47**	**49**	**68**	**85**	**68**	**39**	**69**	**37**
Nitriles[8]	Cyanide	mg/kg	NL	48	2.1 UJ	**3.4**	2.0 U	1.9 U	2.2 UJ	2.0 U	2.0 U	2.0 U	2.1 U	1.9 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
PCBs[9]	PCB-Aroclor 1016	µg/kg	1,000	NL	10 U	10 U	11 U	10 U	10 UJ	10 U	11 U	10 U	10 U	10 UJ
	PCB-Aroclor 1221	µg/kg			10 U	10 U	11 U	10 U	10 UJ	10 U	11 U	10 U	10 U	10 UJ
	PCB-Aroclor 1232	µg/kg			10 U	10 U	11 U	10 U	10 UJ	10 U	11 U	10 U	10 U	10 UJ
	PCB-Aroclor 1242	µg/kg			10 U	10 U	11 U	10 U	10 UJ	10 U	11 U	10 U	10 U	10 UJ
	PCB-Aroclor 1248	µg/kg			10 U	10 U	11 U	10 U	10 UJ	10 U	11 U	10 U	10 U	10 UJ
	PCB-Aroclor 1254	µg/kg			**2.4 J**	10 U	11 U	10 U	**190** J	10 U	11 U	10 U	10 U	10 UJ
	PCB-Aroclor 1260	µg/kg			10 U	10 U	11 U	10 U	10 UJ	10 U	11 U	10 U	10 U	10 UJ
	Total PCBs[10]	µg/kg			**2.4 J**	10 U	11 U	10 U	**190** J	10 U	11 U	10 U	10 U	10 UJ

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15 (164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205) 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
TPH[3]	Gasoline-range hydrocarbons[4]	mg/kg	30/100[5]	NL	39 U	38 U	39 U	40 U	40 U	46 U	49 U	39 U	55 U	47 U
	Diesel-range hydrocarbons	mg/kg	2,000	NL	96 U	95 U	97 U	100 U	100 U	110 U	120 U	98 U	140 U	120 U
	Lube Oil-range Hydrocarbons	mg/kg	2,000	NL	96 U	95 U	**450 J**	100 U	100 U	110 U	120 U	98 U	140 U	120 U
Metals[6]	Antimony	mg/kg	NE	32	**0.44**	**0.56**	**0.87**	**0.53**	**0.56**	**0.32**	**0.36**	**0.47**	**0.45**	**0.50**
	Arsenic	mg/kg	20	NL	**8.6**	**12**	**9.6**	**9.5**	**8.6**	**4.6**	**5.0**	**10**	**6.4**	**7.3**
	Barium	mg/kg	NE	16,000	**79**	**87**	**120**	**76**	**73**	**44**	**68**	**69**	**100**	**88**
	Beryllium	mg/kg	NE	160	0.42 U	0.40 U	**0.48**	0.42 U	**0.46**	**0.32**	**0.68**	**0.43**	**0.87**	**0.55**
	Cadmium	mg/kg	2	NL	**0.088 J**	**0.15 J**	**0.29**	**0.13 J**	**0.13 J**	**0.1 J**	**0.059 J**	**0.14 J**	**0.072 J**	**0.051 J**
	Chromium	mg/kg	2,000	NL	**10**	**10**	**37**	**11**	**12**	**6.4 J**	**15**	**10**	**17**	**14**
	Copper	mg/kg	NE	3,200	**13**	**15**	**36**	**14**	**17**	**13**	**15**	**19**	**19**	**23**
	Iron	mg/kg	NE	56,000	**20,000**	**26,000**	**32,000**	**21,000**	**24,000**	**20,000**	**22,000**	**23,000**	**29,000**	**24,000**
	Lead	mg/kg	250	NL	**6.3**	**9.3**	**24**	**11**	**11**	**7.6 J**	**9.6**	**10**	**10**	**10**
	Manganese	mg/kg	NE	11,200	**400**	**380**	**450**	**400**	**400**	**380**	**310**	**530**	**380**	**440**
	Mercury[7]	µg/kg	2,000	NL	**1.9 J**	**4.2 J**	**42 J**	**15 J**	**3.9 J**	**25**	**9.3 J**	**6.3 J**	**7.6 J**	**19 J**
	Nickel	mg/kg	NE	1,600	**9.9**	**12**	**13**	**11**	**12**	**10**	**13**	**15**	**15**	**13**
	Selenium	mg/kg	NE	400	**0.79 J**	**1.0**	**1.4**	**0.87 J**	**0.86 J**	**0.86 J**	**0.91 J**	**0.93 J**	**1.0 J**	**0.96 J**
	Silver	mg/kg	NE	400	**0.041 J**	**0.051 J**	**0.065 J**	**0.049 J**	**0.047 J**	**0.035 J**	0.22 U	**0.044 J**	0.25 U	**0.047 J**
	Thallium	mg/kg	NE	0.8	0.37 U	0.34 U	0.40 U	0.37 U	0.35 U	**0.17 J**	**0.23 J**	0.43 U	**0.24 J**	**0.17 J**
	Vanadium	mg/kg	NE	400	**27**	**34**	**49**	**25**	**31**	**21**	**35**	**37**	**53**	**32**
	Zinc	mg/kg	NE	24,000	**41**	**52**	**110**	**49**	**52**	**39**	**47**	**51**	**61**	**58**
Nitriles[8]	Cyanide	mg/kg	NL	48	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.2 U	2.4 U	2.0 U	2.6 U	2.1 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15 (164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205) 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
PCBs[9]	PCB-Aroclor 1016	µg/kg	1,000	NL	10 U	10 U	11 U	10 UJ	10 U	--	12 U	11 U	14 U	--
	PCB-Aroclor 1221	µg/kg			10 U	10 U	11 U	10 UJ	10 U	--	12 U	11 U	14 U	--
	PCB-Aroclor 1232	µg/kg			10 U	10 U	11 U	10 UJ	10 U	--	12 U	11 U	14 U	--
	PCB-Aroclor 1242	µg/kg			10 U	10 U	11 U	10 UJ	10 U	--	12 U	11 U	14 U	--
	PCB-Aroclor 1248	µg/kg			10 U	10 U	**31**	10 UJ	10 U	--	12 U	11 U	14 U	--
	PCB-Aroclor 1254	µg/kg			10 U	10 U	11 U	10 UJ	10 U	--	12 U	11 U	14 U	--
	PCB-Aroclor 1260	µg/kg			10 U	10 U	11 U	10 UJ	10 U	--	12 U	11 U	14 U	--
	Total PCBs[10]	µg/kg			10 U	10 U	**31**	10 UJ	10 U	--	12 U	11 U	14 U	--

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Diesel- and lube oil-range petroleum hydrocarbons were analyzed using Northwest Method NWTPH-Dx. Gasoline-range petroleum hydrocarbons were analyzed using Northwest Method NWTPH-Gx.

[4]The reporting limit exceeds the MTCA Cleanup level for some or all samples analyzed for this compound.

[5]Gasoline-range petroleum hydrocarbon cleanup level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene and xylenes is less than 1% of the gasoline mixture.

[6]Metals analyzed using EPA Method 6010C.

[7]Mercury analyzed using EPA Method 7471B.

[8]Nitriles were analyzed using EPA Method 9012B.

[9]PCBs analyzed using EPA Method 8082A.

[10]Total PCBs is the sum of all PCBs.

J = estimated result; U = analyte was not detected greater than the reporting limit; NE = not established; NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level; mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Table 3

Soil Analytical Results - VOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location / Sample ID / Sample Date / Depth Interval (Feet) / MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
VOCs[3]	1,1,1,2-Tetrachloroethane	µg/kg	NE	38,500	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	1,1,1-Trichloroethane	µg/kg	2,000	NL	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,1,2,2-Tetrachloroethane	µg/kg	NE	5,000	3.3 UJ	3.5 UJ	3.4 UJ	4.2 UJ	2.6 UJ	3.0 U	3.6 U	3.3 U	3.8 UJ	3.5 U
	1,1,2-Trichloroethane	µg/kg	NE	17,500	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,1-Dichloroethane	µg/kg	NE	175,000	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	1,1-Dichloroethene	µg/kg	NE	4,000,000	4.1 UJ	4.3 UJ	4.3 UJ	5.3 UJ	3.3 UJ	3.7 U	4.4 U	4.2 U	4.7 UJ	4.4 U
	1,1-Dichloropropene	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,2,3-Trichlorobenzene	µg/kg	NE	NE	2.4 UJ	2.6 UJ	2.6 UJ	3.2 UJ	2.0 UJ	2.2 U	2.7 U	2.5 U	2.8 UJ	2.7 U
	1,2,3-Trichloropropane	µg/kg	NE	33.3	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,2,4-Trichlorobenzene	µg/kg	NE	34500	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,2,4-Trimethylbenzene	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**0.65 J**	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,2-Dibromo-3-Chloropropane	µg/kg	NE	1,250	8.1 UJ	8.7 UJ	8.6 UJ	11 UJ	6.6 UJ	7.4 U	8.9 U	8.4 U	9.4 UJ	8.8 U
	1,2-Dibromoethane	µg/kg	5	NL	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	NE	7,200,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,2-Dichloroethane	µg/kg	NE	11,000	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	1,2-Dichloropropane	µg/kg	NE	27,800	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,3,5-Trimethylbenzene	µg/kg	NE	800,000	4.1 UJ	4.3 UJ	4.3 UJ	5.3 UJ	**0.16 J**	3.7 U	4.4 U	4.2 U	4.7 UJ	4.4 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,3-Dichloropropane	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	NE	185,000	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	2,2-Dichloropropane	µg/kg	NE	NE	4.1 UJ	4.3 UJ	4.3 UJ	5.3 UJ	3.3 UJ	3.7 U	4.4 U	4.2 U	4.7 UJ	4.4 U
	2-Chlorotoluene	µg/kg	NE	1,600,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	4-Chlorotoluene	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Benzene	µg/kg	30	NL	**0.40 J**	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Bromobenzene	µg/kg	NE	NE	8.1 UJ	8.7 UJ	8.6 UJ	11 UJ	6.6 UJ	7.4 U	8.9 U	8.4 U	9.4 UJ	8.8 U
	Bromochloromethane	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Bromodichloromethane	µg/kg	NE	16,100	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	Bromoform (Tribromomethane)	µg/kg	NE	127,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Bromomethane	µg/kg	NE	112,000	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	Carbon Tetrachloride	µg/kg	NE	14,300	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Chloroethane	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Chloroform	µg/kg	NE	32,300	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Chloromethane	µg/kg	NE	NE	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	cis-1,2-Dichloroethene	µg/kg	NE	160,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**0.20 J**	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	cis-1,3-Dichloropropene	µg/kg	NE	NE	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	Dibromochloromethane	µg/kg	NE	11,900	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Dibromomethane	µg/kg	NE	800	0.81 UJ	0.87 UJ	0.86 UJ	1.1 UJ	0.66 UJ	0.74 U	0.89 U	0.84 U	0.94 UJ	0.88 U
	Dichlorodifluoromethane (CFC-12)	µg/kg	NE	16,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
VOCs[3]	Ethylbenzene	µg/kg	6,000	NL	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**0.30 J**	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Hexachlorobutadiene	µg/kg	NE	12,800	2.4 UJ	2.6 UJ	2.6 UJ	3.2 UJ	2.0 UJ	2.2 U	2.7 U	2.5 U	2.8 UJ	2.7 U
	Isopropylbenzene (Cumene)	µg/kg	NE	8,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**0.17 J**	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Methyl t-butyl ether (MTBE)	µg/kg	100	NL	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Methylene Chloride	µg/kg	20	NL	**2.4 J**	**2.5 J**	**5.6 J**	**120 J**	**2.6 J**	**2.9 J**	**4.9 J**	**3.3 J**	14 UJ	13 U
	Naphthalene	µg/kg	5,000	NL	8.1 UJ	8.7 UJ	8.6 UJ	11 UJ	**2.3 J**	7.4 U	8.9 U	8.4 U	9.4 UJ	8.8 U
	n-Butylbenzene	µg/kg	NE	4,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**0.67 J**	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	n-Propylbenzene	µg/kg	NE	8,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	p-Isopropyltoluene	µg/kg	NE	NE	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**1.4 J**	1.5 U	**5.2**	1.7 U	1.9 UJ	1.8 U
	Sec-Butylbenzene	µg/kg	NE	8,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Styrene	µg/kg	NE	16,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Tert-Butylbenzene	µg/kg	NE	8,000,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Tetrachloroethene (PCE)	µg/kg	50	NL	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	**0.47 J**	1.7 U	1.9 UJ	1.8 U
	Toluene	µg/kg	7,000	NL	**0.30 J**	1.7 UJ	1.7 UJ	2.1 UJ	**0.31 J**	1.5 U	**0.57 J**	1.7 U	1.9 UJ	1.8 U
	Trans-1,2-Dichloroethene	µg/kg	NE	1,600,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Trans-1,3-Dichloropropene	µg/kg	NE	NE	8.1 UJ	8.7 UJ	8.6 UJ	11 UJ	6.6 UJ	7.4 U	8.9 U	8.4 U	9.4 UJ	8.8 U
	Trichloroethene (TCE)	µg/kg	30	NL	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Trichlorofluoromethane (CFC-11)	µg/kg	NE	24,000,000	1.6 UJ	**0.42 J**	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Vinyl Chloride	µg/kg	NE	240,000	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Xylene, m-,p-	µg/kg	9,000	NL	1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	**0.13 J**	1.5 U	**0.27 J**	1.7 U	1.9 UJ	1.8 U
	Xylene, o-	µg/kg			1.6 UJ	1.7 UJ	1.7 UJ	2.1 UJ	1.3 UJ	1.5 U	1.8 U	1.7 U	1.9 UJ	1.8 U
	Total Xylenes[4]	µg/kg			3.2 UJ	3.4 UJ	3.4 UJ	4.2 UJ	**0.13 J**	3.0 U	**0.27 J**	3.4 U	3.8 UJ	3.6 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location	LFB-13	LFB-14	LFB-15	LFB-16	LFB-17	MW-15	MW-15A	MW-16	MW-7D	SB-12
				Sample ID	LFB-13 (72-73)	LFB-14 (97-98)	LFB-15 (35-37)	LFB-16 (35-37)	LFB-17 (42-43)	MW-15 (164-165)	MW-15A (204-205)	MW-16 (69-70)	MW-7D (169-170.5)	SB-12 (235-236.5)
				Sample Date	7/28/2015	7/28/2015	7/29/2015	7/29/2015	7/29/2015	6/18/2015	8/24/2015	7/14/2015	8/17/2015	8/5/2015
				Depth Interval (Feet)	72-73	97-98	35-37	35-37	42-43	164-165	204-205	69-70	169-170.5	235-236.5
				MTCA Method B CUL[2]										
VOCs[3]	1,1,1,2-Tetrachloroethane	µg/kg	NE	38,500	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	1,1,1-Trichloroethane	µg/kg	2,000	NL	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,1,2,2-Tetrachloroethane	µg/kg	NE	5,000	3.5 U	3.6 U	1.8 U	3.5 U	3.7 U	3.1 UJ	7.9 U	3.4 U	6.8 U	4.3 U
	1,1,2-Trichloroethane	µg/kg	NE	17,500	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,1-Dichloroethane	µg/kg	NE	175,000	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	1,1-Dichloroethene	µg/kg	NE	4,000,000	4.4 U	4.5 U	2.2 U	4.4 U	4.6 U	3.8 UJ	9.8 U	4.2 U	8.5 U	5.3 U
	1,1-Dichloropropene	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,2,3-Trichlorobenzene	µg/kg	NE	NE	2.6 U	2.7 U	1.3 U	2.6 U	2.8 U	2.3 UJ	5.9 U	2.5 U	5.1 U	3.2 U
	1,2,3-Trichloropropane	µg/kg	NE	33.3	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,2,4-Trichlorobenzene	µg/kg	NE	34500	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,2,4-Trimethylbenzene	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,2-Dibromo-3-Chloropropane	µg/kg	NE	1,250	8.8 U	8.9 U	4.5 U	8.7 U	9.2 U	7.7 UJ	20 U	8.4 U	17 U	11 U
	1,2-Dibromoethane	µg/kg	5	NL	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	NE	7,200,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,2-Dichloroethane	µg/kg	NE	11,000	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	1,2-Dichloropropane	µg/kg	NE	27,800	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,3,5-Trimethylbenzene	µg/kg	NE	800,000	4.4 U	4.5 U	2.2 U	4.4 U	4.6 U	3.8 UJ	9.8 U	4.2 U	8.5 U	5.3 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,3-Dichloropropane	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	NE	185,000	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	2,2-Dichloropropane	µg/kg	NE	NE	4.4 U	4.5 U	2.2 U	4.4 U	4.6 U	3.8 UJ	9.8 U	4.2 U	8.5 U	5.3 U
	2-Chlorotoluene	µg/kg	NE	1,600,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	4-Chlorotoluene	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Benzene	µg/kg	30	NL	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Bromobenzene	µg/kg	NE	NE	8.8 U	8.9 U	4.5 U	8.7 U	9.2 U	7.7 UJ	20 U	8.4 U	17 U	11 U
	Bromochloromethane	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Bromodichloromethane	µg/kg	NE	16,100	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	Bromoform (Tribromomethane)	µg/kg	NE	127,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Bromomethane	µg/kg	NE	112,000	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	Carbon Tetrachloride	µg/kg	NE	14,300	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Chloroethane	µg/kg	NE	NE	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Chloroform	µg/kg	NE	32,300	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Chloromethane	µg/kg	NE	NE	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	cis-1,2-Dichloroethene	µg/kg	NE	160,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	cis-1,3-Dichloropropene	µg/kg	NE	NE	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	Dibromochloromethane	µg/kg	NE	11,900	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Dibromomethane	µg/kg	NE	800	0.88 U	0.89 U	0.45 U	0.87 U	0.92 U	0.77 UJ	2.0 U	0.84 U	1.7 U	1.1 U
	Dichlorodifluoromethane (CFC-12)	µg/kg	NE	16,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15 (164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205) 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
VOCs[3]	Ethylbenzene	µg/kg	6,000	NL	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Hexachlorobutadiene	µg/kg	NE	12,800	2.6 U	2.7 U	1.3 U	2.6 U	2.8 U	2.3 UJ	5.9 U	2.5 U	5.1 U	3.2 U
	Isopropylbenzene (Cumene)	µg/kg	NE	8,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Methyl t-butyl ether (MTBE)	µg/kg	100	NL	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Methylene Chloride	µg/kg	20	NL	13 U	13 U	6.7 U	13 U	14 U	**5.9 J**	**9.6 J**	**3.2 J**	**13 J**	16 U
	Naphthalene	µg/kg	5,000	NL	8.8 U	8.9 U	4.5 U	8.7 U	9.2 U	7.7 UJ	20 U	8.4 U	17 U	11 U
	n-Butylbenzene	µg/kg	NE	4,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	**0.36 J**	2.1 U
	n-Propylbenzene	µg/kg	NE	8,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	p-Isopropyltoluene	µg/kg	NE	NE	1.8 U	1.8 U	**14 J**	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Sec-Butylbenzene	µg/kg	NE	8,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Styrene	µg/kg	NE	16,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Tert-Butylbenzene	µg/kg	NE	8,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Tetrachloroethene (PCE)	µg/kg	50	NL	1.8 U	1.8 U	0.90 U	**1.7**	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Toluene	µg/kg	7,000	NL	1.8 U	1.8 U	0.90 U	**0.35 J**	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Trans-1,2-Dichloroethene	µg/kg	NE	1,600,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Trans-1,3-Dichloropropene	µg/kg	NE	NE	8.8 U	8.9 U	4.5 U	8.7 U	9.2 U	7.7 UJ	20 U	8.4 U	17 U	11 U
	Trichloroethene (TCE)	µg/kg	30	NL	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Trichlorofluoromethane (CFC-11)	µg/kg	NE	24,000,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Vinyl Chloride	µg/kg	NE	240,000	1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	**3.3 J**	1.7 U	**1.9 J**	2.1 U
	Xylene, m-,p-	µg/kg			1.8 U	1.8 U	0.90 U	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Xylene, o-	µg/kg	9,000	NL	1.8 U	1.8 U	**0.83 J**	1.7 U	1.8 U	1.5 UJ	3.9 U	1.7 U	3.4 U	2.1 U
	Total Xylenes[4]	µg/kg			3.6 U	3.6 U	**0.83 J**	3.4 U	3.6 U	3.0 UJ	7.8 U	3.4 U	6.8 U	4.2 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Volatile organic compounds (VOCs) analyzed using EPA Method 8260B.

[4]This is the total value for all xylenes.

J = estimated result; NE= not established; NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level; U = analyte was not detected greater than the reporting limit; µg/kg = micrograms per kilogram;

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Bold and shading indicates analyte was detected above the applicable cleanup level.

Table 4

Soil Analytical Results - SVOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location / Sample ID / Sample Date / Depth Interval (Feet) / MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
SVOCs[3]	1,2,4-Trichlorobenzene	µg/kg	NE	34,500	50 U	50 U	54 U	51 U	56 U	52 U	52 U	52 U	50 U	52 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	NE	7,200,000	55 U	55 U	60 U	56 U	61 U	57 U	58 U	57 U	55 U	57 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/kg	NE	NE	50 U	50 U	54 U	51 U	56 U	52 U	52 U	52 U	50 U	52 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	NE	185,000	50 U	50 U	54 U	51 U	56 U	52 U	52 U	52 U	50 U	52 U
	1-Methylnaphthalene	µg/kg	5,000[4]	NL	30 U	30 U	33 U	30 U	33 U	31 U	31 U	31 U	30 U	31 U
	2-Methylnaphthalene	µg/kg			20 U	20 U	22 U	20 U	22 U	21 U	21 U	21 U	20 U	21 U
	Naphthalene	µg/kg			20 U	20 U	22 U	20 U	22 U	21 U	21 U	21 U	20 U	21 U
	2,2'-Oxybis[1-chloropropane]	µg/kg	NE	14,300	250 U	250 U	270 U	250 U	280 U	260 U	260 U	260 U	250 U	260 U
	2,4,5-Trichlorophenol	µg/kg	NE	8,000,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2,4,6-Trichlorophenol	µg/kg	NE	80,000	150 U	150 U	160 U	150 U	170 U	150 U	160 U	160 U	150 U	150 U
	2,4-Dichlorophenol	µg/kg	NE	240,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2,4-Dimethylphenol	µg/kg	NE	1,600,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2,4-Dinitrophenol	µg/kg	NE	160,000	990 U	1,000 U	1,100 U	1,000 U	1,100 U	1,000 U	1,000 U	1,000 U	1,000 U	1,000 U
	2,4-Dinitrotoluene	µg/kg	NE	3,230	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2,6-Dinitrotoluene	µg/kg	NE	667	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2-Chloronaphthalene	µg/kg	NE	6,400,000	20 U	20 U	22 U	20 U	22 U	21 U	21 U	21 U	20 U	21 U
	2-Chlorophenol	µg/kg	NE	400,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2-methylphenol (o-Cresol)	µg/kg	NE	4,000,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2-Nitroaniline	µg/kg	NE	800,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	2-Nitrophenol	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	3 & 4 Methylphenol	µg/kg	NE	80,000	200 U	**16 J**	220 U	200 U	220 U	210 U	210 U	210 U	200 U	210 U
	3,3'-Dichlorobenzidine	µg/kg	NE	2,220	200 U	200 U	220 U	200 U	220 U	210 U	210 U	210 U	200 U	210 U
	3-Nitroaniline	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	4,6-Dinitro-2-Methylphenol	µg/kg	NE	NE	990 U	1,000 U	1,100 U	1,000 U	1,100 U	1,000 UJ	1,000 U	1,000 U	1,000 U	1,000 U
	4-Bromophenyl phenyl ether	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	4-Chloro-3-Methylphenol	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	4-Chloroaniline	µg/kg	NE	5,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	4-Chlorophenyl-Phenylether	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	4-Nitroaniline	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	4-Nitrophenol (p-Nitrophenol)	µg/kg	NE	NE	990 U	1,000 U	1,100 U	1,000 U	1,100 U	1,000 U	1,000 U	1,000 U	1,000 U	1,000 U
	Acenaphthylene	µg/kg	NE	NE	20 U	20 U	22 U	20 U	22 U	21 U	21 U	21 U	20 U	**5.5 J**
	Anthracene	µg/kg	NE	24,000,000	20 U	20 U	22 U	20 U	**13 J**	21 U	21 U	21 U	20 U	21 U
	Benzo(a)anthracene	µg/kg	NE	1,370	20 U	**7.8 J**	22 U	20 U	**19 J**	**6.1 J**	21 U	21 U	**13 J**	**23**
	Benzo(a)pyrene	µg/kg	100	NL	30 U	**14 J**	33 U	30 U	**19 J**	31 U	31 U	**14 J**	30 U	**46**
	Benzo(b)fluoranthene	µg/kg	NE	1,370	20 U	**15 J**	22 U	20 U	**23**	**11 J**	21 U	21 U	20 U	**56**
	Benzo(g,h,i)perylene	µg/kg	NE	NE	25 U	25 U	27 U	25 U	**16 J**	26 U	26 U	26 U	25 U	**38**
	Benzo(k)fluoranthene	µg/kg	NE	13,700	25 U	**10 J**	27 U	25 U	28 U	**10 J**	26 U	26 U	25 U	26 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
SVOCs[3]	Benzoic Acid	µg/kg	NE	320,000,000	2500 U	2,500 U	2,700 U	2,500 U	2,800 U	2,600 R	2,600 U	2,600 U	2,500 U	2,600 U
	Benzyl Alcohol	µg/kg	NE	8,000,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Bis(2-Chloroethoxy)Methane	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Bis(2-Chloroethyl)Ether	µg/kg	NE	909	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Bis(2-Ethylhexyl) Phthalate	µg/kg	NE	71,400	600 U	**57 J**	**55 J**	610 U	**200 J**	620 U	630 U	630 U	600 U	620 U
	Butyl benzyl Phthalate	µg/kg	NE	526,000	200 U	200 U	220 U	200 U	220 U	210 U	210 U	210 U	200 U	210 U
	Carbazole	µg/kg	NE	NE	99 U	100 U	110 U	100 U	**7.5 J**	100 U	100 U	100 U	100 U	**5.8 J**
	Chrysene	µg/kg	NE	137,000	25 U	25 U	27 U	25 U	**20 J**	**6.1 J**	26 U	26 U	**7.7 J**	**24 J**
	Dibenzo(a,h)anthracene	µg/kg	NE	137	40 U	40 U	43 U	41 U	45 U	41 U	42 U	42 U	40 U	**28 J**
	Dibenzofuran	µg/kg	NE	80,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Dibutyl Phthalate	µg/kg	NE	8,000,000	500 U	500 U	540 U	510 U	560 U	520 U	520 U	520 U	500 U	520 U
	Diethyl Phthalate	µg/kg	NE	64,000,000	200 U	200 U	220 U	200 U	220 U	210 U	210 U	210 U	200 U	**20 J**
	Dimethyl Phthalate	µg/kg	NE	NE	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Di-N-Octyl Phthalate	µg/kg	NE	800,000	500 U	500 U	540 U	510 U	560 U	520 U	520 U	520 U	500 U	520 U
	Fluoranthene	µg/kg	NE	3,200,000	**9.0 J**	**20**	22 U	20 U	**65**	21 U	21 U	**9.8 J**	**16 J**	**45**
	Fluorene	µg/kg	NE	3,200,000	20 U	20 U	22 U	20 U	**8.7 J**	21 U	21 U	21 U	20 U	21 U
	Hexachlorobenzene	µg/kg	NE	625	50 U	50 U	54 U	51 U	56 U	52 U	52 U	52 U	50 U	52 U
	Hexachlorobutadiene	µg/kg	NE	12,800	50 U	50 U	54 U	51 U	56 U	52 U	52 U	52 U	50 U	52 U
	Hexachlorocyclopentadiene	µg/kg	NE	480,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Hexachloroethane	µg/kg	NE	25,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Indeno(1,2,3-c,d)pyrene	µg/kg	NE	1,370	40 U	40 U	43 U	41 U	45 U	41 U	42 U	42 U	40 U	**38 J**
	Isophorone	µg/kg	NE	1,050,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Nitrobenzene	µg/kg	NE	160,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	N-Nitrosodi-n-propylamine	µg/kg	NE	143	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	NE	204,000	50 U	50 U	54 U	51 U	56 U	52 U	52 U	52 U	50 U	52 U
	Pentachlorophenol	µg/kg	NE	2,500	200 U	200 U	220 U	200 U	220 U	210 U	210 U	210 U	200 U	210 U
	Phenanthrene	µg/kg	NE	NE	20 U	**13 J**	22 U	20 U	**43**	21 U	21 U	21 U	20 U	**26**
	Phenol	µg/kg	NE	24,000,000	99 U	100 U	110 U	100 U	110 U	100 U	100 U	100 U	100 U	100 U
	Pyrene	µg/kg	NE	2,400,000	20 U	**16 J**	**7.2 J**	20 U	**51**	21 U	21 U	21 U	**10 J**	**50**
	Total cPAH TEQ[5] (ND=0.5RL)	µg/kg	100	NL	22 U	**21**	24 U	22 U	**29**	**22**	23 U	**22**	**23**	**62**

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15:(164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205) 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
SVOCs[3]	1,2,4-Trichlorobenzene	µg/Kg	NE	34,500	51 U	50 U	53 U	52 U	52 U	57 U	61 U	53 U	69 U	60 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/Kg	NE	7,200,000	56 U	55 U	58 U	57 U	57 U	63 U	67 U	58 U	76 U	66 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	NE	NE	51 U	50 U	53 U	52 U	52 U	57 U	61 U	53 U	69 U	60 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/Kg	NE	185,000	51 U	50 U	53 U	52 U	52 U	57 U	61 U	53 U	69 U	60 U
	1-Methylnaphthalene	µg/Kg	5,000[4]	NL	31 U	30 U	32 U	31 U	31 U	34 U	37 U	32 U	41 U	36 U
	2-Methylnaphthalene	µg/Kg			20 U	20 U	21 U	21 U	21 U	23 U	24 U	21 U	28 U	24 U
	Naphthalene	µg/Kg			20 U	20 U	21 U	21 U	21 U	23 U	24 U	21 U	28 U	24 U
	2,2'-Oxybis[1-chloropropane]	µg/Kg	NE	14,300	250 U	250 U	270 U	260 U	260 U	280 U	300 U	260 U	340 U	300 U
	2,4,5-Trichlorophenol	µg/Kg	NE	8,000,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2,4,6-Trichlorophenol	µg/Kg	NE	80,000	150 U	150 U	160 U	160 U	150 U	170 U	180 U	160 U	210 U	180 U
	2,4-Dichlorophenol	µg/Kg	NE	240,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2,4-Dimethylphenol	µg/Kg	NE	1,600,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2,4-Dinitrophenol	µg/Kg	NE	160,000	1,000 U	1,000 U	1,100 U	1,000 U	1,000 U	1,100 U	1,200 U	1,100 U	1,400 U	1,200 U
	2,4-Dinitrotoluene	µg/Kg	NE	3,230	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2,6-Dinitrotoluene	µg/Kg	NE	667	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2-Chloronaphthalene	µg/Kg	NE	6,400,000	20 U	20 U	21 U	21 U	21 U	23 U	24 U	21 U	28 U	24 U
	2-Chlorophenol	µg/Kg	NE	400,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2-methylphenol (o-Cresol)	µg/Kg	NE	4,000,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2-Nitroaniline	µg/Kg	NE	800,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	2-Nitrophenol	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	3 & 4 Methylphenol	µg/Kg	NE	80,000	200 U	200 U	210 U	210 U	210 U	230 U	240 U	210 U	280 U	240 U
	3,3'-Dichlorobenzidine	µg/Kg	NE	2,220	200 U	200 U	210 U	210 U	210 U	230 U	240 U	210 U	280 U	240 U
	3-Nitroaniline	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	4,6-Dinitro-2-Methylphenol	µg/Kg	NE	NE	1,000 U	1,000 U	1,100 U	1,000 U	1,000 U	1,100 U	1,200 U	1,100 U	1,400 U	1,200 U
	4-Bromophenyl phenyl ether	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	4-Chloro-3-Methylphenol	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	4-Chloroaniline	µg/Kg	NE	5,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	4-Chlorophenyl-Phenylether	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	4-Nitroaniline	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	4-Nitrophenol (p-Nitrophenol)	µg/Kg	NE	NE	1,000 U	1,000 U	1,100 U	1,000 U	1,000 U	1,100 U	1,200 U	1,100 U	1,400 U	1,200 U
	Acenaphthylene	µg/Kg	NE	NE	20 U	20 U	21 U	21 U	21 U	23 U	24 U	21 U	28 U	24 U
	Anthracene	µg/Kg	NE	24,000,000	20 U	20 U	21 U	21 U	21 U	23 U	24 U	21 U	28 U	24 U
	Benzo(a)anthracene	µg/Kg	NE	1,370	20 U	20 U	**17 J**	21 U	**13 J**	23 U	24 U	21 U	28 U	**18 J**
	Benzo(a)pyrene	µg/Kg	100	NL	31 U	30 U	**35**	31 U	**31**	34 U	37 U	32 U	41 U	36 U
	Benzo(b)fluoranthene	µg/Kg	NE	1,370	20 U	20 U	**23**	21 U	**27**	23 U	24 U	21 U	28 U	24 U
	Benzo(g,h,i)perylene	µg/Kg	NE	NE	25 U	25 U	**26 J**	26 U	**19 J**	28 UJ	30 U	26 U	34 U	30 U
	Benzo(k)fluoranthene	µg/Kg	NE	13,700	25 U	25 U	**15 J**	26 U	**12 J**	28 U	30 U	26 U	34 U	30 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15:(164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205) 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
SVOCs[3]	Benzoic Acid	µg/Kg	NE	320,000,000	2,500 U	2,500 U	2,700 U	2,600 U	2,600 U	2,800 UJ	3,000 U	2,600 U	3,400 U	3,000 U
	Benzyl Alcohol	µg/Kg	NE	8,000,000	**15 J**	**21 J**	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Bis(2-Chloroethoxy)Methane	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Bis(2-Chloroethyl)Ether	µg/Kg	NE	909	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Bis(2-Ethylhexyl) Phthalate	µg/Kg	NE	71,400	610 U	**96 J**	**310 J**	**71 J**	**120 J**	680 U	**61 J**	630 U	**290 J**	**110 J**
	Butyl benzyl Phthalate	µg/Kg	NE	526,000	200 U	200 U	210 U	210 U	210 U	230 U	240 U	210 U	280 U	240 U
	Carbazole	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Chrysene	µg/Kg	NE	137,000	25 U	25 U	**24 J**	26 U	**10 J**	28 U	30 U	26 U	34 U	30 U
	Dibenzo(a,h)anthracene	µg/Kg	NE	137	41 U	40 U	42 U	42 U	41 U	45 UJ	49 U	42 U	55 U	48 U
	Dibenzofuran	µg/Kg	NE	80,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Dibutyl Phthalate	µg/Kg	NE	8,000,000	**77 J**	**140 J**	530 U	520 U	520 U	570 U	610 U	530 U	690 U	600 U
	Diethyl Phthalate	µg/Kg	NE	64,000,000	**24 J**	**23 J**	**19 J**	**24 J**	**26 J**	230 U	240 U	210 U	280 U	240 U
	Dimethyl Phthalate	µg/Kg	NE	NE	100 U	100 U	110 U	100 U	100 U	110 U	**16 J**	110 U	140 U	120 U
	Di-N-Octyl Phthalate	µg/Kg	NE	800,000	510 U	500 U	**96 J**	520 U	520 U	570 U	610 U	530 U	**140 J**	600 U
	Fluoranthene	µg/Kg	NE	3,200,000	20 U	20 U	**20 J**	21 U	**15 J**	23 U	24 U	21 U	28 U	24 U
	Fluorene	µg/Kg	NE	3,200,000	20 U	20 U	21 U	21 U	21 U	23 U	24 U	21 U	28 U	24 U
	Hexachlorobenzene	µg/Kg	NE	625	51 U	50 U	53 U	52 U	52 U	57 U	61 U	53 U	69 U	60 U
	Hexachlorobutadiene	µg/Kg	NE	12,800	51 U	50 U	53 U	52 U	52 U	57 U	61 U	53 U	69 U	60 U
	Hexachlorocyclopentadiene	µg/Kg	NE	480,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Hexachloroethane	µg/Kg	NE	25,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Indeno(1,2,3-c,d)pyrene	µg/Kg	NE	1,370	41 U	40 U	**30 J**	42 U	**21 J**	45 UJ	49 U	42 U	55 U	48 U
	Isophorone	µg/Kg	NE	1,050,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Nitrobenzene	µg/Kg	NE	160,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	N-Nitrosodi-n-propylamine	µg/Kg	NE	143	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/Kg	NE	204,000	51 U	50 U	53 U	52 U	52 U	57 U	61 U	53 U	69 U	60 U
	Pentachlorophenol	µg/Kg	NE	2,500	200 U	200 U	210 U	210 U	210 U	230 U	240 U	210 U	280 U	240 U
	Phenanthrene	µg/Kg	NE	NE	20 U	20 U	**14 J**	21 U	**9.8 J**	23 U	24 U	21 U	28 U	24 U
	Phenol	µg/Kg	NE	24,000,000	100 U	100 U	110 U	100 U	100 U	110 U	120 U	110 U	140 U	120 U
	Pyrene	µg/Kg	NE	2,400,000	20 U	20 U	**24**	21 U	**16 J**	23 U	24 U	21 U	28 U	24 U
	Total cPAH TEQ[5] (ND=0.5RL)	µg/Kg	100	NL	23 U	22 U	**46**	23 U	**40**	25 U	27 U	24 U	31 U	**27**

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Semi-volatile Organic Compounds (SVOCs) were analyzed using EPA Method 8270C.

[3]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[4]Total value for naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

[5]Carcinogenic PAH (cPAH) toxic equivalency (TEQ) calculated using toxicity equivalency factors (TEF) from MTCA Table 708-2, based on methodology described in MTCA Cleanup Regulation WAC 173-340-708.

J = estimated result; NE= not established; NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level; U = analyte was not detected greater than the reporting limit; µg/kg = micrograms per kilogram;

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Table 5

Soil Analytical Results - Pesticides[1]

Marshall Landfill Site
Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location / Sample ID / Sample Date / Depth Interval (Feet)	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
				MTCA Method B CUL[2]										
Organochlorine Pesticides[3]	4,4'-DDD	µg/kg	NE	4,170	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	**0.21 J**	2.1 U
	4,4'-DDE	µg/kg	NE	2,940	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	4,4'-DDT	µg/kg	NL	2,940	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	Aldrin	µg/kg	NE	58.8	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Alpha-BHC	µg/kg	NE	159	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	alpha-Chlordane (cis)	µg/kg	NE	NE	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Beta-BHC	µg/kg	NE	556	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Delta-BHC	µg/kg	NE	NE	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Dieldrin	µg/kg	NE	62.5	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	Endosulfan I	µg/kg	NE	NE	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Endosulfan II	µg/kg	NE	NE	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 UJ
	Endosulfan Sulfate	µg/kg	NE	NE	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	Endrin	µg/kg	NE	24,000	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	Endrin Aldehyde	µg/kg	NE	NE	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	**14**	2.0 U	**2.0 J**
	Endrin Ketone	µg/kg	NE	NE	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	gamma-Chlordane	µg/kg	NE	NE	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Heptachlor	µg/kg	NE	222	2.1 U	2.0 UJ	2.2 U	2.0 U	2.2 U	2.1 U	2.1 U	2.0 U	2.0 U	2.1 U
	Heptachlor Epoxide	µg/kg	NE	110	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Lindane (Gamma-BHC)	µg/kg	10	NL	1.0 U	1.0 UJ	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
	Methoxychlor	µg/kg	NE	400,000	10 U	10 UJ	11 U	10 U	11 U	10 U	10 U	10 U	9.9 U	10 U
	Toxaphene	µg/kg	NE	909	100 U	100 UJ	110 U	100 U	110 U	100 U	100 U	100 U	99 U	100 U
Organo-phosphorus Pesticides[4]	Atrazine	µg/kg	NE	4,350	--	--	--	--	--	68 U	69 U	69 U	70 U	66 U
	Azinphos-methyl	µg/kg	NE	NE	--	--	--	--	--	13 U	13 U	13 U	14 U	13 U
	Bolstar (Sulprofos)	µg/kg	NE	NE	--	--	--	--	--	13 U	13 U	13 U	14 U	13 U
	Chlorpyrifos	µg/kg	NE	80,000	--	--	--	--	--	20 U	21 U	21 U	21 U	20 U
	Coumaphos	µg/kg	NE	NE	--	--	--	--	--	13 U	13 U	13 U	14 U	13 U
	Demeton	µg/kg	NE	3,200	--	--	--	--	--	40 U	40 U	40 U	41 U	39 U
	Diazinon	µg/kg	NE	56,000	--	--	--	--	--	22 U	23 U	23 U	23 U	22 U
	Dichlorvos (DDVP)	µg/kg	NE	3,450	--	--	--	--	--	23 U	24 U	24 U	24 U	23 U
	Dimethoate	µg/kg	NE	16,000	--	--	--	--	--	22 U	23 U	23 U	23 U	22 U
	Disulfoton (Di-Syston)	ug/Kg	NE	3,200	--	--	--	--	--	49 U	50 U	50 U	50 U	48 U
	EPN	µg/kg	NE	800	--	--	--	--	--	13 U	13 U	13 U	14 U	13 U
	Ethoprop	µg/kg	NE	NE	--	--	--	--	--	15 U	16 U	15 U	16 U	15 U
	Famphur	µg/kg	NE	NE	--	--	--	--	--	13 U	13 U	13 U	14 U	13 U
	Fensulfothion	µg/kg	NE	NE	--	--	--	--	--	26 U	26 U	26 U	26 U	25 U
	Fenthion	µg/kg	NE	NE	--	--	--	--	--	34 U	34 U	34 U	35 U	33 U
	Malathion	µg/kg	NE	1,600,000	--	--	--	--	--	15 U	16 U	15 U	16 U	15 U
	Merphos	µg/kg	NE	2,400	--	--	--	--	--	31 U	31 U	31 U	31 U	30 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-1 LFB-1 (30-31) 6/26/2015 30-31	LFB-2 LFB-2 (52-53) 6/26/2015 52-53	LFB-3 LFB-3 (68-69) 6/30/2015 68-69	LFB-4 LFB-4 (92-93) 7/1/2015 92-93	LFB-5 LFB-5 (49-50) 7/1/2015 49-50	LFB-8 LFB-8 (17-18) 7/16/2015 17-18	LFB-9 LFB-9 (11-12) 7/16/2015 11-12	LFB-10 LFB-10 (45-46) 7/16/2015 45-46	LFB-11 LFB-11 (42-43) 7/17/2015 42-43	LFB-12 LFB-12 (29-30) 7/27/2015 29-30
Organo-phosphorus Pesticides[4]	Methyl Parathion	µg/kg	NE	20,000	--	--	--	--	--	20 U	21 U	21 U	21 U	20 U
	Mevinphos	µg/kg	NE	NE	--	--	--	--	--	15 U	16 U	15 U	16 U	15 U
	Parathion (ethyl)	µg/kg	NE	480,000	--	--	--	--	--	18 U	19 U	19 U	19 U	18 U
	Phorate	µg/kg	NE	16,000	--	--	--	--	--	20 U	21 U	21 U	21 U	20 U
	Propazine	µg/kg	NE	1,600,000	--	--	--	--	--	68 U	69 U	69 U	70 U	66 U
	Ronnel	µg/kg	NE	4,000,000	--	--	--	--	--	47 U	48 U	47 U	48 U	46 U
	Simazine	µg/kg	NE	8,330	--	--	--	--	--	68 U	69 U	69 U	70 U	66 U
	Sulfotepp	µg/kg	NE	40,000	--	--	--	--	--	20 U	21 U	21 U	21 U	20 U
	Thionazin	µg/kg	NE	NE	--	--	--	--	--	18 U	19 U	19 U	19 U	18 U
	Tokuthion (Prothiofos)	µg/kg	NE	NE	--	--	--	--	--	20 U	21 U	21 U	21 U	20 U
	Trichloronate	µg/kg	NE	NE	--	--	--	--	--	20 U	21 U	21 U	21 U	20 U
Chlorinated Herbicides[5]	2,4,5-T	µg/kg	NE	800,000	20 U	20 U	22 U	20 U	23 U	20 U	21 U	21 U	21 U	21 U
	2,4-D	µg/kg	NE	800,000	82 U	81 U	88 U	81 U	90 U	81 U	83 U	83 U	83 U	84 U
	2,4-DB	µg/kg	NE	640,000	82 U	81 U	88 U	81 U	90 U	81 U	83 U	83 U	83 U	84 U
	Dalapon (DPA)	µg/kg	NE	2,400,000	41 U	40 U	44 U	41 U	45 U	40 U	41 U	42 U	41 U	42 U
	Dicamba	µg/kg	NE	2,400,000	41 U	40 U	44 U	41 U	45 U	40 U	41 U	42 U	41 U	42 U
	Dichlorprop	µg/kg	NE	NE	82 U	81 U	88 U	**6.9 J**	90 U	81 U	83 U	83 U	83 U	84 U
	MCPA	µg/kg	NE	40,000	8,200 U	8,100 U	8,800 U	8,100 U	9,000 U	8,100 U	8,300 U	8,300 U	8,300 U	8,400 U
	Mecoprop (MCPP)	µg/kg	NE	80,000	8,200 U	8,100 U	8,800 U	8,100 U	9,000 U	8,100 U	8,300 U	8,300 U	8,300 U	8,400 U
	Silvex (Fenoprop or 2,4,5-TP)	µg/kg	NE	640,000	20 U	20 U	22 U	20 U	23 U	20 U	21 U	21 U	21 U	21 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15 (164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
Organochlorine Pesticides[3]	4,4'-DDD	µg/kg	NE	4,170	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	4,4'-DDE	µg/kg	NE	2,940	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	4,4'-DDT	µg/kg	3,000	NL	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Aldrin	µg/kg	NE	58.8	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Alpha-BHC	µg/kg	NE	159	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	alpha-Chlordane (cis)	µg/kg	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Beta-BHC	µg/kg	NE	556	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Delta-BHC	µg/kg	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Dieldrin	µg/kg	NE	62.5	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Endosulfan I	µg/kg	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Endosulfan II	µg/kg	NE	NE	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Endosulfan Sulfate	µg/kg	NE	NE	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Endrin	µg/kg	NE	24,000	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Endrin Aldehyde	µg/kg	NE	NE	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Endrin Ketone	µg/kg	NE	NE	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	gamma-Chlordane	µg/kg	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Heptachlor	µg/kg	NE	222	2.1 U	2.0 U	2.1 U	2.1 U	2.1 U	--	2.4 U	--	2.6 U	--
	Heptachlor Epoxide	µg/kg	NE	110	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Lindane (Gamma-BHC)	µg/kg	10	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	--	1.2 U	--	1.3 U	--
	Methoxychlor	µg/kg	NE	400,000	10 U	10 U	10 U	10 U	11 U	--	12 U	--	13 U	--
	Toxaphene	µg/kg	NE	909	100 U	100 U	100 U	100 U	110 U	--	120 U	--	130 U	--
Organo-phosphorus Pesticides[4]	Atrazine	µg/kg	NE	4,350	68 U	70 U	72 U	68 U	67 U	--	82 U	--	88 U	--
	Azinphos-methyl	µg/kg	NE	NE	13 U	14 U	14 U	13 U	13 U	--	16 U	--	17 U	--
	Bolstar (Sulprofos)	µg/kg	NE	NE	13 U	14 U	14 U	13 U	13 U	--	16 U	--	17 U	--
	Chlorpyrifos	µg/kg	NE	80,000	20 U	21 U	21 U	20 U	20 U	--	24 U	--	26 U	--
	Coumaphos	µg/kg	NE	NE	13 U	14 U	14 U	13 U	13 U	--	16 U	--	17 U	--
	Demeton	µg/kg	NE	3,200	40 U	41 U	42 U	40 U	39 U	--	48 U	--	51 U	--
	Diazinon	µg/kg	NE	56,000	22 U	23 U	23 U	22 U	22 U	--	27 U	--	29 U	--
	Dichlorvos (DDVP)	µg/kg	NE	3,450	23 U	24 U	25 U	24 U	23 U	--	28 U	--	30 U	--
	Dimethoate	µg/kg	NE	16,000	22 U	23 U	23 U	22 U	22 U	--	27 U	--	29 U	--
	Disulfoton (Di-Syston)	µg/kg	NE	3,200	49 U	50 U	51 U	49 U	48 U	--	58 U	--	63 U	--
	EPN	µg/kg	NE	800	13 U	14 U	14 U	13 U	13 U	--	16 U	--	17 U	--
	Ethoprop	µg/kg	NE	NE	15 U	16 U	16 U	15 U	15 U	--	18 U	--	20 U	--
	Famphur	µg/kg	NE	NE	13 U	14 U	14 U	13 U	13 U	--	16 U	--	17 U	--
	Fensulfothion	µg/kg	NE	NE	25 U	26 U	27 U	26 U	25 U	--	30 U	--	33 U	--
	Fenthion	µg/kg	NE	NE	33 U	34 U	35 U	34 U	33 U	--	40 U	--	43 U	--
	Malathion	µg/kg	NE	1,600,000	15 U	16 U	16 U	15 U	15 U	--	18 U	--	20 U	--
	Merphos	µg/kg	NE	2,400	30 U	31 U	32 U	31 U	30 U	--	37 U	--	39 U	--

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Location Sample ID Sample Date Depth Interval (Feet) MTCA Method B CUL[2]	LFB-13 LFB-13 (72-73) 7/28/2015 72-73	LFB-14 LFB-14 (97-98) 7/28/2015 97-98	LFB-15 LFB-15 (35-37) 7/29/2015 35-37	LFB-16 LFB-16 (35-37) 7/29/2015 35-37	LFB-17 LFB-17 (42-43) 7/29/2015 42-43	MW-15 MW-15 (164-165) 6/18/2015 164-165	MW-15A MW-15A (204-205 8/24/2015 204-205	MW-16 MW-16 (69-70) 7/14/2015 69-70	MW-7D MW-7D (169-170.5) 8/17/2015 169-170.5	SB-12 SB-12 (235-236.5) 8/5/2015 235-236.5
Organo-phosphorus Pesticides[4]	Methyl Parathion	µg/kg	NE	20,000	20 U	21 U	21 U	20 U	20 U	--	24 U	--	26 U	--
	Mevinphos	µg/kg	NE	NE	15 U	16 U	16 U	15 U	15 U	--	18 U	--	20 U	--
	Parathion (ethyl)	µg/kg	NE	480,000	18 U	19 U	19 U	18 U	18 U	--	22 U	--	24 U	--
	Phorate	µg/kg	NE	16,000	20 U	21 U	21 U	20 U	20 U	--	24 U	--	26 U	--
	Propazine	µg/kg	NE	1,600,000	68 U	70 U	72 U	68 U	67 U	--	82 U	--	88 U	--
	Ronnel	µg/kg	NE	4,000,000	47 U	48 U	49 U	47 U	46 U	--	56 U	--	60 U	--
	Simazine	µg/kg	NE	8,330	68 U	70 U	72 U	68 U	67 U	--	82 U	--	88 U	--
	Sulfotepp	µg/kg	NE	40,000	20 U	21 U	21 U	20 U	20 U	--	24 U	--	26 U	--
	Thionazin	µg/kg	NE	NE	18 U	19 U	19 U	18 U	18 U	--	22 U	--	24 U	--
	Tokuthion (Prothiofos)	µg/kg	NE	NE	20 U	21 U	21 U	20 U	20 U	--	24 U	--	26 U	--
	Trichloronate	µg/kg	NE	NE	20 U	21 U	21 U	20 U	20 U	--	24 U	--	26 U	--
Chlorinated Herbicides[5]	2,4,5-T	µg/kg	NE	800,000	21 U	21 U	21 U	21 U	21 U	--	25 U	--	27 U	--
	2,4-D	µg/kg	NE	800,000	82 U	82 U	86 U	84 U	83 U	--	100 U	--	110 U	--
	2,4-DB	µg/kg	NE	640,000	82 U	82 U	86 U	84 U	83 U	--	100 U	--	110 U	--
	Dalapon (DPA)	µg/kg	NE	2,400,000	41 U	41 U	43 U	42 U	42 U	--	50 U	--	54 U	--
	Dicamba	µg/kg	NE	2,400,000	41 U	41 U	43 U	42 U	42 U	--	50 U	--	54 U	--
	Dichlorprop	µg/kg	NE	NE	82 U	82 U	86 U	84 U	83 U	--	100 U	--	110 U	--
	MCPA	µg/kg	NE	40,000	8,200 U	8,200 U	8,600 U	8,400 U	8,300 U	--	10,000 U	--	11,000 U	--
	Mecoprop (MCPP)	µg/kg	NE	80,000	8,200 U	8,200 U	8,600 U	8,400 U	8,300 U	--	10,000 U	--	11,000 U	--
	Silvex (Fenoprop or 2,4,5-TP)	µg/kg	NE	640,000	21 U	21 U	21 U	21 U	21 U	--	25 U	--	27 U	--

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Organochlorine pesticides analyzed using EPA Method 8081A.

[4]Organo-phosphorus pesticides analyzed using EPA Method 8141A

[5]Chlorinated herbicides using EPA Method 8151A.

-- = not analyzed; J = estimated result; NE= not established; NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level; U = analyte was not detected greater than the reporting limit; µg/kg = micrograms per kilogram;

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Table 6

Groundwater Analytical Results - TPH, Metals, GC, Anions and PCBs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location / Sample Name / Sample Date	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL		**0.066 J**	–	0.13 U	0.12 U	0.13 U	–	0.12 U	0.12 U	0.12 U	–
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL		0.22 U	–	0.21 U	0.20 U	0.21 U	–	0.20 U	0.20 U	0.21 U	–
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL		100 U	–	100 U	100 U	150 U	–	100 U	100 U	150 U	–
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064		**0.00022 J**	**0.00020 J**	**0.00019 J**	**0.00014 J**	**0.00015 J**	**0.00012 J**	**0.00016 J**	**0.00014 J**	**0.00014 J**	**0.00025 J**
	Arsenic	mg/L	0.005	NL		**0.0042**	**0.0018**	**0.0030**	**0.0025**	**0.0026**	**0.0019**	**0.0025**	**0.0024**	**0.0025**	**0.0019**
	Barium	mg/L	NE	3.2		**0.54**	**0.44**	**0.047**	**0.043**	**0.046**	**0.029**	**0.045**	**0.043**	**0.047**	**0.024**
	Beryllium	mg/L	NE	0.032		0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL		**0.00097**	**0.00033 J**	**0.000050 J**	0.00040 U	0.00040 U	0.00040 U	**0.000029 J**	0.00040 U	0.00040 U	0.00040 U
	Chromium	mg/L	NL	0.048		**0.0010**	**0.00024 J**	**0.00019 J**	**0.00015 J**	**0.00017 J**	**0.0025**	**0.00047**	**0.00022 J**	**0.00015 J**	**0.00021 J**
	Copper	mg/L	NE	0.64		**0.039**	**0.0088**	**0.0053**	**0.0038**	**0.0041**	**0.0027**	**0.0058**	**0.0047**	**0.0045**	**0.0018 J**
	Iron	mg/L	NE	11.2		0.040 U	0.20 U	**0.027 J**	0.040 U	**0.013 J**	0.20 U	**0.035 J**	**0.0082 J**	**0.0089 J**	0.20 U
	Lead	mg/L	0.015	NL		**0.0045**	**0.00086**	**0.00036 J**	0.00040 U	**0.000040 J**	0.00080 U	**0.00049**	**0.000036 J**	**0.000035 J**	0.00080 U
	Manganese	mg/L	NE	2.24		**0.031**	**0.024**	**0.00093 J**	**0.00081 J**	**0.00048 J**	**0.00092 J**	**0.00097 J**	**0.00083 J**	0.0020 U	0.0020 U
	Mercury[5]	mg/L	0.002	NL		0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	–
	Nickel	mg/L	NE	0.320		**0.016**	**0.011**	**0.0014 J**	**0.0014 J**	**0.0012 J**	**0.0011 J**	**0.0016 J**	**0.0018 J**	**0.0012 J**	**0.00081 J**
	Selenium	mg/L	NE	0.080		**0.00031 J**	0.0080 U	0.0010 U	**0.00050 J**	0.0010 U	0.0080 U	**0.00030 J**	**0.00035 J**	0.0010 U	0.0080 U
	Silver	mg/L	NE	0.080		0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016		0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080		**0.0085**	**0.0066**	**0.0084**	**0.0080**	**0.0078**	**0.0056**	**0.0057**	**0.0062**	**0.0067**	**0.0049**
	Zinc	mg/L	NE	4.8		**1.9**	**0.37**	**0.0021 J**	0.0070 U	**0.0022 J**	0.0070 U	**0.0023 J**	0.0070 U	0.0070 U	0.0070 U
Total Metals[4]	Antimony	mg/L	NE	0.0064		**0.00032 J**	**0.00049**	**0.00016 J**	**0.00014 J**	**0.00015 J**	**0.00013 J**	**0.00022 J**	**0.00016 J**	**0.00027 J**	**0.00020 J**
	Arsenic	mg/L	0.005	NL		**0.0046**	**0.0020**	**0.0028**	**0.0025**	**0.0027**	**0.0021**	**0.0024**	**0.0026**	**0.0028**	**0.0025**
	Barium	mg/L	NE	3.2		**0.47**	**0.49**	**0.046**	**0.043**	**0.044**	**0.034**	**0.044**	**0.045**	**0.048**	**0.032**
	Beryllium	mg/L	NE	0.032		**0.00044**	**0.00064**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000078 J**
	Cadmium	mg/L	0.005	NL		**0.017**	**0.0036**	**0.000040 J**	0.00040 U	0.00040 U	0.00040 U	**0.000057 J**	0.00040 U	**0.000033 J**	0.00040 U
	Chromium	mg/L	NL	0.048		**0.0012**	**0.0035**	0.00040 U	0.00040 U	**0.00019 J**	0.00040 U	**0.00018 J**	**0.00028 J**	**0.00032 J**	**0.00033 J**
	Copper	mg/L	NE	0.64		**0.12**	**0.037**	**0.0044**	**0.0046**	**0.0039**	**0.0028**	**0.0053**	**0.0080**	**0.0048**	**0.0024**
	Iron	mg/L	NE	11.2		**2.3**	**2.5**	**0.014 J**	**0.0071 J**	0.040 U	0.20 U	**0.29**	**0.43**	**0.32**	**0.29**
	Lead	mg/L	0.015	NL		**0.097**	**0.040**	**0.000067 J**	0.00040 U	**0.00011 J**	0.00080 U	**0.00076**	**0.00088**	**0.00038 J**	**0.00069 J**
	Manganese	mg/L	NE	2.24		**0.043**	**0.078**	**0.00058 J**	**0.00096 J**	**0.00047 J**	0.0020 U	**0.010**	**0.0069**	**0.0053**	**0.0078**
	Mercury[5]	mg/L	0.002	NL		0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	–
	Nickel	mg/L	NE	0.320		**0.017**	**0.015**	**0.0013 J**	**0.0014 J**	**0.0012 J**	**0.00083 J**	**0.0012 J**	**0.0020 J**	**0.0016 J**	**0.00093 J**
	Selenium	mg/L	NE	0.080		**0.00053 J**	0.0080 U	0.0010 U	0.0010 U	0.0010 U	0.0080 U	**0.00036 J**	0.0010 U	0.0010 U	0.0080 U
	Silver	mg/L	NE	0.080		**0.000057 J**	**0.000096 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.00096**	**0.000096 J**	**0.000099 J**
	Thallium[6]	mg/L	NE	0.00016		0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	**0.00011 J**
	Vanadium	mg/L	NE	0.080		**0.015**	**0.011**	**0.0081**	**0.0080**	**0.0087**	**0.0062**	**0.0058**	**0.0071**	**0.0078**	**0.0069**
	Zinc	mg/L	NE	4.8		**4.5**	**2.7**	**0.0047 J**	0.0070 U	0.0070 U	**0.0050 J**	**0.0035 J**	**0.0040 J**	**0.0028 J**	**0.0027 J**

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17
Anions[7]	Chloride	mg/L	NE	NE	**270**	--	**46**	0.80 U	**46**	--	**45**	**42**	**47 J**	--
	Nitrate	mg/L	NE	25.6	**80 J**	**70**	**0.066 J**	**0.38**	**2.4**	--	0.20 U	**0.20**	**1.9**	**4.0**
	Nitrite	mg/L	NE	1.6	0.20 U	--	0.20 U	**24**	0.20 U	--	0.20 U	0.20 U	0.20 U	--
	Sulfate	mg/L	NE	NE	**150**	--	**13**	**16**	**25**	--	**15**	**15**	**26 J**	--
Cation[8]	Ammonia	mg/L	NE	NE	0.10 U	--	**0.20**	**0.19**	0.10 U	--	0.10 U	0.10 U	0.10 U	--
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE	**15 J**	--	**8.9 J**	**8.2 J**	**11 J**	--	**4.1 J**	**6.9 J**	**7.8 J**	--
	Total Organic Carbon	mg/L	NE	NE	**6.8**	--	**5.6**	**3.4**	**3.1**	--	**4.9**	**4.0**	**2.9**	--
	E. Coli	MPN/100mL	NE	NE	0.00	--	0.00	0.00	1.0 U	--	0.00	0.00	1.0 U	--
	Total Coliform	MPN/100mL	NE	NE	0.00	--	0.00	0.00	1.0 U	--	0.00	0.00	**730**	--
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL	0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	PCB-Aroclor 1221	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	PCB-Aroclor 1232	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	PCB-Aroclor 1242	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	PCB-Aroclor 1248	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	PCB-Aroclor 1254	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	PCB-Aroclor 1260	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--
	Total PCBs[12]	µg/L			0.12 U	--	0.095 U	0.091 U	0.10 U	--	0.10 U	0.098 U	0.099 U	--

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location Sample Name Sample Date MW-4 MW-4-120717 12/07/17	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:120116 12/1/2016
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL	--	0.12 U	0.12 U	0.13 U	--	0.12 U	0.12 U	--	0.12 U	0.12 U
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL	--	0.20 U	0.20 U	0.21 U	--	0.20 U	0.21 U	--	0.20 U	0.20 U
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL	--	100 U	100 U	150 U	--	100 U	150 U	--	100 U	100 U
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064	**0.00017 J**	**0.00014 J**	**0.00014 J**	**0.00011 J**	0.00040 U	**0.00027 J**	**0.00020 J**	**0.00027 J**	**0.00026 J**	**0.00018 J**
	Arsenic	mg/L	0.005	NL	**0.0011**	**0.0025**	**0.0022**	**0.0022**	**0.0012**	**0.0020**	**0.0015**	**0.0012**	**0.0022**	**0.0013**
	Barium	mg/L	NE	3.2	**0.017**	**0.032**	**0.029**	**0.037**	**0.029**	**0.12**	**0.094**	**0.086**	**0.19**	**0.18**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	**0.0010**	**0.000029 J**	0.00040 U	**0.000032 J**	0.00040 U	**0.000046 J**	0.00040 U	0.00040 U	**0.000078 J**	0.00040 U
	Chromium	mg/L	NL	0.048	**0.00016 J**	**0.00032 J**	0.00040 U	**0.00016 J**	**0.00018 J**	**0.00029 J**	0.00040 U	**0.00015 J**	**0.00032 J**	**0.00025 J**
	Copper	mg/L	NE	0.64	**0.0019 J**	**0.0046**	**0.0033**	**0.0035**	**0.0023**	**0.0035**	**0.0027**	**0.0010 J**	**0.0029**	**0.0013 J**
	Iron	mg/L	NE	11.2	0.20 U	**0.031 J**	0.040 U	**0.0082 J**	0.20 U	**0.032 J**	**0.0058 J**	0.20 U	**0.030 J**	0.040 U
	Lead	mg/L	0.015	NL	**0.00061 J**	**0.00037 J**	**0.000042 J**	**0.000078 J**	0.00080 U	**0.00068**	0.00040 U	0.00080 U	**0.00044**	**0.000054 J**
	Manganese	mg/L	NE	2.24	0.0020 U	**0.0010 J**	**0.0017 J**	0.0020 U	0.0020 U	**0.0011 J**	0.0020 U	0.0020 U	**0.0014 J**	0.0020 U
	Mercury[5]	mg/L	0.002	NL	--	0.00020 U	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320	**0.00031 J**	**0.00072 J**	**0.00065 J**	**0.00093 J**	**0.00050 J**	**0.0012 J**	**0.00086 J**	**0.00052 J**	**0.0014 J**	**0.00074 J**
	Selenium	mg/L	NE	0.080	0.0080 U	0.0010 U	0.0010 U	0.0010 U	0.0080 U	**0.00031 J**	0.0010 U	0.0080 U	0.0010 U	**0.00044 J**
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0011 J**	**0.0065**	**0.0073**	**0.0068**	**0.0041**	**0.0022 J**	**0.0019 J**	**0.0014 J**	**0.0024 J**	**0.0019 J**
	Zinc	mg/L	NE	4.8	**0.0023 J**	**0.0022 J**	**0.0020 J**	0.0070 U	0.0070 U	**0.0027 J**	0.0070 U	0.0070 U	**0.0049 J**	0.0070 U
Total Metals[4]	Antimony	mg/L	NE	0.0064	**0.00032 J**	**0.00015 J**	**0.00011 J**	**0.00015 J**	**0.00012 J**	**0.00027 J**	**0.00026 J**	**0.00023 J**	**0.00023 J**	**0.00019 J**
	Arsenic	mg/L	0.005	NL	**0.0014**	**0.0023**	**0.0024**	**0.0023**	**0.0019**	**0.0017**	**0.0016**	**0.0016**	**0.0019**	**0.0014**
	Barium	mg/L	NE	3.2	**0.020**	**0.031**	**0.028**	**0.036**	**0.037**	**0.12**	**0.097**	**0.11**	**0.18**	**0.19**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000051 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	**0.0011**	**0.000030 J**	0.00040 U	0.00040 U	0.00040 U	**0.000031 J**	0.00040 U	0.00040 U	**0.000052 J**	0.00040 U
	Chromium	mg/L	NL	0.048	**0.00019 J**	**0.00015 J**	0.00040 U	**0.00032 J**	**0.00054**	**0.00017 J**	**0.00021 J**	**0.00017 J**	0.00040 U	**0.00016 J**
	Copper	mg/L	NE	0.64	**0.0021**	**0.0043**	**0.0031**	**0.0034**	**0.0037**	**0.0028**	**0.0024**	**0.0011 J**	**0.0019 J**	**0.0013 J**
	Iron	mg/L	NE	11.2	**0.045 J**	**0.072**	**0.0062 J**	**0.10**	**0.69**	**0.027 J**	0.040 U	0.20 U	**0.010 J**	0.040 U
	Lead	mg/L	0.015	NL	**0.0039**	**0.00013 J**	**0.000042 J**	**0.00037 J**	**0.0017**	**0.00010 J**	0.00040 U	0.00080 U	**0.000093 J**	0.00040 U
	Manganese	mg/L	NE	2.24	**0.0037**	**0.00080 J**	**0.0032**	**0.0015 J**	**0.0081**	**0.0010 J**	0.0020 U	**0.00050 J**	**0.00039 J**	0.0020 U
	Mercury[5]	mg/L	0.002	NL	--	0.00020 U	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320	**0.00045 J**	**0.00072 J**	**0.00058 J**	**0.0010 J**	**0.00076 J**	**0.0011 J**	**0.00089 J**	**0.00057 J**	**0.0012 J**	**0.00075 J**
	Selenium	mg/L	NE	0.080	0.0080 U	0.0010 U	**0.00047 J**	0.0010 U	0.0080 U	**0.00031 J**	0.0010 U	0.0080 U	**0.00039 J**	0.0010 U
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	**0.000053 J**	**0.000043 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0018 J**	**0.0068**	**0.0073**	**0.0077**	**0.0057**	**0.0022 J**	**0.0025 J**	**0.0025 J**	**0.0022 J**	**0.0020 J**
	Zinc	mg/L	NE	4.8	**0.0034 J**	**0.0019 J**	0.0070 U	0.0070 U	0.0070 U	**0.0024 J**	0.0070 U	0.0070 U	**0.0027 J**	0.0070 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-4 MW-4-120717 12/07/17	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:120116 12/1/2016
Anions[7]	Chloride	mg/L	NE	NE	--	**37**	**23**	**38**	**--**	**50**	**41 J**	**--**	**53**	**25**
	Nitrate	mg/L	NE	25.6	**1.2**	**0.74**	**1.7**	**1.9**	**3.6**	**2.9**	**0.80**	**4.3**	**4.4**	**5.8**
	Nitrite	mg/L	NE	1.6	--	0.20 U	0.20 U	0.20 U	--	0.20 U	**0.16 J**	--	0.20 U	0.20 U
	Sulfate	mg/L	NE	NE	--	**19**	**15**	**23**	**--**	**28**	**15**	**--**	**31**	**45**
Cation[8]	Ammonia	mg/L	NE	NE	--	**0.22**	**0.11**	0.10 U	**--**	0.10 U	0.10 U	**--**	0.10 U	0.10 U
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	**0.015**	0.010 U	0.010 U	0.010 U	**0.011**
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE	--	**10 J**	**7.4 J**	**5.9 J**	**--**	20 U	**8.7 J**	**--**	20 U	20 U
	Total Organic Carbon	mg/L	NE	NE	--	**4.3**	**2.6**	**1.9**	**--**	**2.8**	**2.8**	**--**	**2.5**	**1.5**
	E. Coli	MPN/100mL	NE	NE	--	0.00	0.00	1.0 U	**--**	0.00	1.0 U	**--**	0.00	0.00
	Total Coliform	MPN/100mL	NE	NE	--	**7.5**	**2.0**	1.0 U	**--**	0.00	1.0 U	**--**	0.00	0.00
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL	--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	PCB-Aroclor 1221	µg/L			--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	PCB-Aroclor 1232	µg/L			--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	PCB-Aroclor 1242	µg/L			--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	PCB-Aroclor 1248	µg/L			--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	PCB-Aroclor 1254	µg/L			--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	PCB-Aroclor 1260	µg/L			--	0.10 U	0.093 U	0.098 U	**--**	0.10 U	0.098 U	**--**	0.096 U	0.096 U
	Total PCBs[12]	µg/L			--	0.10 U	0.093 U	0.098 U	--	0.10 U	0.098 U	--	0.096 U	0.096 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location Sample Name Sample Date	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A-120717 12/07/17	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL		0.13 U	--	0.12 U	0.12 U	0.13 U	0.13 U	-	-	0.12 U	0.12 U
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL		0.21 U	--	0.20 U	0.20 U	0.22 U	0.22 U	-	-	0.20 U	0.20 U
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL		150 U	--	100 U	100 U	100 U	150 U	-	-	100 U	100 U
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064		**0.00019 J**	**0.00027 J**	**0.00096 J**	**0.00022 J**	**0.00062**	**0.00049**	**0.00051**	**0.00055**	0.00040 U	0.00040 U
	Arsenic	mg/L	0.005	NL		**0.0016**	**0.0011**	**0.00089 J**	**0.0040 J**	**0.00041 J**	**0.00045 J**	**0.00054 J**	**0.00056 J**	**0.00097 J**	**0.00031 J**
	Barium	mg/L	NE	3.2		**0.14**	**0.10**	**0.059 J**	**0.55 J**	**0.051**	**0.052**	**0.051**	**0.051**	**0.024**	**0.021**
	Beryllium	mg/L	NE	0.032		0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL		**0.000042 J**	0.00040 U	0.00040 U	**0.00091**	**0.000037 J**	**0.000034 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Chromium	mg/L	NL	0.048		**0.00019 J**	**0.00019 J**	**0.0018 J**	**0.0010 J**	**0.0013**	**0.00093**	**0.0015 J**	**0.0019 J**	**0.0024**	**0.0017**
	Copper	mg/L	NE	0.64		**0.00080 J**	**0.00080 J**	**0.0025 J**	**0.033 J**	**0.0014 J**	**0.0027**	**0.0022**	**0.0024**	0.0020 U	0.0020 U
	Iron	mg/L	NE	11.2		**0.0077 J**	0.20 U	**0.0058 J**	**0.0079 J**	**0.012 J**	**0.013 J**	0.20 U	0.20 U	0.040 U	0.040 U
	Lead	mg/L	0.015	NL		**0.00036 J**	0.00080 U	**0.000040 J**	**0.0039 J**	0.00040 U	**0.000049 J**	0.00080 U	0.00080 U	0.00040 U	0.00040 U
	Manganese	mg/L	NE	2.24		0.0020 U	0.0020 U	**0.00068 J**	**0.030 J**	**0.0010 J**	**0.00039 J**	0.0020 U	**0.00086 J**	**0.00084 J**	**0.00042 J**
	Mercury[5]	mg/L	0.002	NL		0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	0.00020 U	--	--	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320		0.0030 U	**0.00047 J**	**0.0028 J**	**0.015 J**	**0.0018 J**	**0.0013 J**	**0.0010 J**	**0.0012 J**	0.0030 U	0.0030 U
	Selenium	mg/L	NE	0.080		0.0010 U	0.0080 U	**0.00034 J**	**0.00032 J**	**0.00052 J**	**0.00032 J**	0.0080 U	0.0080 U	0.0010 U	**0.00040 J**
	Silver	mg/L	NE	0.080		0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016		0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080		**0.0022 J**	**0.0014 J**	**0.0047**	**0.0079**	**0.0025 J**	**0.0030 J**	**0.0024 J**	**0.0025 J**	**0.011**	**0.011**
	Zinc	mg/L	NE	4.8		0.0070 U	0.0070 U	**0.10 J**	**1.5 J**	**0.043**	**0.041**	**0.014**	**0.016**	**0.013**	**0.0093**
Total Metals[4]	Antimony	mg/L	NE	0.0064		**0.00025 J**	**0.00023 J**	**0.0012**	**0.0010**	**0.00095**	**0.00079**	**0.00085**	**0.00086**	**0.000081 J**	0.00040 U
	Arsenic	mg/L	0.005	NL		**0.0017**	**0.0016**	**0.00089 J**	**0.00065 J**	**0.00080 J**	**0.00072 J**	**0.00080 J**	**0.00095 J**	**0.00055 J**	**0.00032 J**
	Barium	mg/L	NE	3.2		**0.15**	**0.13**	**0.082**	**0.065**	**0.072**	**0.058**	**0.073 J**	**0.11 J**	**0.027**	**0.021**
	Beryllium	mg/L	NE	0.032		0.00040 U	0.00040 U	**0.00011 J**	0.00040 U	**0.00023 J**	0.00040 U	**0.00010 J**	**0.00018 J**	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL		0.00040 U	0.00040 U	**0.00026 J**	**0.00018 J**	**0.00013 J**	**0.00011 J**	**0.00020 J**	**0.00042**	**0.000031 J**	0.00040 U
	Chromium	mg/L	NL	0.048		**0.00030 J**	**0.00021 J**	**0.0043 J**	**0.0021 J**	**0.0040**	**0.0023**	**0.0043 J**	**0.0075 J**	**0.0023**	**0.0016**
	Copper	mg/L	NE	0.64		0.0020 U	**0.00084 J**	**0.067 J**	**0.015 J**	**0.024**	**0.029**	**0.087 J**	**0.24 J**	**0.00060 J**	0.0020 U
	Iron	mg/L	NE	11.2		0.040 U	0.20 U	**11 J**	**1.1 J**	**3.5**	**2.2**	**6.0 J**	**13 J**	**0.22**	**0.040**
	Lead	mg/L	0.015	NL		0.00040 U	0.00080 U	**0.018 J**	**0.0049 J**	**0.012**	**0.0093**	**0.030 J**	**0.069 J**	**0.00076**	**0.00020 J**
	Manganese	mg/L	NE	2.24		0.0020 U	0.0020 U	**0.037 J**	**0.0099 J**	**0.031**	**0.012**	**0.034 J**	**0.076 J**	**0.020**	**0.0068**
	Mercury[5]	mg/L	0.002	NL		0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	0.00020 U	--	--	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320		0.0030 U	**0.00052 J**	**0.0068**	**0.0040**	**0.0052**	**0.0024 J**	**0.0044 J**	**0.0082 J**	**0.00061 J**	0.0030 U
	Selenium	mg/L	NE	0.080		0.0010 U	0.0080 U	**0.00047 J**	**0.00059 J**	0.0010 U	**0.00040 J**	0.0080 U	0.0080 U	**0.00035 J**	0.0010 U
	Silver	mg/L	NE	0.080		0.00040 U	0.00040 U	**0.0016 J**	**0.00030 J**	**0.00075**	**0.00057**	**0.0011 J**	**0.0017 J**	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016		0.0010 U	**0.000068 J**	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080		**0.0027 J**	**0.0024 J**	**0.0052**	**0.0032 J**	**0.0042**	**0.0043**	**0.0047**	**0.0074**	**0.012**	**0.011**
	Zinc	mg/L	NE	4.8		0.0070 U	**0.0023 J**	**0.31 J**	**0.18 J**	**0.23**	**0.095**	**0.18 J**	**0.39 J**	**0.025**	**0.012**

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A-120717 12/07/17	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016
Anions[7]	Chloride	mg/L	NE	NE	**14**	–	**0.99**	**1.4**	**1.2**	**1.1**	–	–	**24**	**1.2**
	Nitrate	mg/L	NE	25.6	**4.3**	**4.2**	**0.29**	**0.38**	**0.36**	**0.28**	**0.29**	**0.30**	0.20 U	**0.27**
	Nitrite	mg/L	NE	1.6	0.20 U	–	0.20 U	0.20 U	0.20 U	0.20 U	–	–	**0.30**	0.20 U
	Sulfate	mg/L	NE	NE	**19**	–	**4.1**	**4.5**	**3.8**	**4.1**	–	–	**7.4**	**4.7**
Cation[8]	Ammonia	mg/L	NE	NE	0.10 U	–	0.10 U	0.10 U	0.10 U	0.10 U	–	–	0.10 U	0.10 U
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE	**5.3 J**	–	20 U	20 U	**4.2 J**	20 U	–	–	20 U	**4.3 J**
	Total Organic Carbon	mg/L	NE	NE	**0.99 J**	–	1.0 U	1.0 U	1.0 U	1.0 U	–	–	1.0 U	1.0 U
	E. Coli	MPN/100mL	NE	NE	1.0 U	–	0.00	0.00	0.00	1.0 U	–	–	0.00	0.00
	Total Coliform	MPN/100mL	NE	NE	1.0 U	–	0.00	**12**	**4.1**	1.0 U	–	–	0.00	0.00
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL	0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	PCB-Aroclor 1221	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	PCB-Aroclor 1232	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	PCB-Aroclor 1242	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	PCB-Aroclor 1248	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	PCB-Aroclor 1254	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	PCB-Aroclor 1260	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U
	Total PCBs[12]	µg/L			0.096 U	–	0.12 U	0.10 U	0.12 U	0.099 U	–	–	0.10 U	0.095 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017	MW-8A MW-8A-082116 8/21/2016	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:120617 12/06/17	MW-9A MW-9A-082116 8/21/2016
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL	0.13 U	-	0.12 U	**0.047**	0.12 U	–	0.12 U	**0.046**	0.12 U	–	0.12 U
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL	0.21 U	-	0.20 U	0.20 U	0.21 U	–	0.20 U	0.20 U	0.21 U	–	0.20 U
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL	150 U	-	100 U	100 U	150 U	–	100 U	100 U	150 U	–	100 U
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064	0.00040 U	0.00040 U	**0.00043**	**0.00040**	**0.00032 J**	0.00042 U	**0.00012 J**	**0.00013 J**	**0.000097 J**	0.00040 U	**0.00019 J**
	Arsenic	mg/L	0.005	NL	**0.00040 J**	**0.00041 J**	**0.0010**	**0.00038 J**	**0.00059 J**	**0.00054 J**	**0.0019**	**0.00096 J**	**0.0012**	**0.0010**	**0.0031**
	Barium	mg/L	NE	3.2	**0.021**	**0.021**	**0.036**	**0.033**	**0.031**	**0.029**	**0.19**	**0.19**	**0.16**	**0.14**	**0.049**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	**0.00014 J**	**0.000067 J**	**0.000044 J**	0.00040 U	**0.000043 J**	0.00040 U	**0.000034 J**	0.00040 U	**0.000029 J**
	Chromium	mg/L	NL	0.048	**0.0016**	**0.0017**	**0.00068**	**0.00048**	0.00053 U	**0.00047 J**	**0.00034 J**	**0.00029 J**	0.00040 U	**0.0020 J**	**0.00018 J**
	Copper	mg/L	NE	0.64	0.0020 U	0.0020 U	**0.0082**	**0.0048**	**0.0040**	**0.0029**	**0.0014 J**	0.0020 U	**0.00060 J**	**0.00094 J**	**0.0035**
	Iron	mg/L	NE	11.2	0.040 U	0.20 U	**0.028 J**	0.040 U	**0.020 J**	0.20 U	**0.023 J**	0.040 U	0.040 U	0.20 U	**0.029 J**
	Lead	mg/L	0.015	NL	0.00040 U	0.00080 U	**0.0013**	**0.00050**	**0.00043**	**0.00031 J**	**0.00027 J**	**0.000035 J**	0.00040 U	0.00080 U	**0.00044**
	Manganese	mg/L	NE	2.24	0.0020 U	0.0020 U	**0.0017 J**	0.0020 U	0.0020 U	**0.0016 J**	**0.00063 J**	0.0020 U	0.0020 U	**0.0025**	**0.0010 J**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U
	Nickel	mg/L	NE	0.320	0.0030 U	**0.00025 J**	**0.017**	**0.0021 J**	**0.0013 J**	**0.00079 J**	**0.00087 J**	**0.00046 J**	**0.00055 J**	**0.0022 J**	**0.0017 J**
	Selenium	mg/L	NE	0.080	0.0010 U	0.0080 U	**0.00046 J**	0.0010 U	**0.00036 J**	0.0080 U	**0.00032 J**	0.0010 U	0.0010 U	0.0080 U	**0.00039 J**
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.012**	**0.012**	**0.0027 J**	**0.0019 J**	**0.0024 J**	**0.0018 J**	**0.0028 J**	**0.0028 J**	**0.0028 J**	**0.0017 J**	**0.0094**
	Zinc	mg/L	NE	4.8	**0.0095**	**0.0065 J**	**0.029**	**0.015**	**0.012**	**0.0092**	**0.0019 J**	0.0070 U	0.0070 U	0.0070 U	**0.0026 J**
Total Metals[4]	Antimony	mg/L	NE	0.0064	**0.00015 J**	0.00040 U	**0.00045**	**0.00034 J**	**0.00032 J**	**0.00025 J**	**0.00015 J**	**0.000097 J**	**0.00010 J**	**0.00016 J**	**0.00023 J**
	Arsenic	mg/L	0.005	NL	**0.00057 J**	0.0010 U	**0.00073 J**	**0.00061 J**	**0.00060 J**	**0.00071 J**	**0.0018**	**0.0013**	**0.0012**	**0.0018**	**0.0029**
	Barium	mg/L	NE	3.2	**0.022**	**0.021**	**0.035**	**0.032**	**0.031**	**0.035**	**0.19**	**0.18**	**0.16**	**0.17**	**0.049**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000078 J**	0.00040 U	0.00040 U	0.00040 U	**0.000072 J**	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	**0.00012 J**	**0.000071 J**	**0.000046 J**	0.00040 U	**0.000041 J**	0.00040 U	0.00040 U	0.00040 U	**0.000028 J**
	Chromium	mg/L	NL	0.048	**0.0020**	**0.0015**	**0.00045**	**0.00046**	**0.00051**	**0.00050**	**0.00064**	**0.00045**	**0.00059**	**0.0011**	0.00040 U
	Copper	mg/L	NE	0.64	0.0020 U	0.0020 U	**0.0061**	**0.0049**	**0.0041**	**0.0038**	**0.0014 J**	**0.0010 J**	**0.00072 J**	**0.0022**	**0.0029**
	Iron	mg/L	NE	11.2	**0.10**	0.20 U	**0.025 J**	**0.0099 J**	**0.0091 J**	0.20 U	**0.86**	**0.44**	**0.62**	**2.0**	**0.018 J**
	Lead	mg/L	0.015	NL	**0.00034 J**	0.00080 U	**0.00082**	**0.00052**	**0.00060**	**0.0012**	**0.00048**	**0.00061**	**0.00032 J**	**0.0011**	**0.000083 J**
	Manganese	mg/L	NE	2.24	**0.0073**	**0.0028**	**0.00087 J**	0.0020 U	0.0020 U	**0.00061 J**	**0.022**	**0.030**	**0.014**	**0.045**	**0.00043 J**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U
	Nickel	mg/L	NE	0.320	0.0030 U	**0.00011 J**	**0.019**	**0.0018 J**	**0.0014 J**	**0.00094 J**	**0.0013 J**	**0.00084 J**	**0.00076 J**	**0.0023 J**	**0.0017 J**
	Selenium	mg/L	NE	0.080	**0.00035 J**	0.0080 U	**0.00041 J**	**0.00048 J**	0.0010 U	0.0080 U	0.0010 U	**0.00040 J**	0.0010 U	0.0080 U	0.0010 U
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.00011 J**	**0.000037 J**	0.00040 U	0.00040 U	**0.000096 J**	**0.00090**
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.012**	**0.011**	**0.0026 J**	**0.0023 J**	**0.0022 J**	**0.0027 J**	**0.0039 J**	**0.0036 J**	**0.0034 J**	**0.0056**	**0.0099**
	Zinc	mg/L	NE	4.8	**0.011**	**0.0082**	**0.016**	**0.013**	**0.012**	**0.012**	**0.0032 J**	**0.0022 J**	**0.0026 J**	**0.010**	**0.0020 J**

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017	MW-8A MW-8A-082116 8/21/2016	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:120617 12/06/17	MW-9A MW-9A-082116 8/21/2016
Anions[7]	Chloride	mg/L	NE	NE	**1.0**	–	**8.9**	**7.6**	**8.1**	–	**43 J**	**17**	**17**	–	**50**
	Nitrate	mg/L	NE	25.6	**0.19 J**	**0.19 J**	**1.3**	**1.2**	**1.3**	**1.8**	**3.4**	**2.9**	**3.9**	**4.5**	0.20 U
	Nitrite	mg/L	NE	1.6	0.20 U	–	0.20 U	0.20 U	0.20 U	–	0.20 U	0.20 U	0.20 U	–	0.20 U
	Sulfate	mg/L	NE	NE	**5.8**	–	**10**	**9.3**	**10**	–	**28**	**20**	**20**	–	**11**
Cation[8]	Ammonia	mg/L	NE	NE	0.10 U	–	**0.16**	0.10 U	0.10 U	–	**0.18**	**0.15**	**0.28**	–	**0.17**
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE	20 U		20 U	20 U	20 U	–	**5.9 J**	20 U	**4.3 J**	–	**16 J**
	Total Organic Carbon	mg/L	NE	NE	1.0 U		**0.71 J**	**0.59 J**	1.0 U	–	**1.5**	**1.1**	**0.67 J**	–	**5.4**
	E. Coli	MPN/100mL	NE	NE	1.0 U		0.00	0.00	1.0 U	–	0.00	0.00	1.0 U	–	0.00
	Total Coliform	MPN/100mL	NE	NE	1.0 U		0.00	0.00	1.0 U	–	0.00	0.00	1.0 U	–	0.00
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL	0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	PCB-Aroclor 1221	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	PCB-Aroclor 1232	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	PCB-Aroclor 1242	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	PCB-Aroclor 1248	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	PCB-Aroclor 1254	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	PCB-Aroclor 1260	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U
	Total PCBs[12]	µg/L			0.098 U	–	0.093 U	0.094 U	0.10 U	–	0.092 U	0.093 U	0.097 U	–	0.096 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A:022217 2/22/2017	MW-9A MW-9A:121317 12/13/2017	MW-11A MW-11A:082416 8/24/2016	MW-11A MW-11A:112816 11/28/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:121117 12/11/17	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-DUP:113016 11/30/2016
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL	0.12 U	0.12 U	-	0.12 U	0.12 U	0.13 U	–	0.12 U	0.13 U	0.13 U	0.12 U
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL	0.20 U	0.20 U	-	0.20 U	0.21 U	0.21 U	–	0.20 U	0.21 U	0.21 U	0.21 U
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL	100 U	150 U	-	100 U	100 U	150 U	–	100 U	100 U	150 U	100 U
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064	**0.00013 J**	**0.00011 J**	**0.00015 J**	**0.00012 J**	**0.00015 J**	**0.00012 J**	0.00040 U	**0.000080 J**	0.00040 U	0.00040 U	0.00040 U
	Arsenic	mg/L	0.005	NL	**0.0025**	**0.0021**	**0.0022**	**0.0025**	**0.0019**	**0.0020**	**0.0018**	**0.0014**	**0.00097 J**	**0.0010**	**0.0010**
	Barium	mg/L	NE	3.2	**0.051**	**0.044**	**0.060**	**0.098**	**0.080**	**0.082**	**0.083**	**0.0074**	**0.0065**	**0.0065**	**0.0070**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Chromium	mg/L	NL	0.048	**0.00042**	0.00040 U	**0.00016 J**	**0.0013**	**0.00042**	**0.00043**	**0.00066**	**0.0011**	**0.00015 J**	0.00040 U	**0.00016 J**
	Copper	mg/L	NE	0.64	**0.0023**	**0.0022**	**0.0019 J**	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Iron	mg/L	NE	11.2	**0.018 J**	**0.046**	0.20 U	0.040 U	0.040 U	0.040 U	0.20 U	**0.014 J**	**0.0070 J**	**0.0069 J**	**0.0070 J**
	Lead	mg/L	0.015	NL	**0.000049 J**	0.00040 U	0.00080 U	0.00040 U	0.00040 U	**0.000037 J**	0.00080 U	**0.000078 J**	0.00040 U	0.00040 U	**0.000040 J**
	Manganese	mg/L	NE	2.24	0.0020 U	0.0020 U	0.0020 U	**0.00058 J**	0.0020 U	0.0020 U	0.0020 U	**0.0037**	**0.00075 J**	**0.00070 J**	**0.00082 J**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320	**0.0012 J**	**0.00091 J**	**0.0011 J**	0.0030 U	0.0030 U	0.0030 U	**0.00022 J**	0.0030 U	0.0030 U	0.0030 U	0.0030 U
	Selenium	mg/L	NE	0.080	**0.00032 J**	0.0010 U	0.0080 U	0.0010 U	0.0010 U	0.0010 U	0.0080 U	0.0010 U	0.0010 U	0.0010 U	**0.00033 J**
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0085**	**0.0060**	**0.0066**	**0.0042**	**0.0027 J**	**0.0032 J**	**0.0028 J**	**0.011**	**0.0090**	**0.0089**	**0.0093**
	Zinc	mg/L	NE	4.8	**0.0021 J**	**0.0027 J**	0.0070 U	**0.0024 J**	**0.0022 J**	0.0070 U	0.0070 U	**0.0051 J**	**0.0021 J**	**0.0037 J**	**0.0025 J**
Total Metals[4]	Antimony	mg/L	NE	0.0064	**0.00014 J**	**0.00014 J**	**0.00011 J**	**0.00017 J**	**0.00010 J**	**0.00025 J**	0.00040 U	**0.000093 J**	0.00040 U	**0.00010 J**	**0.000085 J**
	Arsenic	mg/L	0.005	NL	**0.0026**	**0.0023**	**0.0020**	**0.0022**	**0.0019**	**0.0021**	**0.0016**	**0.0014**	**0.0011**	**0.0014**	**0.0011**
	Barium	mg/L	NE	3.2	**0.050**	**0.046**	**0.075**	**0.10**	**0.077**	**0.075**	**0.085**	**0.010**	**0.0084**	**0.016**	**0.0087**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	**0.000046 J**	0.00040 U	**0.000031 J**	0.00040 U	0.00040 U	0.00040 U	**0.000064 J**	0.00040 U	**0.000055 J**	0.00040 U
	Chromium	mg/L	NL	0.048	**0.00016 J**	**0.00020 J**	**0.00034 J**	**0.00054**	**0.00042**	**0.00052**	**0.00046**	**0.00030 J**	**0.00053**	**0.0025 J**	**0.00029 J**
	Copper	mg/L	NE	0.64	**0.0023**	**0.0017 J**	**0.0024**	0.0020 U	0.0020 U	0.0020 U	0.0020 U	**0.0015 J**	**0.0010 J**	**0.0013 J**	**0.00094 J**
	Iron	mg/L	NE	11.2	**0.019 J**	0.040 U	0.20 U	**0.017 J**	0.040 U	0.040 U	0.20 U	**1.0**	**0.71**	**1.8**	**0.69**
	Lead	mg/L	0.015	NL	**0.000054 J**	**0.000041 J**	0.00080 U	0.00040 U	0.00040 U	0.00040 U	0.00080 U	**0.0013**	**0.00079**	**0.0015**	**0.00062**
	Manganese	mg/L	NE	2.24	0.0020 U	0.0020 U	0.0020 U	**0.00046 J**	0.0020 U	0.0020 U	0.0020 U	**0.023**	**0.013**	**0.038**	**0.013**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320	**0.0012 J**	**0.00092 J**	**0.0019 J**	0.0030 U	0.0030 U	0.0030 U	0.0030 U	**0.00061 J**	**0.00049 J**	**0.0011 J**	0.0030 U
	Selenium	mg/L	NE	0.080	0.0010 U	**0.00033 J**	0.0080 U	0.0010 U	**0.00035 J**	0.0010 U	0.0080 U	**0.00036 J**	0.0010 U	**0.00035 J**	0.0010 U
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.00024 J**	**0.00027 J**	**0.00077**	**0.00030 J**
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0082**	**0.0069**	**0.0061**	**0.0034 J**	**0.0029 J**	**0.0036 J**	**0.0024 J**	**0.010**	**0.0093**	**0.013**	**0.0097**
	Zinc	mg/L	NE	4.8	0.0070 U	0.0070 U	0.0070 U	**0.0032 J**	0.0070 U	0.0070 U	0.0070 U	**0.017**	**0.0075**	**0.018**	**0.0070**

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location Sample Name Sample Date	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A:022217 2/22/2017	MW-9A MW-9A:121317 12/13/2017	MW-11A MW-11A:082416 8/24/2016	MW-11A MW-11A:112816 11/28/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:121117 12/11/17	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-DUP:113016 11/30/2016
Anions[7]	Chloride	mg/L	NE	NE		**48**	**50**	–	**11**	**9.8**	**11**	–	**1.4**	**1.5**	**1.8**	**1.4**
	Nitrate	mg/L	NE	25.6		**1.6**	**2.6**	**1.3**	**3.6**	**3.0**	**3.0**	**3.5**	**3.9**	**3.6**	**4.1**	**3.4**
	Nitrite	mg/L	NE	1.6		0.20 U	**0.15 J**	–	0.20 U	0.20 U	0.20 U	–	0.20 U	0.20 U	0.20 U	0.20 U
	Sulfate	mg/L	NE	NE		**21**	**25**	–	**11**	**9.5**	**9.7**	–	**25**	**24**	**30**	**23**
Cation[8]	Ammonia	mg/L	NE	NE		**0.57 J**	**0.061 J**	–	0.10 U	**0.10**	0.10 U	–	**0.098 J**	**0.11**	0.10 U	**0.19**
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	**0.0080 J**
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE		**9.5 J**	**9.8 J**	–	20 U	20 U	20 U	–	20 U	**8.4 J**	**9.0 J**	**11 J**
	Total Organic Carbon	mg/L	NE	NE		**3.0**	**2.9**	–	**0.75 J**	**0.64 J**	1.0 U	–	**2.6**	**2.3**	**2.6**	**2.5**
	E. Coli	MPN/100mL	NE	NE		0.00	1.0 U	–	0.00	0.00	1.0 U	–	0.00	0.00	1.0 U	0.00
	Total Coliform	MPN/100mL	NE	NE		0.00	**2.0**	–	0.00	0.00	1.0 U	–	0.00	0.00	1.0 U	0.00
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL		0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	PCB-Aroclor 1221	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	PCB-Aroclor 1232	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	PCB-Aroclor 1242	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	PCB-Aroclor 1248	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	PCB-Aroclor 1254	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	PCB-Aroclor 1260	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U
	Total PCBs[12]	µg/L				0.093 U	0.098 U	–	0.10 U	0.10 U	0.097 U	–	0.10 U	0.10 U	0.10 U	0.10 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A-082316 8/23/2016
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL	0.13 U	–	0.12 U	0.12 U	0.13 U	–	0.12 U	0.13 U	0.13 U	0.13 U
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL	0.21 U	–	0.20 U	0.21 U	0.21 U	–	0.20 U	0.22 U	0.22 U	0.21 U
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL	150 U	–	100 U	100 U	150 U	–	100 U	100 U	150 U	100 U
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064	0.00040 U	**0.00020 J**	**0.00012 J**	**0.000097 J**	**0.000095 J**	0.00040 U	**0.00019 J**	**0.00014 J**	**0.00013 J**	**0.00015 J**
	Arsenic	mg/L	0.005	NL	**0.0010**	**0.00092 J**	**0.0023**	**0.0018**	**0.0020**	**0.0013**	**0.0023**	**0.0020**	**0.0021**	**0.0038**
	Barium	mg/L	NE	3.2	**0.0066**	**0.0059**	**0.053**	**0.052**	**0.055**	**0.036**	**0.042**	**0.037**	**0.047**	**0.038**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000062 J**	0.00040 U	0.00040 U	**0.000070 J**
	Chromium	mg/L	NL	0.048	0.00040 U	**0.00027 J**	**0.0012**	**0.00026 J**	**0.00032 J**	**0.00034 J**	**0.00035 J**	**0.00017 J**	**0.00014 J**	**0.00027 J**
	Copper	mg/L	NE	0.64	0.0020 U	0.0020 U	**0.00063 J**	0.0020 U	**0.00088 J**	**0.00074 J**	**0.0057**	**0.0045**	**0.0051**	**0.0063**
	Iron	mg/L	NE	11.2	**0.0096 J**	0.20 U	0.040 U	0.040 U	0.040 U	0.20 U	**0.019 J**	0.040 U	**0.0068 J**	**0.028 J**
	Lead	mg/L	0.015	NL	**0.000051 J**	0.00080 U	**0.00019 J**	**0.000049 J**	**0.000042 J**	0.00080 U	**0.00029 J**	0.00040 U	0.00040 U	**0.00038 J**
	Manganese	mg/L	NE	2.24	**0.00068 J**	0.0020 U	**0.0013 J**	0.0020 U	**0.0016 J**	0.0020 U	**0.0018 J**	**0.00078 J**	**0.0010 J**	**0.0013 J**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320	0.0030 U	**0.00014 J**	**0.00042 J**	0.0030 U	0.0030 U	**0.00017 J**	**0.0016 J**	**0.0012 J**	**0.0017 J**	**0.0011 J**
	Selenium	mg/L	NE	0.080	0.0010 U	0.0080 U	0.0010 U	0.0010 U	0.0010 U	0.0080 U	**0.00030 J**	0.0010 U	0.0010 U	0.0010 U
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0089**	**0.0075**	**0.0042**	**0.0029 J**	**0.0033 J**	**0.0020 J**	**0.0028 J**	**0.0024 J**	**0.0027 J**	**0.0059**
	Zinc	mg/L	NE	4.8	**0.0066 J**	0.0070 U	**0.0075**	0.0070 U	0.0070 U	0.0070 U	**0.0025 J**	0.0070 U	0.0070 U	**0.0056 J**
Total Metals[4]	Antimony	mg/L	NE	0.0064	0.00040 U	0.00040 U	**0.00015 J**	**0.00010 J**	**0.00011 J**	0.00040 U	**0.00018 J**	**0.00014 J**	**0.00016 J**	**0.00015 J**
	Arsenic	mg/L	0.005	NL	**0.0014**	**0.0011**	**0.0019**	**0.0018**	**0.0022**	**0.0018**	**0.0022**	**0.0021**	**0.0022**	**0.0036**
	Barium	mg/L	NE	3.2	**0.015**	**0.0077**	**0.055**	**0.051**	**0.055**	**0.047**	**0.042**	**0.036**	**0.049**	**0.037**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000054 J**	0.00040 U	0.00040 U	**0.00011 J**
	Chromium	mg/L	NL	0.048	**0.0011 J**	**0.00025 J**	**0.00033 J**	**0.00027 J**	**0.00036 J**	**0.00039 J**	**0.00033 J**	**0.00032 J**	**0.0011**	0.00040 U
	Copper	mg/L	NE	0.64	**0.0013 J**	**0.00068 J**	**0.00088 J**	**0.00061 J**	0.0020 U	**0.00081 J**	**0.0054**	**0.0046**	**0.0047**	**0.0055**
	Iron	mg/L	NE	11.2	**1.7**	**0.21**	**0.034 J**	**0.039 J**	0.040 U	0.20 U	**0.12**	**0.15**	**0.19**	**0.014 J**
	Lead	mg/L	0.015	NL	**0.0014**	**0.00032 J**	0.00040 U	0.00040 U	**0.00013 J**	0.00080 U	**0.00012 J**	**0.000082 J**	**0.00012 J**	**0.00017 J**
	Manganese	mg/L	NE	2.24	**0.037**	**0.0072**	**0.00040 J**	0.0020 U	0.0020 U	**0.00048 J**	**0.0027**	**0.0019 J**	**0.0045**	**0.00058 J**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	–	0.00020 U	0.00020 U	0.00020 U	0.00020 U
	Nickel	mg/L	NE	0.320	**0.0010 J**	**0.00021 J**	0.0030 U	0.0030 U	0.0030 U	**0.00024 J**	**0.0014 J**	**0.0011 J**	**0.0019 J**	**0.0011 J**
	Selenium	mg/L	NE	0.080	0.0010 U	0.0080 U	0.0010 U	0.0010 U	0.0010 U	0.0080 U	0.0010 U	0.0010 U	**0.00031 J**	**0.00033 J**
	Silver	mg/L	NE	0.080	**0.00074**	**0.00013 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000039 J**	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.012**	**0.0091**	**0.0033 J**	**0.0027 J**	**0.0039 J**	**0.0030 J**	**0.0028 J**	**0.0024 J**	**0.0033 J**	**0.0055**
	Zinc	mg/L	NE	4.8	**0.018**	**0.0042 J**	**0.0024 J**	0.0070 U	0.0070 U	0.0070 U	**0.0040 J**	0.0070 U	0.0070 U	**0.0035 J**

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A-082316 8/23/2016
Anions[7]	Chloride	mg/L	NE	NE	**1.4**	--	**7.7**	**7.1**	**7.9**	--	**45**	**40**	**47**	**45**
	Nitrate	mg/L	NE	25.6	**4.0**	**3.4**	**5.1**	**4.7**	**4.7**	**4.2**	**0.47**	**0.31**	**0.20**	0.21 U
	Nitrite	mg/L	NE	1.6	0.20 U	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	**0.16 J**	0.20 U
	Sulfate	mg/L	NE	NE	**27**	**--**	**10**	**10**	**11**	**--**	**23**	**20**	**17**	**22**
Cation[8]	Ammonia	mg/L	NE	NE	0.10 U	**--**	0.10 U	**0.088 J**	0.10 U	**--**	0.10 U	**0.072 J**	0.10 U	0.10 U
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	**0.0024 J**	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE	**9.0 J**	**--**	20 U	20 U	**5.1 J**	**--**	20 U	**6.8 J**	**8.9 J**	**9.0 J**
	Total Organic Carbon	mg/L	NE	NE	**2.6**	**--**	**1.1**	**0.98 J**	**0.93 J**	**--**	**4.1**	**3.9**	**2.9**	**4.6**
	E. Coli	MPN/100mL	NE	NE	1.0 U	**--**	0.00	0.00	1.0 U	**--**	0.00	0.00	1.0 U	0.00
	Total Coliform	MPN/100mL	NE	NE	1.0 U	**--**	0.00	0.00	1.0 U	**--**	0.00	0.00	1.0 U	0.00
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL	0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	PCB-Aroclor 1221	µg/L			0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	PCB-Aroclor 1232	µg/L			0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	PCB-Aroclor 1242	µg/L			0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	PCB-Aroclor 1248	µg/L			0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	PCB-Aroclor 1254	µg/L			0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	PCB-Aroclor 1260	µg/L			0.096 U	**--**	0.10 U	0.11 U	0.10 U	**--**	0.10 U	0.11 U	0.095 U	0.10 U
	Total PCBs[12]	µg/L			0.096 U	--	0.10 U	0.11 U	0.10 U	--	0.10 U	0.11 U	0.095 U	0.10 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17	MW-16 MW-16:082916 8/29/2016	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16-120717 12/07/17	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
TPH[3]	Diesel-range hydrocarbons	mg/L	0.5	NL	0.13 U	0.13 U	--	0.13 U	0.12 U	0.13 U	--	0.12 U	0.12 U	0.12 U	--
	Lube Oil-range Hydrocarbons	mg/L	0.5	NL	0.21 U	0.22 U	--	0.21 U	0.20 U	0.21 U	--	0.20 U	0.20 U	0.21 U	--
	Gasoline-range hydrocarbons	µg/L	800/1,000[13]	NL	100 U	150 U	--	100 U	100 U	150 U	--	100 U	100 U	150 U	--
Dissolved Metals[4]	Antimony	mg/L	NE	0.0064	**0.00013 J**	**0.00013 J**	**0.00011 J**	**0.00013 J**	**0.00013 J**	**0.00013 J**	**0.00022 J**	**0.00015 J**	**0.00013 J**	**0.00011 J**	0.00040 U
	Arsenic	mg/L	0.005	NL	**0.0030**	**0.0036**	**0.0032**	**0.0028**	**0.0019**	**0.0021**	**0.0016**	**0.0027**	**0.0024**	**0.0023**	**0.0017**
	Barium	mg/L	NE	3.2	**0.037**	**0.049**	**0.049**	**0.022**	**0.056**	**0.052**	**0.026**	**0.039**	**0.039**	**0.045**	**0.029**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	0.00040 U	**0.000063 J**	0.00040 U	**0.000029 J**	0.00040 U	**0.000031 J**	0.00040 U	0.00040 U	0.00040 U
	Chromium	mg/L	NL	0.048	**0.00030 J**	**0.00014 J**	**0.00030 J**	**0.00033 J**	0.00040 U	**0.00014 J**	**0.00024 J**	**0.00023 J**	0.00040 U	0.00040 U	**0.00020 J**
	Copper	mg/L	NE	0.64	**0.0046**	**0.0061**	**0.0013 J**	**0.0053**	**0.0038**	**0.0031**	**0.0027**	**0.0044**	**0.0037**	**0.0038**	**0.0023**
	Iron	mg/L	NE	11.2	0.040 U	0.040 U	0.20 U	0.040 U	0.040 U	0.040 U	0.20 U	**0.029 J**	**0.0099 J**	0.040 U	0.20 U
	Lead	mg/L	0.015	NL	**0.000080 J**	**0.000035 J**	0.00080 U	0.00040 U	0.00040 U	**0.00011 J**	**0.00057 J**	**0.00036 J**	**0.000046 J**	**0.000049 J**	0.00080 U
	Manganese	mg/L	NE	2.24	0.0020 U	0.0020 U	0.0020 U	**0.0011 J**	**0.0016 J**	**0.00098 J**	**0.00050 J**	**0.0019 J**	**0.0013 J**	**0.0023**	0.0020 U
	Mercury[5]	mg/L	0.002	NL	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	--
	Nickel	mg/L	NE	0.320	**0.00094 J**	**0.0014 J**	**0.00057 J**	**0.0011 J**	**0.0011 J**	**0.0012 J**	**0.00072 J**	**0.0016 J**	**0.0015 J**	**0.0016 J**	**0.0011 J**
	Selenium	mg/L	NE	0.080	**0.00033 J**	0.0010 U	0.0080 U	0.0010 U	**0.00032 J**	0.0010 U	0.0080 U	**0.00036 J**	0.0010 U	0.0010 U	0.0080 U
	Silver	mg/L	NE	0.080	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0053**	**0.0070**	**0.0061**	**0.0049**	**0.0041**	**0.0042**	**0.0026 J**	**0.0066**	**0.0072**	**0.0066**	**0.0046**
	Zinc	mg/L	NE	4.8	**0.0029 J**	**0.0019 J**	**0.0026 J**	**0.0036 J**	**0.0023 J**	0.0070 U	**0.0019 J**	**0.0024 J**	0.0070 U	**0.0020 J**	0.0070 U
Total Metals[4]	Antimony	mg/L	NE	0.0064	**0.00013 J**	**0.00015 J**	**0.00013 J**	0.00040 U	**0.00016 J**	**0.00019 J**	**0.00012 J**	**0.00017 J**	**0.00012 J**	**0.00011 J**	**0.00011 J**
	Arsenic	mg/L	0.005	NL	**0.0031**	**0.0036**	**0.0029**	**0.0023**	**0.0021**	**0.0022**	**0.0019**	**0.0026**	**0.0025**	**0.0022**	**0.0021**
	Barium	mg/L	NE	3.2	**0.036**	**0.049**	**0.053**	**0.026**	**0.060**	**0.053**	**0.034**	**0.040**	**0.038**	**0.040**	**0.033**
	Beryllium	mg/L	NE	0.032	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000071 J**
	Cadmium	mg/L	0.005	NL	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000039 J**	**0.000037 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U
	Chromium	mg/L	NL	0.048	**0.00016 J**	**0.00028 J**	**0.00024 J**	**0.0015**	**0.00076**	**0.0014**	**0.00028 J**	**0.00052**	**0.00061**	0.00040 U	**0.00023 J**
	Copper	mg/L	NE	0.64	**0.0056**	**0.0053**	**0.0020**	**0.0058**	**0.0044**	**0.0034**	**0.0032**	**0.0039**	**0.0038**	**0.0043**	**0.0026**
	Iron	mg/L	NE	11.2	**0.024 J**	0.040 U	0.20 U	**0.23**	**0.33**	**0.22**	**0.072 J**	**0.26**	**0.025 J**	0.040 U	**0.037 J**
	Lead	mg/L	0.015	NL	**0.00030 J**	**0.000049 J**	0.00080 U	0.00040 U	**0.00063**	**0.00034 J**	0.00080 U	**0.00021 J**	**0.000039 J**	**0.00020 J**	0.00080 U
	Manganese	mg/L	NE	2.24	**0.00078 J**	**0.00045 J**	0.0020 U	**0.0085**	**0.012**	**0.0051**	**0.0020**	**0.0023**	**0.0013 J**	**0.0024**	**0.00073 J**
	Mercury[5]	mg/L	0.002	NL	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	--	0.00020 U	0.00020 U	0.00020 U	--
	Nickel	mg/L	NE	0.320	**0.0011 J**	**0.0014 J**	**0.00049 J**	**0.0012 J**	**0.0014 J**	**0.0019 J**	**0.00076 J**	**0.0016 J**	**0.0014 J**	**0.0014 J**	**0.0016 J**
	Selenium	mg/L	NE	0.080	0.0010 U	0.0010 U	0.0080 U	**0.00049 J**	0.0010 U	0.0010 U	0.0080 U	0.0010 U	0.0010 U	0.0010 U	0.0080 U
	Silver	mg/L	NE	0.080	0.00040 U	**0.000036 J**	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	0.00040 U	**0.000046 J**
	Thallium[6]	mg/L	NE	0.00016	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	0.080	**0.0052**	**0.0075**	**0.0060**	**0.0040**	**0.0043**	**0.0049**	**0.0038 J**	**0.0071**	**0.0069**	**0.0059**	**0.0055**
	Zinc	mg/L	NE	4.8	**0.0067 J**	0.0070 U	**0.0024 J**	**0.0031 J**	**0.0034 J**	0.0070 U	**0.0019 J**	**0.0024 J**	0.0070 U	0.0070 U	0.0070 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17	MW-16 MW-16:082916 8/29/2016	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16-120717 12/07/17	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
Anions[7]	Chloride	mg/L	NE	NE	**40**	**50**	--	**15**	**42**	**46**	--	**45**	**43**	**47**	--
	Nitrate	mg/L	NE	25.6	**0.37**	**1.3**	**4.8**	**1.0 J**	**0.48**	**1.6**	**2.9**	**0.24**	**1.1**	**1.2**	**2.5**
	Nitrite	mg/L	NE	1.6	0.20 U	**0.16 J**	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
	Sulfate	mg/L	NE	NE	**17**	**28**	--	**10**	**15**	**18**	--	**18**	**18**	**25**	--
Cation[8]	Ammonia	mg/L	NE	NE	0.10 U	0.10 U	--	**0.10**	**0.089 J**	0.10 U	--	**0.20**	0.10 U	**0.083 J**	--
Nitriles[9]	Cyanide[6]	mg/L	NE	0.0096	0.010 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	**0.0090 J**	0.010 U	0.010 U
General Chemistry[10]	CHEMICAL OXYGEN DEMAND	mg/L	NE	NE	**7.0 J**	**11 J**	--	**21**	**8.3 J**	**7.7 J**	--	**15 J**	**14 J**	**10 J**	--
	Total Organic Carbon	mg/L	NE	NE	**4.3**	**3.5**	--	**6.0**	**3.8**	**2.8**	--	**5.0**	**4.1**	**2.6**	--
	E. Coli	MPN/100mL	NE	NE	0.00	1.0 U	--	0.00	0.00	1.0 U	--	0.00	0.00	1.0 U	--
	Total Coliform	MPN/100mL	NE	NE	0.00	**6.3**	--	**29**	**340**	1.0 U	--	0.00	**1.0**	1.0 U	--
PCBs[6,11]	PCB-Aroclor 1016	µg/L	0.1	NL	0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	PCB-Aroclor 1221	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	PCB-Aroclor 1232	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	PCB-Aroclor 1242	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	PCB-Aroclor 1248	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	PCB-Aroclor 1254	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	PCB-Aroclor 1260	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--
	Total PCBs[12]	µg/L			0.099 U	0.10 U	--	0.10 U	0.094 U	0.10 U	--	0.10 U	0.095 U	0.099 U	--

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Diesel- and lube oil-range petroleum hydrocarbons were analyzed using Northwest Method NWTPH-Dx. Gasoline-range petroleum hydrocarbons were analyzed using Northwest Method NWTPH-Gx.

[4]Total and dissolved metals analyzed by EPA Method 200.8

[5]Mercury analyzed by EPA Method 245.1.

[6]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

[7]Anions analyzed by EPA Method 300.0.

[8]Cations analyzed by EPA Method 350.1.

[9]Nitriles analyzed by EPA Method 335.4.

[10]Chemical Oxygen Demand analyzed by EPA Method 410.04, Total Organic Carbon analyzed by EPA Method 5310C, E. Coli and Total Coliform analyzed by EPA Method 9223B.

[11]PCBs analyzed by EPA Method 8082A.

[12]Total PCBs is the sum of all PCBs.

[13]Gasoline-range petroleum hydrocarbon cleanup level is 1,000 mg/kg if benzene is not present and the total of ethylbenzene, toluene and xylenes is less than 1% of the gasoline mixture.

J = estimated result; NE = not established; NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level; mg/L = milligrams per liter;

MPN/100mL = most probable number of coliform per 100 milliliters; U = analyte was not detected above the reporting limit; µg/L= micrograms per liter;

Bold indicates that the analyte was detected above the laboratory reporting limit.

Bold and shading indicates analyte was detected above the applicable cleanup level.

Table 7

Groundwater Analytical Results - VOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location / Sample Name / Sample Date	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17	MW-4 MW-4-120717 12/07/17
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL		1.0 U	**0.22 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768		1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U
	1,1-Dichloroethane	ug/L	NE	7.68		1.0 U	**0.61 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400		1.0 U	**1.5**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146		1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.51		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE		0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U	1.0 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE		1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200		25 U	30 U	25 U	25 U	30 U	30 U	25 U	25 U	30 U	30 U	30 U
	Benzene	ug/L	5	NL		0.20 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.40 U
	Bromobenzene	ug/L	NE	NE		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE		1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54		2.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U	5.0 U
	Bromomethane	ug/L	NE	11.2		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800		1.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U	5.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17	MW-4 MW-4-120717 12/07/17
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	**0.31 J**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	**1.4**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**0.39 J**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	**1.0**	**1.5**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.58 J**	1.0 U
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene (TCE)	ug/L	5	NL	1.0 U	**0.34 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.0 U	**1.9**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.40 U
	Xylene, m-,p-	ug/L	1,000[5]	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A:121317 12/13/2017
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,1-Dichloroethane	ug/L	NE	7.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	30 U	30 U	25 U	30 U	30 U	25 U	25 U	30 U	30 U
	Benzene	ug/L	5	NL	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U
	Bromobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	2.0 U	2.0 U	5.0 U	5.0 U	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U
	Bromomethane	ug/L	NE	11.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800	1.0 U	1.0 U	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A:121317 12/13/2017
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	**1.0**	1.0 U	**1.3**	**0.97 J**	**0.99 J**	**0.45 J**	**0.80 J**
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U
	Xylene, m-,p-	ug/L	1,000[6]	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017	MW-8A MW-8A-082116 8/21/2016
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,1-Dichloroethane	ug/L	NE	7.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE	0.010 U	0.010 U	0.010 U	0.010 U	1.0 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	30 U	30 U	30 U	25 U	25 U	30 U	30 U	25 U
	Benzene	ug/L	5	NL	0.20 U	0.20 U	0.20 U	0.40 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U
	Bromobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	2.0 U	2.0 U	2.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U	2.0 U
	Bromomethane	ug/L	NE	11.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800	1.0 U	1.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U	1.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.20 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017	MW-8A MW-8A-082116 8/21/2016
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	5.0 U	5.0 U	**1.2 J**	**1.2 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.30 J**
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.20 U	0.20 U	0.40 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U
	Xylene, m-,p-	ug/L	1,000[6]	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:120617 12/06/17	MW-9A MW-9A-082116 8/21/2016	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A:022217 2/22/2017	MW-9A MW-9A:121317 12/13/2017
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL	1.0 U	**0.34 J**	**0.31 J**	1.0 U	**0.32 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,1-Dichloroethane	ug/L	NE	7.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	30 U	30 U	25 U	25 U	30 U	30 U	25 U	25 U	30 U	30 U
	Benzene	ug/L	5	NL	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U
	Bromobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U
	Bromomethane	ug/L	NE	11.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:120617 12/06/17	MW-9A MW-9A-082116 8/21/2016	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A:022217 2/22/2017	MW-9A MW-9A:121317 12/13/2017
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	**0.67 J**	1.0 U	**0.77 J**	1.0 U	1.0 U	1.0 U	1.0 U
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**0.31 J**	**0.29 J**	1.0 U	1.0 U	**0.40 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U
	Xylene, m-,p-	ug/L	1,000[6]	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-11A MW-11A:082416 8/24/2016	MW-11A MW-11A:112816 11/28/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:121117 12/11/17	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-DUP:113016 11/30/2016	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17	MW-14 MW-14:082416 8/24/2016
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,1-Dichloroethane	ug/L	NE	7.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	30 U	30 U	**11 J**	25 U	30 U	25 U	30 U	30 U	25 U
	Benzene	ug/L	5	NL	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.20 U	0.40 U	0.40 U	0.20 U
	Bromobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	2.0 U	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	2.0 U	5.0 U	5.0 U	2.0 U
	Bromomethane	ug/L	NE	11.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800	1.0 U	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-11A MW-11A:082416 8/24/2016	MW-11A MW-11A:112816 11/28/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:121117 12/11/17	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-DUP:113016 11/30/2016	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17	MW-14 MW-14:082416 8/24/2016
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	5.0 U	**1.1 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**6.4**	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.20 U	0.40 U	0.40 U	0.20 U
	Xylene, m-,p-	ug/L	1,000[6]	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A-082316 8/23/2016	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17	MW-16 MW-16:082916 8/29/2016
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,1-Dichloroethane	ug/L	NE	7.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	1.0 U	0.010 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	30 U	30 U	25 U	25 U	30 U	25 U	25 U	30 U	30 U	25 U
	Benzene	ug/L	5	NL	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U
	Bromobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U	2.0 U
	Bromomethane	ug/L	NE	11.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U	1.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A-082316 8/23/2016	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17	MW-16 MW-16:082916 8/29/2016
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	**1.7 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**1.8 J**	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**0.71 J**	1.0 U
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U	0.20 U
	Xylene, m-,p-	ug/L	1,000[6]	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16:121317 12/13/2017	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
VOCs[3]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	ug/L	200	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane[4]	ug/L	NE	0.219	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	ug/L	NE	240,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane[4]	ug/L	NE	0.768	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,1-Dichloroethane	ug/L	NE	7.68	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane[4]	ug/L	NE	0.00146	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane[4]	ug/L	NE	0.0547	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,2-Dibromoethane[4,5]	ug/L	0.01	NE	0.010 U	0.010 U	1.0 U	0.010 U	0.010 U	0.010 U	1.0 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	ug/L	NE	1.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	ug/L	NE	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	ug/L	NE	NE	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2-Hexanone	ug/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	4-Chlorotoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	30 U	30 U	25 U	25 U	30 U	30 U
	Benzene	ug/L	5	NL	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U
	Bromobenzene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	ug/L	NE	NE	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Bromodichloromethane[4]	ug/L	NE	0.706	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	2.0 U	5.0 U	5.0 U	2.0 U	2.0 U	5.0 U	5.0 U
	Bromomethane	ug/L	NE	11.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	ug/L	NE	800	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	5.0 U	5.0 U
	Carbon Tetrachloride[4]	ug/L	NE	0.625	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16:121317 12/13/2017	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
VOCs[3]	Chloroethane	ug/L	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Chloroform	ug/L	NE	1.41	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	ug/L	NE	NE	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromochloromethane[4]	ug/L	NE	0.521	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Dibromomethane (methylene bromide)	ug/L	NE	80	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethylbenzene	ug/L	700	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	HCFC-21	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene[4]	ug/L	NE	0.561	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	ug/L	20	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methylene Chloride	ug/L	5	NL	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Naphthalene	ug/L	160	NL	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	ug/L	NE	400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Hexane	ug/L	NE	480	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	ug/L	NE	1,600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	ug/L	NE	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Toluene	ug/L	1,000	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethene	ug/L	5	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Vinyl Chloride[4]	ug/L	0.2	NL	0.20 U	0.40 U	0.40 U	0.20 U	0.20 U	0.40 U	0.40 U
	Xylene, m-,p-	ug/L			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Xylene, o-	ug/L	1,000[6]	NL	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Total Xylenes	ug/L			3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Volatile organic compounds (VOCs) analyzed by EPA Method 8260C.

[4]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

[5]1,2-Dibromoethane analyzed by EPA Method 8011.

[6]Total Xylenes.

J = estimated result; NE = not established; U = analyte was not detected above the reporting limit; µg/L = milligrams per Liter

NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level as discussed in Section 2.2.5.

Bold indicates that the analyte was detected above the laboratory reporting limit.

Table 8

Groundwater Analytical Results - SVOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17
				MTCA Method B CUL[2]										
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	--	**4.8**	--	--	--	**0.042 J**	--	--	--	**0.041 J**
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	1-Methylnaphthalene	µg/L	160[6]	NL	0.074 U	1.1 U	0.057 U	0.057 U	0.058 U	1.0 U	0.057 U	0.057 U	0.058 U	1.0 U
	2-Methylnaphthalene	µg/L			0.25 U	0.45 U	0.19 U	0.19 U	0.19 U	0.42 U	0.19 U	0.19 U	0.19 U	0.41 U
	Naphthalene	µg/L			0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.74 U	0.68 U	0.57 U	0.57 U	0.58 U	0.62 U	0.57 U	0.57 U	0.58 U	0.62 U
	2,4-Dichlorophenol	µg/L	NE	24	0.49 U	4.5 U	0.38 U	0.38 U	0.38 U	4.2 U	0.38 U	0.38 U	0.39 U	4.1 U
	2,4-Dimethylphenol	µg/L	NE	160	2.5 U	4.5 U	1.9 U	1.9 U	1.9 U	4.2 U	1.9 U	1.9 U	1.9 U	4.1 U
	2,4-Dinitrophenol	µg/L	NE	32	6.2 U	5.6 U	4.8 U	4.8 U	4.8 U	5.2 U	4.8 U	4.8 U	4.8 U	5.2 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	0.49 U	1.1 U	0.38 U	0.38 U	0.38 U	1.0 U	0.38 U	0.38 U	0.39 U	1.0 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.49 UR	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	2-Chloronaphthalene	µg/L	NE	640	0.074 U	1.1 U	0.057 U	0.057 U	0.058 U	1.0 U	0.057 U	0.057 U	0.058 U	1.0 U
	2-Chlorophenol	µg/L	NE	40	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	2-Nitroaniline	µg/L	NE	160	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	2-Nitrophenol	µg/L	NE	NE	0.49 U	1.1 U	0.38 U	0.38 U	0.38 U	1.0 U	0.38 U	0.38 U	0.39 U	1.0 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.99 U	0.90 U	0.76 U	0.76 U	0.77 U	0.83 U	0.76 U	0.76 U	0.77 U	0.83 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	2.5 U	17 U	1.9 U	1.9 U	1.9 U	16 U	1.9 U	1.9 U	1.9 U	16 U
	3-Nitroaniline	µg/L	NE	NE	0.49 U	3.4 U	0.38 U	0.38 U	0.38 U	3.1 U	0.38 U	0.38 U	0.39 U	3.1 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	4.9 U	5.6 U	3.8 U	3.8 U	3.8 U	5.2 U	3.8 U	3.8 U	3.9 U	5.2 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	4-Chloroaniline[4]	µg/L	NE	0.219	0.49 UR	11 U	0.38 U	0.38 U	0.38 U	10 U	0.38 U	0.38 U	0.39 U	10 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	4-Nitroaniline	µg/L	NE	NE	0.74 U	2.3 U	0.57 U	0.57 U	0.58 U	2.1 U	0.57 U	0.57 U	0.58 U	2.1 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	3.7 U	17 U	2.9 U	2.9 U	2.9 U	16 U	2.9 U	2.9 U	2.9 U	16 U
	Acenaphthene	µg/L	NE	960	0.12 U	0.45 U	0.095 U	0.095 U	0.096 U	0.42 U	0.095 U	0.096 U	0.096 U	0.41 U
	Acenaphthylene	µg/L	NE	NE	0.099 U	1.1 U	0.076 U	0.076 U	0.077 U	1.0 U	0.076 U	0.076 U	0.077 U	1.0 U
	Anthracene	µg/L	NE	4,800	0.049 U	0.045 U	0.038 U	0.038 U	0.038 U	0.042 U	0.038 U	0.038 U	0.039 U	0.041 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	0.074 U	1.1 U	0.057 U	0.057 U	0.058 U	1.0 U	0.057 U	0.057 U	0.058 U	1.0 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	0.049 U	1.1 U	0.038 U	0.038 U	0.038 U	1.0 U	0.038 U	0.038 U	0.039 U	1.0 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	0.099 U	1.1 U	0.076 U	0.076 U	0.077 U	1.0 U	0.076 U	0.076 U	0.077 U	1.0 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	0.074 U	1.1 U	0.057 U	0.057 U	0.058 U	1.0 U	0.057 U	0.057 U	0.058 U	1.0 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	0.074 U	1.1 U	0.057 U	0.057 U	0.058 U	1.0 U	0.057 U	0.057 U	0.058 U	1.0 U
	Benzoic Acid	µg/L	NE	64,000	**0.99 J**	**1.1 J**	**0.73 J**	2.9 U	2.9 U	**0.66 J**	**0.60 J**	2.9 U	2.9 U	3.1 U
	Benzyl Alcohol	µg/L	NE	800	0.58 U	0.68 U	0.38 U	0.14 U	0.38 U	0.62 U	0.13 U	0.38 U	0.39 U	0.62 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17
				MTCA Method B CUL[2]										
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	**1.7 J**	17 U	2.9 U	2.7 U	2.9 U	16 U	2.9 U	2.9 U	**6.0 J**	16 U
	Butyl benzyl Phthalate	µg/L	NE	46.1	0.51 U	11 U	**0.22 J**	**0.51 J**	0.58 U	10 U	**0.56 J**	**0.22 J**	0.58 U	10 U
	Carbazole	µg/L	NE	NE	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	Chrysene	µg/L	NE	12.0	0.049 U	0.68 U	0.038 U	0.038 U	0.038 U	0.62 U	0.038 U	0.038 U	0.039 U	0.62 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.074 U	0.68 U	0.057 U	0.057 U	0.058 U	0.62 U	0.057 U	0.057 U	0.058 U	0.62 U
	Dibenzofuran	µg/L	NE	16	0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	Dibutyl Phthalate	µg/L	NE	1,600	0.34 U	3.4 U	**0.15 J**	**0.17 J**	0.38 U	3.1 U	**0.13 J**	**0.16 J**	0.39 U	3.1 U
	Diethyl Phthalate	µg/L	NE	12,800	0.49 U	14 U	0.38 U	0.38 U	0.38 U	12 U	0.38 U	0.38 U	0.39 U	12 U
	Dimethyl Phthalate	µg/L	NE	NE	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	Di-N-Octyl Phthalate	µg/L	NE	160	0.49 U	1.1 U	0.38 U	0.38 U	0.38 U	1.0 U	0.38 U	0.38 U	0.39 U	1.0 U
	Fluoranthene	µg/L	NE	640	0.062 U	3.4 U	0.048 U	0.048 U	0.048 U	3.1 U	0.048 U	0.048 U	0.048 U	3.1 U
	Fluorene	µg/L	NE	640	0.074 U	2.3 U	0.057 U	0.057 U	0.058 U	2.1 U	0.057 U	0.057 U	0.058 U	2.1 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	0.74 U	1.1 U	0.57 U	0.57 U	0.58 U	1.0 U	0.57 U	0.57 U	0.58 U	1.0 U
	Hexachlorocyclopentadiene	µg/L	NE	48	**2.5 R**	2.3 U	1.9 U	1.9 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	2.1 U
	Hexachloroethane	µg/L	NE	1.09	0.74 U	1.1 U	0.57 U	0.57 U	0.58 U	1.0 U	0.57 U	0.57 U	0.58 U	1.0 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	0.074 U	1.1 U	0.057 U	0.057 U	0.058 U	1.0 U	0.057 U	0.057 U	0.058 U	1.0 U
	Isophorone	µg/L	NE	46.1	0.49 U	0.45 U	0.38 U	0.38 U	0.38 U	0.42 U	0.38 U	0.38 U	0.39 U	0.41 U
	Nitrobenzene	µg/L	NE	16	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.49 U	0.68 U	0.38 U	0.38 U	0.38 U	0.62 U	0.38 U	0.38 U	0.39 U	0.62 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	0.49 U	3.4 U	0.38 U	0.38 U	0.38 U	3.1 U	0.38 U	0.38 U	0.39 U	3.1 U
	Pentachlorophenol[4]	µg/L	NE	0.219	0.86 U	5.6 U	0.67 U	0.67 U	0.67 U	5.2 U	0.67 U	0.67 U	0.67 U	5.2 U
	Phenanthrene	µg/L	NE	NE	0.099 U	1.1 U	0.076 U	0.076 U	0.077 U	1.0 U	0.076 U	0.076 U	0.077 U	1.0 U
	Phenol	µg/L	NE	2,400	0.74 U	4.5 U	0.57 U	0.57 U	0.58 U	4.2 U	0.57 U	0.57 U	0.58 U	4.1 U
	Pyrene	µg/L	NE	480	0.074 U	2.3 U	0.057 U	0.057 U	0.058 U	2.1 U	0.057 U	0.057 U	0.058 U	2.1 U
	Total cPAH TEQ (ND=0.5RL)[4,5]	µg/L	0.1	NL	0.044 U	0.8074 U	0.034 U	0.034 U	0.035 U	0.7341 U	0.034 U	0.034 U	0.035 U	0.7341 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	MW-4 MW-4-120717 12/07/17	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:022217 2/22/2017
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	**0.028 J**	–	–	–	**0.029 J**	–	–	**0.071 J**	–	–	–
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	1-Methylnaphthalene	µg/L	160[6]	NL	0.95 U	0.057 U	0.057 U	0.059 U	0.99 U	0.062 U	0.058 U	1.1 U	0.059 U	0.057 U	0.058 U
	2-Methylnaphthalene	µg/L			0.38 U	0.19 U	0.19 U	0.20 U	0.40 U	0.21 U	0.19 U	0.42 U	0.20 U	0.19 U	0.19 U
	Naphthalene	µg/L			0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.57 U	0.57 U	0.57 U	0.59 U	0.59 U	0.62 U	0.58 U	0.63 U	0.59 U	0.57 U	0.58 U
	2,4-Dichlorophenol	µg/L	NE	24	3.8 U	0.38 U	0.38 U	0.40 U	4.0 U	0.41 U	0.39 U	4.2 U	0.39 U	0.38 U	0.39 U
	2,4-Dimethylphenol	µg/L	NE	160	3.8 U	1.9 U	1.9 U	2.0 U	4.0 U	2.1 U	1.9 U	4.2 U	2.0 U	1.9 U	1.9 U
	2,4-Dinitrophenol	µg/L	NE	32	4.7 U	4.8 U	4.7 U	5.0 U	5.0 U	5.1 U	4.9 U	5.3 U	4.9 U	4.8 U	4.8 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	0.95 U	0.38 U	0.38 U	0.40 U	0.99 U	0.41 U	0.39 U	1.1 U	0.39 U	0.38 U	0.39 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	2-Chloronaphthalene	µg/L	NE	640	0.95 U	0.057 U	0.057 U	0.059 U	0.99 U	0.062 U	0.058 U	1.1 U	0.059 U	0.057 U	0.058 U
	2-Chlorophenol	µg/L	NE	40	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	2-Nitroaniline	µg/L	NE	160	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	2-Nitrophenol	µg/L	NE	NE	0.95 U	0.38 U	0.38 U	0.40 U	0.99 U	0.41 U	0.39 U	1.1 U	0.39 U	0.38 U	0.39 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.76 U	0.76 U	0.76 U	0.79 U	0.79 U	0.82 U	0.78 U	0.84 U	0.78 U	0.76 U	0.77 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	14 U	1.9 U	1.9 U	2.0 U	15 U	2.1 U	1.9 U	16 U	2.0 U	1.9 U	1.9 U
	3-Nitroaniline	µg/L	NE	NE	2.8 U	0.38 U	0.38 U	0.40 U	3.0 U	0.41 U	0.39 U	3.2 U	0.39 U	0.38 U	0.39 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	4.7 U	3.8 U	3.8 U	4.0 U	5.0 U	4.1 U	3.9 U	5.3 U	3.9 U	3.8 U	3.9 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	4-Chloroaniline[4]	µg/L	NE	0.219	9.5 U	0.38 U	0.38 U	0.40 U	9.9 U	0.41 U	0.39 U	11 U	0.39 U	0.38 U	0.39 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	4-Nitroaniline	µg/L	NE	NE	1.9 U	0.57 U	0.57 U	0.59 U	2.0 U	0.62 U	0.58 U	2.1 U	0.59 U	0.57 U	0.58 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	14 U	2.9 U	2.8 U	3.0 U	15 U	3.1 U	2.9 U	16 U	2.9 U	2.9 U	2.9 U
	Acenaphthene	µg/L	NE	960	0.38 U	0.095 U	0.095 U	0.099 U	0.40 U	0.10 U	0.097 U	0.42 U	0.098 U	0.095 U	0.097 U
	Acenaphthylene	µg/L	NE	NE	0.95 U	0.076 U	0.076 U	0.079 U	0.99 U	0.082 U	0.078 U	1.1 U	0.078 U	0.076 U	0.077 U
	Anthracene	µg/L	NE	4,800	0.038 U	0.038 U	0.038 U	0.040 U	0.040 U	0.041 U	0.039 U	0.042 U	0.039 U	0.038 U	0.039 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	0.95 U	0.057 U	0.057 U	0.059 U	0.99 U	0.062 U	0.058 U	1.1 U	0.059 U	0.057 U	0.058 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	0.95 U	0.038 U	0.038 U	0.040 U	0.99 U	0.041 U	0.039 U	1.1 U	0.039 U	0.038 U	0.039 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	0.95 U	0.076 U	0.076 U	0.079 U	0.99 U	0.082 U	0.078 U	1.1 U	0.078 U	0.076 U	0.077 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	0.95 U	0.057 U	0.057 U	0.059 U	0.99 U	0.062 U	0.058 U	1.1 U	0.059 U	0.057 U	0.058 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	0.95 U	0.057 U	0.057 U	0.059 U	0.99 U	0.062 U	0.058 U	1.1 U	0.059 U	0.057 U	0.058 U
	Benzoic Acid	µg/L	NE	64,000	**0.63 J**	**0.85 J**	2.8 U	3.0 U	3.0 U	**0.87 J**	2.9 U	3.2 U	2.9 U	**0.66 J**	2.9 U
	Benzyl Alcohol	µg/L	NE	800	0.57 U	0.38 U	0.16 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.095 U	0.39 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-4 MW-4-120717 12/07/17	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:022217 2/22/2017
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	14 U	2.9 U	3.1 U	3.0 U	**2.7 J**	**29 J**	2.9 U	16 U	2.9 U	2.9 U	**22 J**
	Butyl benzyl Phthalate	µg/L	NE	46.1	9.5 U	**0.20 J**	**0.37 J**	0.59 U	9.9 U	**0.52 J**	**0.63**	11 U	0.59 U	**0.47 J**	0.58 U
	Carbazole	µg/L	NE	NE	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	Chrysene	µg/L	NE	12.0	0.57 U	0.038 U	0.038 U	0.040 U	0.59 U	0.041 U	0.039 U	0.63 U	0.039 U	0.038 U	0.039 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.57 U	0.057 U	0.057 U	0.059 U	0.59 U	0.062 U	0.058 U	0.63 U	0.059 U	0.057 U	0.058 U
	Dibenzofuran	µg/L	NE	16	0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	Dibutyl Phthalate	µg/L	NE	1,600	2.8 U	**0.18 J**	0.38 U	0.40 U	3.0 U	**0.17 J**	**0.17 J**	3.2 U	0.39 U	**0.18 J**	0.39 U
	Diethyl Phthalate	µg/L	NE	12,800	11 U	0.38 U	0.38 U	0.40 U	12 U	0.41 U	0.39 U	13 U	0.39 U	0.38 U	0.39 U
	Dimethyl Phthalate	µg/L	NE	NE	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	Di-N-Octyl Phthalate	µg/L	NE	160	0.95 U	0.38 U	0.38 U	0.40 U	0.99 U	0.41 U	0.39 U	1.1 U	0.39 U	0.38 U	0.39 U
	Fluoranthene	µg/L	NE	640	2.8 U	0.048 U	0.047 U	0.050 U	3.0 U	0.051 U	0.049 U	3.2 U	0.049 U	0.048 U	0.048 U
	Fluorene	µg/L	NE	640	1.9 U	0.057 U	0.057 U	0.059 U	2.0 U	0.062 U	0.058 U	2.1 U	0.059 U	0.057 U	0.058 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	0.95 U	0.57 U	0.57 U	0.59 U	0.99 U	0.62 U	0.58 U	1.1 U	0.59 U	0.57 U	0.58 U
	Hexachlorocyclopentadiene	µg/L	NE	48	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	2.1 U	1.9 U	2.1 U	2.0 U	1.9 U	1.9 U
	Hexachloroethane	µg/L	NE	1.09	0.95 U	0.57 U	0.57 U	0.59 U	0.99 U	0.62 U	0.58 U	1.1 U	0.59 U	0.57 U	0.58 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	0.95 U	0.057 U	0.057 U	0.059 U	0.99 U	0.062 U	0.058 U	1.1 U	0.059 U	0.057 U	0.058 U
	Isophorone	µg/L	NE	46.1	0.38 U	0.38 U	0.38 U	0.40 U	0.40 U	0.41 U	0.39 U	0.42 U	0.39 U	0.38 U	0.39 U
	Nitrobenzene	µg/L	NE	16	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.57 U	0.38 U	0.38 U	0.40 U	0.59 U	0.41 U	0.39 U	0.63 U	0.39 U	0.38 U	0.39 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	2.8 U	0.38 U	0.38 U	0.40 U	3.0 U	0.41 U	0.39 U	3.2 U	0.39 U	0.38 U	0.39 U
	Pentachlorophenol[4]	µg/L	NE	0.219	4.7 U	0.67 U	0.66 U	0.69 U	5.0 U	0.72 U	0.68 U	5.3 U	0.69 U	0.67 U	0.68 U
	Phenanthrene	µg/L	NE	NE	0.95 U	0.076 U	0.076 U	0.079 U	0.99 U	0.082 U	0.078 U	1.1 U	0.078 U	0.076 U	0.077 U
	Phenol	µg/L	NE	2,400	**0.060 J**	0.57 U	0.57 U	0.59 U	4.0 U	0.62 U	0.58 U	4.2 U	0.59 U	0.57 U	0.58 U
	Pyrene	µg/L	NE	480	1.9 U	0.057 U	0.057 U	0.059 U	2.0 U	0.062 U	0.058 U	2.1 U	0.059 U	0.057 U	0.058 U
	Total cPAH TEQ (ND=0.5RL)[5]	µg/L	0.1	NL	0.6963 U	0.034 U	0.034 U	0.036 U	0.7254 U	0.037 U	0.035 U	0.8047 U	0.035 U	0.034 U	0.035 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-5A MW-5A-120717 12/07/17	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	0.39 U	0.39 U	0.42 U	0.38 U	0.38 U	0.39 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	0.39 U	0.39 U	0.42 U	0.38 U	0.38 U	0.39 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	**0.087 J**	--	--	--	--	0.39 U	0.39 U	--	--	--	0.39 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	**0.055 J**	**0.050 J**	0.42 U	0.38 U	0.38 U	0.097 U
	1-Methylnaphthalene	µg/L	160[6]	NL	1.0 U	0.058 U	0.058 U	0.057 U	0.062 U	0.97 U	0.97 U	0.062 U	0.057 U	0.058 U	0.97 U
	2-Methylnaphthalene	µg/L			0.40 U	0.19 U	0.19 U	0.19 U	0.21 U	0.39 U	0.39 U	0.21 U	0.19 U	0.19 U	0.39 U
	Naphthalene	µg/L			0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	0.39 U	0.39 U	0.42 U	0.38 U	0.38 U	0.39 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	0.39 U	0.39 U	0.42 U	0.38 U	0.38 U	0.39 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.60 U	0.58 U	0.58 U	0.57 U	0.62 U	0.58 U	0.58 U	0.62 U	0.57 U	0.58 U	0.58 U
	2,4-Dichlorophenol	µg/L	NE	24	4.0 U	0.38 U	0.38 U	0.38 U	0.41 U	3.9 U	3.9 U	0.42 U	0.38 U	0.38 U	3.9 U
	2,4-Dimethylphenol	µg/L	NE	160	4.0 U	1.9 U	1.9 U	1.9 U	2.1 U	3.9 U	3.9 U	2.1 U	1.9 U	1.9 U	3.9 U
	2,4-Dinitrophenol	µg/L	NE	32	5.0 U	4.8 U	4.8 U	4.7 U	5.2 U	4.8 U	4.8 U	5.2 U	4.8 U	4.8 U	4.8 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	1.0 U	0.38 U	0.38 U	0.38 U	0.41 U	0.97 U	0.97 U	0.42 U	0.38 U	0.38 U	0.97 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.60 U	**0.27 J**	0.38 U	0.38 UR	**0.18 J**	**0.25 J**	**0.24 J**	0.42 U	0.38 U	0.38 U	0.58 U
	2-Chloronaphthalene	µg/L	NE	640	1.0 U	0.058 U	0.058 U	0.057 U	0.062 U	0.97 U	0.97 U	0.062 U	0.057 U	0.058 U	0.97 U
	2-Chlorophenol	µg/L	NE	40	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	2-Nitroaniline	µg/L	NE	160	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	2-Nitrophenol	µg/L	NE	NE	1.0 U	0.38 U	0.38 U	0.38 U	0.41 U	0.97 U	0.97 U	0.42 U	0.38 U	0.38 U	0.97 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.80 U	0.77 U	0.77 U	0.76 U	0.83 U	0.77 U	0.77 U	0.83 U	0.76 U	0.77 U	0.77 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	15 U	1.9 U	1.9 U	1.9 U	2.1 U	14 U	15 U	2.1 U	1.9 U	1.9 U	15 U
	3-Nitroaniline	µg/L	NE	NE	3.0 U	0.38 U	0.38 U	0.38 U	0.41 U	2.9 U	2.9 U	0.42 U	0.38 U	0.38 U	2.9 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	5.0 U	3.8 U	3.8 U	3.8 U	4.1 U	4.8 U	4.8 U	4.2 U	3.8 U	3.8 U	4.8 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	4-Chloroaniline[4]	µg/L	NE	0.219	10 U	0.38 UR	0.38 UR	0.38 UR	0.41 U	9.7 U	9.7 U	0.42 U	0.38 U	0.38 U	9.7 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	4-Nitroaniline	µg/L	NE	NE	2.0 U	0.58 U	0.58 U	0.57 U	0.62 U	1.9 U	1.9 U	0.62 U	0.57 U	0.58 U	1.9 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	15 U	2.9 U	2.9 U	2.8 U	3.1 U	14 U	15 U	3.1 U	2.9 U	2.9 U	15 U
	Acenaphthene	µg/L	NE	960	0.40 U	0.096 U	0.096 U	0.095 U	0.10 U	0.39 U	0.39 U	0.10 U	0.095 U	0.096 U	0.39 U
	Acenaphthylene	µg/L	NE	NE	1.0 U	0.077 U	0.077 U	0.076 U	0.083 U	0.97 U	0.97 U	0.083 U	0.076 U	0.077 U	0.97 U
	Anthracene	µg/L	NE	4,800	0.040 U	0.038 U	0.038 U	0.038 U	0.041 U	0.039 U	0.039 U	0.042 U	0.038 U	0.038 U	0.039 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	1.0 U	0.058 U	0.058 U	0.057 U	0.062 U	0.97 U	0.97 U	0.062 U	0.057 U	0.058 U	0.97 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	1.0 U	0.038 U	0.038 U	0.038 U	0.041 U	0.97 U	0.97 U	0.042 U	0.038 U	0.038 U	0.97 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	1.0 U	0.077 U	0.077 U	0.076 U	0.083 U	0.97 U	0.97 U	0.083 U	0.076 U	0.077 U	0.97 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	1.0 U	0.058 U	0.058 U	0.057 U	0.062 U	0.97 U	0.97 U	0.062 U	0.057 U	0.058 U	0.97 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	1.0 U	0.058 U	0.058 U	0.057 U	0.062 U	0.97 U	0.97 U	0.062 U	0.057 U	0.058 U	0.97 U
	Benzoic Acid	µg/L	NE	64,000	**0.60 J**	**0.62 J**	2.9 U	2.8 U	3.1 U	2.9 U	**0.95 J**	**0.62 J**	2.9 U	2.9 U	2.9 U
	Benzyl Alcohol	µg/L	NE	800	0.60 U	0.13 U	0.38 U	0.60 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-5A MW-5A-120717 12/07/17	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	15 U	**2.7 J**	**1.9 J**	**1.4 J**	3.1 U	**4.5 J**	15 U	3.1 U	2.9 U	**4.2 J**	**8.5 J**
	Butyl benzyl Phthalate	µg/L	NE	46.1	10 U	0.58 U	**0.33 J**	0.54 U	0.62 U	9.7 U	9.7 U	**0.45 J**	**0.37 J**	0.58 U	9.7 U
	Carbazole	µg/L	NE	NE	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	Chrysene	µg/L	NE	12.0	0.60 U	0.038 U	0.038 U	0.038 U	0.041 U	0.58 U	0.58 U	0.042 U	0.038 U	0.038 U	0.58 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.60 U	0.058 U	0.058 U	0.057 U	0.062 U	0.58 U	0.58 U	0.062 U	0.057 U	0.058 U	0.58 U
	Dibenzofuran	µg/L	NE	16	0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	0.39 U	0.39 U	0.42 U	0.38 U	0.38 U	0.39 U
	Dibutyl Phthalate	µg/L	NE	1,600	3.0 U	0.17 U	**0.18 J**	0.21 U	0.41 U	2.9 U	2.9 U	**0.16 J**	**0.23 J**	0.38 U	2.9 U
	Diethyl Phthalate	µg/L	NE	12,800	12 U	0.38 U	0.38 U	0.38 U	0.41 U	12 U	12 U	0.42 U	0.38 U	0.38 U	12 U
	Dimethyl Phthalate	µg/L	NE	NE	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	Di-N-Octyl Phthalate	µg/L	NE	160	1.0 U	0.38 U	0.38 U	0.38 U	0.41 U	0.97 U	0.97 U	0.42 U	0.38 U	0.38 U	0.97 U
	Fluoranthene	µg/L	NE	640	3.0 U	0.048 U	0.048 U	0.047 U	0.052 U	**0.017 J**	2.9 U	0.052 U	0.048 U	0.048 U	2.9 U
	Fluorene	µg/L	NE	640	2.0 U	0.058 U	0.058 U	0.057 U	0.062 U	1.9 U	1.9 U	0.062 U	0.057 U	0.058 U	1.9 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	1.0 U	0.58 U	0.58 U	0.57 U	0.62 U	0.97 U	0.97 U	0.62 U	0.57 U	0.58 U	0.97 U
	Hexachlorocyclopentadiene	µg/L	NE	48	2.0 U	1.9 UR	1.9 U	1.9 UR	2.1 U	1.9 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U
	Hexachloroethane	µg/L	NE	1.09	1.0 U	0.58 U	0.58 U	0.57 U	0.62 U	0.97 U	0.97 U	0.62 U	0.57 U	0.58 U	0.97 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	1.0 U	0.058 U	0.058 U	0.057 U	0.062 U	0.97 U	0.97 U	0.062 U	0.057 U	0.058 U	0.97 U
	Isophorone	µg/L	NE	46.1	0.40 U	0.38 U	0.38 U	0.38 U	0.41 U	0.39 U	0.39 U	0.42 U	0.38 U	0.38 U	0.39 U
	Nitrobenzene	µg/L	NE	16	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.60 U	0.38 U	0.38 U	0.38 U	0.41 U	0.58 U	0.58 U	0.42 U	0.38 U	0.38 U	0.58 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	3.0 U	0.38 U	0.38 U	0.38 U	0.41 U	2.9 U	2.9 U	0.42 U	0.38 U	0.38 U	2.9 U
	Pentachlorophenol[4]	µg/L	NE	0.219	5.0 U	0.67 U	0.67 U	0.66 U	0.73 U	4.8 U	4.8 U	0.73 U	0.67 U	0.67 U	4.8 U
	Phenanthrene	µg/L	NE	NE	1.0 U	0.077 U	0.077 U	0.076 U	0.083 U	0.97 U	0.97 U	0.083 U	0.076 U	0.077 U	0.97 U
	Phenol	µg/L	NE	2,400	4.0 U	0.58 U	0.58 U	0.57 U	0.62 U	3.9 U	3.9 U	0.62 U	0.57 U	0.58 U	3.9 U
	Pyrene	µg/L	NE	480	2.0 U	0.058 U	0.058 U	0.057 U	0.062 U	1.9 U	1.9 U	0.062 U	0.057 U	0.058 U	1.9 U
	Total cPAH TEQ (ND=0.5RL)[5]	µg/L	0.1	NL	0.733 U	0.035 U	0.035 U	0.034 U	0.037 U	0.7109 U	0.7109 U	0.038 U	0.034 U	0.035 U	0.7109 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A-082116 8/21/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:120617 12/06/17	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A-082116 8/21/2016	MW-9A MW-9A:022217 2/22/2017
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	--	--	--	**0.080 J**	--	--	--	**1.1**	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	1-Methylnaphthalene	µg/L	160[6]	NL	0.057 U	0.057 U	0.058 U	0.97 U	0.057 U	0.057 U	0.057 U	0.99 U	0.057 U	0.058 U	0.058 U
	2-Methylnaphthalene	µg/L			0.19 U	0.19 U	0.19 U	0.39 U	0.19 U	0.19 U	0.19 U	0.40 U	0.19 U	0.19 U	0.19 U
	Naphthalene	µg/L			0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.57 U	0.57 U	0.58 U	0.58 U	0.57 U	0.57 U	0.57 U	0.59 U	0.57 U	0.58 U	0.58 U
	2,4-Dichlorophenol	µg/L	NE	24	0.38 U	0.38 U	0.39 U	3.9 U	0.38 U	0.38 U	0.38 U	4.0 U	0.38 U	0.38 U	0.39 U
	2,4-Dimethylphenol	µg/L	NE	160	1.9 U	1.9 U	1.9 U	3.9 U	1.9 U	1.9 U	1.9 U	4.0 U	1.9 U	1.9 U	1.9 U
	2,4-Dinitrophenol	µg/L	NE	32	4.8 U	4.7 U	4.9 U	4.9 U	4.7 U	4.7 U	4.7 U	5.0 U	4.8 U	4.8 U	4.8 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	0.38 U	0.38 U	0.39 U	0.97 U	0.38 U	0.38 U	0.38 U	0.99 U	0.38 U	0.38 U	0.39 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.38 UR	**0.13 J**	0.39 U	**0.13 J**	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	2-Chloronaphthalene	µg/L	NE	640	0.057 U	0.057 U	0.058 U	0.97 U	0.057 U	0.057 U	0.057 U	0.99 U	0.057 U	0.058 U	0.058 U
	2-Chlorophenol	µg/L	NE	40	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	2-Nitroaniline	µg/L	NE	160	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	2-Nitrophenol	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.97 U	0.38 U	0.38 U	0.38 U	0.99 U	0.38 U	0.38 U	0.39 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.76 U	0.76 U	0.78 U	0.78 U	0.76 U	0.76 U	0.76 U	0.79 U	0.76 U	0.77 U	0.77 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	1.9 U	1.9 U	1.9 U	15 U	1.9 U	1.9 U	1.9 U	15 U	1.9 U	1.9 U	1.9 U
	3-Nitroaniline	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	2.9 U	0.38 U	0.38 U	0.38 U	3.0 U	0.38 U	0.38 U	0.39 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	3.8 U	3.8 U	3.9 U	4.9 U	3.8 U	3.8 U	3.8 U	5.0 U	3.8 U	3.8 U	3.9 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	4-Chloroaniline[4]	µg/L	NE	0.219	0.38 UR	0.38 U	0.39 U	9.7 U	0.38 U	0.38 U	0.38 U	9.9 U	0.38 U	0.38 U	0.39 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	4-Nitroaniline	µg/L	NE	NE	0.57 U	0.57 U	0.58 U	1.9 U	0.57 U	0.57 U	0.57 U	2.0 U	0.57 U	0.58 U	0.58 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	2.9 U	2.8 U	2.9 U	15 U	2.8 U	2.8 U	2.8 U	15 U	2.9 U	2.9 U	2.9 U
	Acenaphthene	µg/L	NE	960	0.095 U	0.095 U	0.097 U	0.39 U	0.095 U	0.095 U	0.095 U	0.40 U	0.096 U	0.096 U	0.097 U
	Acenaphthylene	µg/L	NE	NE	0.076 U	0.076 U	0.078 U	0.97 U	0.076 U	0.076 U	0.076 U	0.99 U	0.076 U	0.077 U	0.077 U
	Anthracene	µg/L	NE	4,800	0.038 U	0.038 U	0.039 U	0.039 U	0.038 U	0.038 U	0.038 U	0.040 U	0.038 U	0.038 U	0.039 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	0.057 U	0.057 U	0.058 U	0.97 U	0.057 U	0.057 U	0.057 U	0.99 U	0.057 U	0.058 U	0.058 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	0.038 U	0.038 U	0.039 U	0.97 U	0.038 U	0.038 U	0.038 U	0.99 U	0.038 U	0.038 U	0.039 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	0.076 U	0.076 U	0.078 U	0.97 U	0.076 U	0.076 U	0.076 U	0.99 U	0.076 U	0.077 U	0.077 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	0.057 U	0.057 U	0.058 U	0.97 U	0.057 U	0.057 U	0.057 U	0.99 U	0.057 U	0.058 U	0.058 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	0.057 U	0.057 U	0.058 U	0.97 U	0.057 U	0.057 U	0.057 U	0.99 U	0.057 U	0.058 U	0.058 U
	Benzoic Acid	µg/L	NE	64,000	2.9 U	**0.60 J**	2.9 U	2.9 U	**0.73 J**	**0.67 J**	2.8 U	3.0 U	**0.78 J**	**0.79 J**	2.9 U
	Benzyl Alcohol	µg/L	NE	800	0.38 U	0.19 U	0.39 U	0.58 U	0.38 U	0.16 U	0.38 U	0.59 U	0.38 U	0.30 U	0.39 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A-082116 8/21/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:120617 12/06/17	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A-082116 8/21/2016	MW-9A MW-9A:022217 2/22/2017
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	2.9 U	1.6 U	2.9 U	15 U	2.8 U	2.7 U	2.8 U	15 U	2.9 U	7.9 U	2.9 U
	Butyl benzyl Phthalate	µg/L	NE	46.1	0.57 U	**0.39 J**	0.58 U	9.7 U	0.57 U	**0.22 J**	0.57 U	9.9 U	**0.34 J**	**0.47 J**	**0.64**
	Carbazole	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	Chrysene	µg/L	NE	12.0	0.038 U	0.038 U	0.039 U	0.58 U	0.038 U	0.038 U	0.038 U	0.59 U	0.038 U	0.038 U	0.039 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.057 U	0.057 U	0.058 U	0.58 U	0.057 U	0.057 U	0.057 U	0.59 U	0.057 U	0.058 U	0.058 U
	Dibenzofuran	µg/L	NE	16	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	Dibutyl Phthalate	µg/L	NE	1,600	0.38 U	**0.13 J**	0.39 U	2.9 U	0.38 U	0.38 U	0.38 U	3.0 U	**0.21 J**	**0.14 J**	**0.19 J**
	Diethyl Phthalate	µg/L	NE	12,800	0.38 U	0.38 U	0.39 U	12 U	0.38 U	0.38 U	0.38 U	12 U	0.38 U	0.38 U	0.39 U
	Dimethyl Phthalate	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	Di-N-Octyl Phthalate	µg/L	NE	160	0.38 U	0.38 U	0.39 U	0.97 U	0.38 U	0.38 U	0.38 U	0.99 U	0.38 U	0.38 U	0.39 U
	Fluoranthene	µg/L	NE	640	0.048 U	0.047 U	0.049 U	2.9 U	0.047 U	0.047 U	0.047 U	3.0 U	0.048 U	0.048 U	0.048 U
	Fluorene	µg/L	NE	640	0.057 U	0.057 U	0.058 U	1.9 U	0.057 U	0.057 U	0.057 U	2.0 U	0.057 U	0.058 U	0.058 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	0.57 U	0.57 U	0.58 U	0.97 U	0.57 U	0.57 U	0.57 U	0.99 U	0.57 U	0.58 U	0.58 U
	Hexachlorocyclopentadiene	µg/L	NE	48	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U
	Hexachloroethane	µg/L	NE	1.09	0.57 U	0.57 U	0.58 U	0.97 U	0.57 U	0.57 U	0.57 U	0.99 U	0.57 U	0.58 U	0.58 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	0.057 U	0.057 U	0.058 U	0.97 U	0.057 U	0.057 U	0.057 U	0.99 U	0.057 U	0.058 U	0.058 U
	Isophorone	µg/L	NE	46.1	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.39 U
	Nitrobenzene	µg/L	NE	16	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.38 U	0.38 U	0.39 U	0.58 U	0.38 U	0.38 U	0.38 U	0.59 U	0.38 U	0.38 U	0.39 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	0.38 U	0.38 U	0.39 U	2.9 U	0.38 U	0.38 U	0.38 U	3.0 U	0.38 U	0.38 U	0.39 U
	Pentachlorophenol[4]	µg/L	NE	0.219	0.67 U	0.66 U	0.68 U	4.9 U	0.66 U	0.66 U	0.66 U	5.0 U	0.67 U	0.67 U	0.68 U
	Phenanthrene	µg/L	NE	NE	0.076 U	0.076 U	0.078 U	0.97 U	0.076 U	0.076 U	0.076 U	0.99 U	0.076 U	0.077 U	0.077 U
	Phenol	µg/L	NE	2,400	0.57 U	0.57 U	0.58 U	3.9 U	0.57 U	0.57 U	0.57 U	4.0 U	0.57 U	0.58 U	0.58 U
	Pyrene	µg/L	NE	480	0.057 U	0.057 U	0.058 U	1.9 U	0.057 U	0.057 U	0.057 U	2.0 U	0.057 U	0.058 U	0.058 U
	Total cPAH TEQ (ND=0.5RL)[5]	µg/L	0.1	NL	0.034 U	0.034 U	0.035 U	0.7109 U	0.034 U	0.034 U	0.034 U	0.7254 U	0.034 U	0.035 U	0.035 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-9A MW-9A:121317 12/13/2017	MW-11A MW-11A:082416 8/24/2016	MW-11A MW-11A:112816 11/28/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:121117 12/11/17	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-DUP:113016 11/30/2016	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	0.39 U	–	–	–	**0.013 J**	–	–	–	–	–	**0.033 J**
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	**0.059 J**	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	1-Methylnaphthalene	µg/L	160[6]	NL	0.98 U	0.057 U	0.057 U	0.058 U	0.98 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.95 U
	2-Methylnaphthalene	µg/L			0.39 U	0.19 U	0.19 U	0.19 U	0.39 U	0.19 U	0.19 U	0.21 U	0.19 U	0.20 U	0.38 U
	Naphthalene	µg/L			0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.59 U	0.57 U	0.57 U	0.58 U	0.59 U	0.58 U	0.57 U	0.64 U	0.58 U	0.59 U	0.57 U
	2,4-Dichlorophenol	µg/L	NE	24	3.9 U	0.38 U	0.38 U	0.38 U	3.9 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	3.8 U
	2,4-Dimethylphenol	µg/L	NE	160	3.9 U	1.9 U	1.9 U	1.9 U	3.9 U	1.9 U	1.9 U	2.1 U	1.9 U	2.0 U	3.8 U
	2,4-Dinitrophenol	µg/L	NE	32	4.9 U	4.7 U	4.7 U	4.8 U	4.9 U	4.8 U	4.8 U	5.3 U	4.8 U	4.9 U	4.8 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	0.98 U	0.38 U	0.38 U	0.38 U	0.98 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.95 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 UR	0.43 U	0.39 U	0.39 U	0.57 U
	2-Chloronaphthalene	µg/L	NE	640	0.98 U	0.057 U	0.057 U	0.058 U	0.98 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.95 U
	2-Chlorophenol	µg/L	NE	40	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	2-Nitroaniline	µg/L	NE	160	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	2-Nitrophenol	µg/L	NE	NE	0.98 U	0.38 U	0.38 U	0.38 U	0.98 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.95 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.78 U	0.76 U	0.76 U	0.77 U	0.78 U	0.77 U	0.76 U	0.85 U	0.78 U	0.78 U	0.76 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	15 U	1.9 U	1.9 U	1.9 U	15 U	1.9 U	1.9 U	2.1 U	1.9 U	2.0 U	14 U
	3-Nitroaniline	µg/L	NE	NE	2.9 U	0.38 U	0.38 U	0.38 U	2.9 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	2.9 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	4.9 U	3.8 U	3.8 U	3.8 U	4.9 U	3.9 U	3.8 U	4.3 U	3.9 U	3.9 U	4.8 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	4-Chloroaniline[4]	µg/L	NE	0.219	9.8 U	0.38 U	0.38 U	0.38 U	9.8 U	0.39 U	0.38 UR	0.43 U	0.39 U	0.39 U	9.5 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	4-Nitroaniline	µg/L	NE	NE	2.0 U	0.57 U	0.57 U	0.58 U	2.0 U	0.58 U	0.57 U	0.64 U	0.58 U	0.59 U	1.9 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	15 U	2.8 U	2.8 U	2.9 U	15 U	2.9 U	2.9 U	3.2 U	2.9 U	2.9 U	14 U
	Acenaphthene	µg/L	NE	960	0.39 U	0.095 U	0.094 U	0.096 U	0.39 U	0.096 U	0.095 U	0.11 U	0.097 U	0.098 U	0.38 U
	Acenaphthylene	µg/L	NE	NE	0.98 U	0.076 U	0.076 U	0.077 U	0.98 U	0.077 U	0.076 U	0.085 U	0.078 U	0.078 U	0.95 U
	Anthracene	µg/L	NE	4,800	0.039 U	0.038 U	0.038 U	0.038 U	0.039 U	0.039 U	0.038 U	0.043 U	0.039 U	0.039 U	0.038 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	0.98 U	0.057 U	0.057 U	0.058 U	0.98 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.95 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	0.98 U	0.038 U	0.038 U	0.038 U	0.98 U	0.039 U	0.038 U	0.043 U	0.039 U	0.039 U	0.95 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	0.98 U	0.076 U	0.076 U	0.077 U	0.98 U	0.077 U	0.076 U	0.085 U	0.078 U	0.078 U	0.95 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	0.98 U	0.057 U	0.057 U	0.058 U	0.98 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.95 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	0.98 U	0.057 U	0.057 U	0.058 U	0.98 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.95 U
	Benzoic Acid	µg/L	NE	64,000	**0.69 J**	**0.57 J**	**0.77 J**	2.9 U	**0.63 J**	**0.89 J**	2.9 U	**1.0 J**	2.9 U	2.9 U	**0.67 J**
	Benzyl Alcohol	µg/L	NE	800	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-9A MW-9A:121317 12/13/2017	MW-11A MW-11A:082416 8/24/2016	MW-11A MW-11A:112816 11/28/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:121117 12/11/17	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-DUP:113016 11/30/2016	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	15 U	2.8 U	2.8 U	**2.3 J**	15 U	2.9 U	2.9 U	3.2 U	**1.9 J**	2.9 U	14 U
	Butyl benzyl Phthalate	µg/L	NE	46.1	9.8 U	**0.37 J**	0.57 U	0.58 U	9.8 U	**0.22 J**	0.19 U	**0.56 J**	0.58 U	0.59 U	9.5 U
	Carbazole	µg/L	NE	NE	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	Chrysene	µg/L	NE	12.0	0.59 U	0.038 U	0.038 U	0.038 U	0.59 U	0.039 U	0.038 U	0.043 U	0.039 U	0.039 U	0.57 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.59 U	0.057 U	0.057 U	0.058 U	0.59 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.57 U
	Dibenzofuran	µg/L	NE	16	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	Dibutyl Phthalate	µg/L	NE	1,600	2.9 U	**0.15 J**	0.38 U	**0.16 J**	2.9 U	**0.16 J**	0.38 U	**0.29 J**	**0.13 J**	**0.14 J**	2.9 U
	Diethyl Phthalate	µg/L	NE	12,800	12 U	0.38 U	0.38 U	0.38 U	12 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	11 U
	Dimethyl Phthalate	µg/L	NE	NE	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	Di-N-Octyl Phthalate	µg/L	NE	160	0.98 U	0.38 U	0.38 U	0.38 U	0.98 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.95 U
	Fluoranthene	µg/L	NE	640	2.9 U	0.047 U	0.047 U	0.048 U	2.9 U	0.048 U	0.048 U	0.053 U	0.048 U	0.049 U	2.9 U
	Fluorene	µg/L	NE	640	2.0 U	0.057 U	0.057 U	0.058 U	2.0 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	1.9 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	0.98 U	0.57 U	0.57 U	0.58 U	0.98 U	0.58 U	0.57 U	0.64 U	0.58 U	0.59 U	0.95 U
	Hexachlorocyclopentadiene	µg/L	NE	48	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 UR	2.1 U	1.9 U	2.0 U	1.9 U
	Hexachloroethane	µg/L	NE	1.09	0.98 U	0.57 U	0.57 U	0.58 U	0.98 U	0.58 U	0.57 U	0.64 U	0.58 U	0.59 U	0.95 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	0.98 U	0.057 U	0.057 U	0.058 U	0.98 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	0.95 U
	Isophorone	µg/L	NE	46.1	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.38 U
	Nitrobenzene	µg/L	NE	16	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.59 U	0.38 U	0.38 U	0.38 U	0.59 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	0.57 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	2.9 U	0.38 U	0.38 U	0.38 U	2.9 U	0.39 U	0.38 U	0.43 U	0.39 U	0.39 U	2.9 U
	Pentachlorophenol[4]	µg/L	NE	0.219	4.9 U	0.66 U	0.66 U	0.67 U	4.9 U	0.67 U	0.67 U	0.75 U	0.68 U	0.68 U	4.8 U
	Phenanthrene	µg/L	NE	NE	0.98 U	0.076 U	0.076 U	0.077 U	0.98 U	0.077 U	0.076 U	0.085 U	0.078 U	0.078 U	0.95 U
	Phenol	µg/L	NE	2,400	3.9 U	0.57 U	0.57 U	0.58 U	3.9 U	0.58 U	0.57 U	0.64 U	0.58 U	0.59 U	3.8 U
	Pyrene	µg/L	NE	480	2.0 U	0.057 U	0.057 U	0.058 U	2.0 U	0.058 U	0.057 U	0.064 U	0.058 U	0.059 U	1.9 U
	Total cPAH TEQ (ND=0.5RL)[5]	µg/L	0.1	NL	0.7185 U	0.034 U	0.034 U	0.035 U	0.7185 U	0.035 U	0.034 U	0.039 U	0.035 U	0.035 U	0.6963 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A-082316 8/23/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	--	--	--	**0.027 J**	--	--	--	--	--	--	**0.033 J**
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	1-Methylnaphthalene	µg/L	160[6]	NL	0.057 U	0.057 U	0.059 U	0.95 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.97 U
	2-Methylnaphthalene	µg/L			0.19 U	0.19 U	0.20 U	0.38 U	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.22 U	0.39 U
	Naphthalene	µg/L			0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.57 U	0.57 U	0.59 U	0.57 U	0.58 U	0.58 U	0.58 U	0.59 U	0.59 U	0.66 U	0.58 U
	2,4-Dichlorophenol	µg/L	NE	24	0.38 U	0.38 U	0.39 U	3.8 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	3.9 U
	2,4-Dimethylphenol	µg/L	NE	160	1.9 U	1.9 U	2.0 U	3.8 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	2.2 U	3.9 U
	2,4-Dinitrophenol	µg/L	NE	32	4.8 U	4.8 U	4.9 U	4.8 U	4.8 U	4.8 U	4.8 U	5.0 U	4.9 U	5.5 U	4.8 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	0.38 U	0.38 U	0.39 U	0.95 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.97 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	2-Chloronaphthalene	µg/L	NE	640	0.057 U	0.057 U	0.059 U	0.95 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.97 U
	2-Chlorophenol	µg/L	NE	40	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	2-Nitroaniline	µg/L	NE	160	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	2-Nitrophenol	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.95 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.97 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.77 U	0.76 U	0.79 U	0.76 U	0.77 U	0.77 U	0.77 U	0.79 U	0.78 U	0.88 U	0.78 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	1.9 U	1.9 U	2.0 U	14 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	2.2 U	15 U
	3-Nitroaniline	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	2.9 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	2.9 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	3.8 U	3.8 U	3.9 U	4.8 U	3.8 U	3.8 U	3.9 U	4.0 U	3.9 U	4.4 U	4.8 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	4-Chloroaniline[4]	µg/L	NE	0.219	0.38 U	0.38 U	0.39 U	9.5 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	9.7 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	4-Nitroaniline	µg/L	NE	NE	0.57 U	0.57 U	0.59 U	1.9 U	0.58 U	0.58 U	0.58 U	0.59 U	0.59 U	0.66 U	1.9 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	2.9 U	2.9 U	3.0 U	14 U	2.9 U	2.9 U	2.9 U	3.0 U	2.9 U	3.3 U	15 U
	Acenaphthene	µg/L	NE	960	0.096 U	0.095 U	0.098 U	0.38 U	0.096 U	0.096 U	0.096 U	0.099 U	0.098 U	0.11 U	0.39 U
	Acenaphthylene	µg/L	NE	NE	0.077 U	0.076 U	0.079 U	0.95 U	0.077 U	0.077 U	0.077 U	0.079 U	0.078 U	0.088 U	0.97 U
	Anthracene	µg/L	NE	4,800	0.038 U	0.038 U	0.039 U	0.038 U	0.038 U	0.038 U	0.039 U	0.040 U	0.039 U	0.044 U	0.039 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	0.057 U	0.057 U	0.059 U	0.95 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.97 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	0.038 U	0.038 U	0.039 U	0.95 U	0.038 U	0.038 U	0.039 U	0.040 U	0.039 U	0.044 U	0.97 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	0.077 U	0.076 U	0.079 U	0.95 U	0.077 U	0.077 U	0.077 U	0.079 U	0.078 U	0.088 U	0.97 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	0.057 U	0.057 U	0.059 U	0.95 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.97 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	0.057 U	0.057 U	0.059 U	0.95 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.97 U
	Benzoic Acid	µg/L	NE	64,000	**1.1 J**	2.9 U	3.0 U	2.9 U	**0.78 J**	**0.64 J**	2.9 U	3.0 U	**0.69 J**	3.3 U	2.9 U
	Benzyl Alcohol	µg/L	NE	800	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.14 U	0.44 U	0.58 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A-082316 8/23/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	2.7 U	2.9 U	3.0 U	14 U	2.9 U	2.2 U	2.9 U	**7.3**	3.4 U	**2.2 J**	15 U
	Butyl benzyl Phthalate	µg/L	NE	46.1	**0.39 J**	0.57 U	0.59 U	9.5 U	**0.22 J**	**0.34 J**	0.58 U	**0.35 J**	**0.70**	0.66 U	9.7 U
	Carbazole	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	Chrysene	µg/L	NE	12.0	0.038 U	0.038 U	0.039 U	0.57 U	0.038 U	0.038 U	0.039 U	0.040 U	0.039 U	0.044 U	0.58 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.057 U	0.057 U	0.059 U	0.57 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.58 U
	Dibenzofuran	µg/L	NE	16	0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	Dibutyl Phthalate	µg/L	NE	1,600	**0.16 J**	**0.16 J**	0.39 U	2.9 U	**0.14 J**	**0.18 J**	0.39 U	**0.20 J**	**0.18 J**	0.44 U	2.9 U
	Diethyl Phthalate	µg/L	NE	12,800	0.38 U	0.38 U	0.39 U	11 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	12 U
	Dimethyl Phthalate	µg/L	NE	NE	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	Di-N-Octyl Phthalate	µg/L	NE	160	0.38 U	0.38 U	0.39 U	0.95 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.97 U
	Fluoranthene	µg/L	NE	640	0.048 U	0.048 U	0.049 U	2.9 U	0.048 U	0.048 U	0.048 U	0.050 U	0.049 U	0.055 U	**0.022 J**
	Fluorene	µg/L	NE	640	0.057 U	0.057 U	0.059 U	1.9 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	1.9 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	0.57 U	0.57 U	0.59 U	0.95 U	0.58 U	0.58 U	0.58 U	0.59 U	0.59 U	0.66 U	0.97 U
	Hexachlorocyclopentadiene	µg/L	NE	48	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	2.2 U	1.9 U
	Hexachloroethane	µg/L	NE	1.09	0.57 U	0.57 U	0.59 U	0.95 U	0.58 U	0.58 U	0.58 U	0.59 U	0.59 U	0.66 U	0.97 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	0.057 U	0.057 U	0.059 U	0.95 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	0.97 U
	Isophorone	µg/L	NE	46.1	0.38 U	0.38 U	0.39 U	0.38 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.39 U
	Nitrobenzene	µg/L	NE	16	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.38 U	0.38 U	0.39 U	0.57 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	0.58 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	0.38 U	0.38 U	0.39 U	2.9 U	0.38 U	0.38 U	0.39 U	0.40 U	0.39 U	0.44 U	2.9 U
	Pentachlorophenol[4]	µg/L	NE	0.219	0.67 U	0.67 U	0.69 U	4.8 U	0.67 U	0.67 U	0.67 U	0.69 U	0.68 U	0.77 U	4.8 U
	Phenanthrene	µg/L	NE	NE	0.077 U	0.076 U	0.079 U	0.95 U	0.077 U	0.077 U	0.077 U	0.079 U	0.078 U	0.088 U	0.97 U
	Phenol	µg/L	NE	2,400	0.57 U	0.57 U	0.59 U	3.8 U	0.58 U	0.58 U	0.58 U	0.59 U	0.59 U	0.66 U	3.9 U
	Pyrene	µg/L	NE	480	0.057 U	0.057 U	0.059 U	1.9 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.066 U	1.9 U
	Total cPAH TEQ (ND=0.5RL)[5]	µg/L	0.1	NL	0.034 U	0.034 U	0.035 U	0.6963 U	0.035 U	0.035 U	0.035 U	0.036 U	0.035 U	0.04 U	0.7109 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-16 MW-16:082916 8/29/2016	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16-120717 12/07/17	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	NE	1.51	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	NE	720	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	1,4-Dioxane[7]	µg/L	NE	0.4375	–	–	–	**0.050 J**	–	–	–	**0.044 J**
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	NE	8.1	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	1-Methylnaphthalene	µg/L	160[6]	NL	0.057 U	0.057 U	0.060 U	0.95 U	0.057 U	0.057 U	0.058 U	0.97 U
	2-Methylnaphthalene	µg/L			0.19 U	0.19 U	0.20 U	0.38 U	0.19 U	0.19 U	0.19 U	0.39 U
	Naphthalene	µg/L			0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	2,2'-Oxybis[1-chloropropane]	µg/L	NE	0.625	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	2,4,5-Trichlorophenol	µg/L	NE	800	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	2,4,6-Trichlorophenol	µg/L	NE	3.98	0.57 U	0.57 U	0.60 U	0.57 U	0.57 U	0.57 U	0.58 U	0.58 U
	2,4-Dichlorophenol	µg/L	NE	24	0.38 U	0.38 U	0.40 U	3.8 U	0.38 U	0.38 U	0.39 U	3.9 U
	2,4-Dimethylphenol	µg/L	NE	160	1.9 U	1.9 U	2.0 U	3.8 U	1.9 U	1.9 U	1.9 U	3.9 U
	2,4-Dinitrophenol	µg/L	NE	32	4.7 U	4.8 U	5.0 U	4.7 U	4.8 U	4.7 U	4.8 U	4.9 U
	2,4-Dinitrotoluene[4]	µg/L	NE	0.282	0.38 U	0.38 U	0.40 U	0.95 U	0.38 U	0.38 U	0.39 U	0.97 U
	2,6-Dinitrotoluene[4]	µg/L	NE	0.0583	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	2-Chloronaphthalene	µg/L	NE	640	0.057 U	0.057 U	0.060 U	0.95 U	0.057 U	0.057 U	0.058 U	0.97 U
	2-Chlorophenol	µg/L	NE	40	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	2-methylphenol (o-Cresol)	µg/L	NE	400	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	2-Nitroaniline	µg/L	NE	160	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	2-Nitrophenol	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.95 U	0.38 U	0.38 U	0.39 U	0.97 U
	3 & 4 Methylphenol	µg/L	NE	NE	0.76 U	0.76 U	0.80 U	0.76 U	0.76 U	0.75 U	0.77 U	0.78 U
	3,3'-Dichlorobenzidine[4]	µg/L	NE	0.194	1.9 U	1.9 U	2.0 U	14 U	1.9 U	1.9 U	1.9 U	15 U
	3-Nitroaniline	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	2.8 U	0.38 U	0.38 U	0.39 U	2.9 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	NE	3.8 U	3.8 U	4.0 U	4.7 U	3.8 U	3.8 U	3.9 U	4.9 U
	4-Bromophenyl phenyl ether	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	4-Chloro-3-Methylphenol	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	4-Chloroaniline[4]	µg/L	NE	0.219	0.38 U	0.38 U	0.40 U	9.5 U	0.38 U	0.38 U	0.39 U	9.7 U
	4-Chlorophenyl-Phenylether	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	4-Nitroaniline	µg/L	NE	NE	0.57 U	0.57 U	0.60 U	1.9 U	0.57 U	0.57 U	0.58 U	1.9 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	NE	2.8 U	2.9 U	3.0 U	14 U	2.9 U	2.8 U	2.9 U	15 U
	Acenaphthene	µg/L	NE	960	0.095 U	0.095 U	0.10 U	0.38 U	0.095 U	0.094 U	0.097 U	0.39 U
	Acenaphthylene	µg/L	NE	NE	0.076 U	0.076 U	0.080 U	0.95 U	0.076 U	0.075 U	0.077 U	0.97 U
	Anthracene	µg/L	NE	4,800	0.038 U	0.038 U	0.040 U	0.038 U	0.038 U	0.038 U	0.039 U	0.039 U
	Benzo(a)anthracene[4]	µg/L	NE	0.120	0.057 U	0.057 U	0.060 U	0.95 U	0.057 U	0.057 U	0.058 U	0.97 U
	Benzo(a)pyrene[4]	µg/L	0.1	NL	0.038 U	0.038 U	0.040 U	0.95 U	0.038 U	0.038 U	0.039 U	0.97 U
	Benzo(b)fluoranthene[4]	µg/L	NE	0.120	0.076 U	0.076 U	0.080 U	0.95 U	0.076 U	0.075 U	0.077 U	0.97 U
	Benzo(g,h,i)perylene	µg/L	NE	NE	0.057 U	0.057 U	0.060 U	0.95 U	0.057 U	0.057 U	0.058 U	0.97 U
	Benzo(k)fluoranthene	µg/L	NE	1.20	0.057 U	0.057 U	0.060 U	0.95 U	0.057 U	0.057 U	0.058 U	0.97 U
	Benzoic Acid	µg/L	NE	64,000	2.8 U	**0.81 J**	3.0 U	**0.72 J**	2.9 U	2.8 U	2.9 U	**0.59 J**
	Benzyl Alcohol	µg/L	NE	800	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.095 U	0.39 U	0.58 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-16 MW-16:082916 8/29/2016	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16-120717 12/07/17	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
SVOCs[3]	Bis(2-Chloroethoxy)Methane	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	Bis(2-Chloroethyl)Ether[4]	µg/L	NE	0.0398	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	Bis(2-Ethylhexyl) Phthalate[4]	µg/L	NE	6.25	2.8 U	2.9 U	3.0 U	**2.4 J**	**2.8 J**	4.1 U	2.9 U	15 U
	Butyl benzyl Phthalate	µg/L	NE	46.1	0.57 U	**0.23 J**	0.60 U	9.5 U	**0.44 J**	**0.39 J**	0.58 U	9.7 U
	Carbazole	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	Chrysene	µg/L	NE	12.0	0.038 U	0.038 U	0.040 U	0.57 U	0.038 U	0.038 U	0.039 U	0.58 U
	Dibenzo(a,h)anthracene[4]	µg/L	NE	0.0120	0.057 U	0.057 U	0.060 U	0.57 U	0.057 U	0.057 U	0.058 U	0.58 U
	Dibenzofuran	µg/L	NE	16	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	Dibutyl Phthalate	µg/L	NE	1,600	0.33 U	**0.17 J**	**0.15 J**	2.8 U	**0.21 J**	0.38 U	0.39 U	2.9 U
	Diethyl Phthalate	µg/L	NE	12,800	**0.36 J**	0.38 U	0.40 U	11 U	0.38 U	0.38 U	0.39 U	12 U
	Dimethyl Phthalate	µg/L	NE	NE	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	Di-N-Octyl Phthalate	µg/L	NE	160	0.38 U	0.38 U	0.40 U	**0.18 J**	0.38 U	0.38 U	0.39 U	0.97 U
	Fluoranthene	µg/L	NE	640	0.047 U	0.048 U	0.050 U	2.8 U	0.048 U	0.047 U	0.048 U	2.9 U
	Fluorene	µg/L	NE	640	0.057 U	0.057 U	0.060 U	1.9 U	0.057 U	0.057 U	0.058 U	1.9 U
	Hexachlorobenzene[4]	µg/L	NE	0.0547	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	Hexachlorobutadiene[4]	µg/L	NE	0.561	0.57 U	0.57 U	0.60 U	0.95 U	0.57 U	0.57 U	0.58 U	0.97 U
	Hexachlorocyclopentadiene	µg/L	NE	48	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
	Hexachloroethane	µg/L	NE	1.09	0.57 U	0.57 U	0.60 U	0.95 U	0.57 U	0.57 U	0.58 U	0.97 U
	Indeno(1,2,3-c,d)pyrene[4]	µg/L	NE	0.120	0.057 U	0.057 U	0.060 U	0.95 U	0.057 U	0.057 U	0.058 U	0.97 U
	Isophorone	µg/L	NE	46.1	0.38 U	0.38 U	0.40 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U
	Nitrobenzene	µg/L	NE	16	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	N-Nitrosodi-n-propylamine[4]	µg/L	NE	0.0125	0.38 U	0.38 U	0.40 U	0.57 U	0.38 U	0.38 U	0.39 U	0.58 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	NE	17.9	0.38 U	0.38 U	0.40 U	2.8 U	0.38 U	0.38 U	0.39 U	2.9 U
	Pentachlorophenol[4]	µg/L	NE	0.219	0.66 U	0.67 U	0.70 U	4.7 U	0.67 U	0.66 U	0.68 U	4.9 U
	Phenanthrene	µg/L	NE	NE	0.076 U	0.076 U	0.080 U	0.95 U	0.076 U	0.075 U	0.077 U	0.97 U
	Phenol	µg/L	NE	2,400	0.57 U	0.57 U	0.60 U	**0.14 J**	0.57 U	0.57 U	0.58 U	3.9 U
	Pyrene	µg/L	NE	480	0.057 U	0.057 U	0.060 U	1.9 U	0.057 U	0.057 U	0.058 U	1.9 U
	Total cPAH TEQ (ND=0.5RL)[5]	µg/L	0.1	NL	0.034 U	0.034 U	0.036 U	0.6963 U	0.034 U	0.034 U	0.035 U	0.7109 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet.

When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Semi-volatile Organic Compounds (SVOCs) analzyed by EPA Method 8270D.

[4]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

[5]Carcinogenic PAH (cPAH) toxic equivalency (TEQ) calculated using toxicity equivalency factors (TEF) from MTCA Table 708-2, based on methodology described in MTCA Cleanup Regulation WAC 173-340-708.

[6]Total value for naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

[7]1,4-Dioxane analyzed by EPA Method 8270SIM.

J = estimated result; R = rejected result; NE = not established; U = analyte was not detected above the reporting limit; µg/L = milligrams per Liter

NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level as discussed in Section 2.2.5.

Bold indicates that the analyte was detected above the laboratory reporting limit.

Bold and shading indicates analyte was detected above the applicable cleanup level.

Table 9

Groundwater Analytical Results - Pesticides[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17	MW-4 MW-4-120717 12/07/17	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:112816 11/28/2016
Organo-chlorine Pesticides[3]	4,4'-DDD	µg/L	NE	0.365	0.036 U	--	0.029 U	0.029 U	0.030 U	--	0.033 U	0.029 U	0.030 U	--	--	0.030 U	0.028 U
	4,4'-DDE	µg/L	NE	0.257	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	4,4'-DDT	µg/L	NL	0.257	0.036 U	--	0.029 U	0.029 U	0.030 U	--	0.033 U	0.029 U	0.030 U	--	--	0.030 U	0.028 U
	Aldrin[6]	µg/L	NE	0.00257	0.036 U	--	0.029 U	0.029 U	0.030 U	--	0.033 U	0.029 U	0.030 U	--	--	0.030 U	0.028 U
	Alpha-BHC[6]	µg/L	NE	0.0139	0.036 U	--	0.029 U	0.029 U	0.030 U	--	0.033 U	0.029 U	0.030 U	--	--	0.030 U	0.028 U
	alpha-Chlordane (cis)	µg/L	NE	NE	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Beta-BHC[6]	µg/L	NE	0.0486	0.060 U	--	0.048 U	0.048 U	0.050 U	--	0.055 U	0.049 U	0.050 U	--	--	0.050 U	0.047 U
	Delta-BHC	µg/L	NE	NE	0.060 U	--	0.048 U	0.048 U	0.050 U	--	0.055 U	0.049 U	0.050 U	--	--	0.050 U	0.047 U
	Dieldrin[6]	µg/L	NE	0.00547	0.036 U	--	0.029 U	0.029 U	0.030 U	--	0.033 U	0.029 U	0.030 U	--	--	0.030 U	0.028 U
	Endosulfan I	µg/L	NE	NE	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Endosulfan II	µg/L	NE	NE	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Endosulfan Sulfate	µg/L	NE	NE	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Endrin	µg/L	NE	4.80	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Endrin Aldehyde	µg/L	NE	NE	0.24 U	--	0.19 U	0.19 U	0.20 U	--	0.22 U	0.19 U	0.20 U	--	--	0.20 U	0.19 U
	Endrin Ketone	µg/L	NE	NE	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	gamma-Chlordane	µg/L	NE	NE	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Heptachlor[6]	µg/L	NE	0.0194	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Heptachlor Epoxide[6]	µg/L	NE	0.00481	0.024 U	--	0.019 U	0.019 U	0.020 U	--	0.022 U	0.019 U	0.020 U	--	--	0.020 U	0.019 U
	Lindane (Gamma-BHC)	µg/L	0.2	NL	0.036 U	--	0.029 U	0.029 U	0.030 U	--	0.033 U	0.029 U	0.030 U	--	--	0.030 U	0.028 U
	Methoxychlor	µg/L	NE	80.0	0.12 U	--	0.095 U	0.095 U	0.10 U	--	0.11 U	0.097 U	0.099 U	--	--	0.10 U	0.094 U
	Toxaphene[6]	µg/L	NE	0.0795	1.2 U	--	0.95 U	0.95 U	1.0 U	--	1.1 U	0.97 U	0.99 U	--	--	1.0 U	0.94 U
Organo-phosphorus Pesticides[4]	Atrazine[6]	µg/L	NE	0.380	10 U	--	9.5 U	9.5 U	9.7 U	--	11 U	9.5 U	9.7 U	--	--	9.5 U	9.7 UJ
	Azinphos-methyl	µg/L	NE	NE	2.5 U	--	2.4 U	2.4 U	2.4 U	--	2.8 U	2.4 U	2.4 U	--	--	2.4 U	2.4 UJ
	Bolstar (Sulprofos)	µg/L	NE	NE	1.0 U	--	0.95 U	0.95 U	0.97 U	--	1.1 U	0.95 U	0.97 U	--	--	0.95 U	0.97 UJ
	Chlorpyrifos	µg/L	NE	16.0	1.5 U	--	1.4 U	1.4 U	1.5 U	--	1.7 U	1.4 U	1.5 U	--	--	1.4 U	1.5 UJ
	Coumaphos	µg/L	NE	NE	1.0 U	--	0.95 U	0.95 U	0.97 U	--	1.1 U	0.95 U	0.97 U	--	--	0.95 U	0.97 UJ
	Demeton[6]	µg/L	NE	0.640	3.0 U	--	2.8 U	2.8 U	2.9 U	--	3.4 U	2.9 U	2.9 U	--	--	2.9 U	2.9 UJ
	Diazinon	µg/L	NE	11.2	0.50 U	--	0.47 U	0.47 U	0.49 U	--	0.56 U	0.48 U	0.49 U	--	--	0.48 U	0.49 UJ
	Dichlorvos (DDVP)[6]	µg/L	NE	0.151	0.50 U	--	0.47 U	0.47 U	0.49 U	--	0.56 U	0.48 U	0.49 U	--	--	0.48 U	0.49 UJ
	Dimethoate	µg/L	NE	3.20	1.5 U	--	1.4 U	1.4 U	1.5 U	--	1.7 U	1.4 U	1.5 U	--	--	1.4 U	1.5 UJ
	Disulfoton (Di-Syston)[6]	µg/L	NE	0.640	1.0 U	--	0.95 U	0.95 U	0.97 U	--	1.1 U	0.95 U	0.97 U	--	--	0.95 U	0.97 UJ
	EPN[6]	µg/L	NE	0.160	1.2 U	--	1.1 U	1.1 U	1.2 U	--	1.3 U	1.1 U	1.2 U	--	--	1.1 U	1.2 UJ
	Ethoprop	µg/L	NE	NE	1.5 U	--	1.4 U	1.4 U	1.5 U	--	1.7 U	1.4 U	1.5 U	--	--	1.4 U	1.5 UJ
	Famphur	µg/L	NE	NE	1.0 U	--	0.95 U	0.95 U	0.97 U	--	1.1 U	0.95 U	0.97 U	--	--	0.95 U	0.97 UJ
	Fensulfothion	µg/L	NE	NE	2.5 U	--	2.4 U	2.4 U	2.4 U	--	2.8 U	2.4 U	2.4 U	--	--	2.4 U	2.4 UJ
	Fenthion	µg/L	NE	NE	2.5 U	--	2.4 U	2.4 U	2.4 U	--	2.8 U	2.4 U	2.4 U	--	--	2.4 U	2.4 UJ
	Malathion	µg/L	NE	320	2.0 U	--	1.9 U	1.9 U	1.9 U	--	2.2 U	1.9 U	1.9 U	--	--	1.9 U	1.9 UJ
	Merphos[6]	µg/L	NE	0.480	5.0 U	--	4.7 U	4.7 U	4.9 U	--	5.6 U	4.8 U	4.9 U	--	--	4.8 U	4.9 UJ
	Methyl Parathion[6]	µg/L	NE	4.00	4.0 U	--	3.8 U	3.8 U	3.9 U	--	4.5 U	3.8 U	3.9 U	--	--	3.8 U	3.9 UJ
	Mevinphos	µg/L	NE	NE	6.2 U	--	5.9 U	5.9 U	6.0 U	--	7.0 U	5.9 U	6.0 U	--	--	5.9 U	6.0 UJ
	Parathion (ethyl)	µg/L	NE	96.0	1.0 U	--	0.95 U	0.95 U	0.97 U	--	1.1 U	0.95 U	0.97 U	--	--	0.95 U	0.97 UJ

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-1A MW-1A-082516 8/25/2016	MW-1A MW-1A:121117 12/11/17	MW-2A MW-2A-082216 8/22/2016	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A-120717 12/07/17	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3-120717 12/07/17	MW-4 MW-4-120717 12/07/17	MW-4A MW-4A-082216 8/22/2016	MW-4A MW-4A:112816 11/28/2016
Organo-phosphorus Pesticides[4] (continued)	Phorate	µg/L	NE	3.20	1.2 U	--	1.1 U	1.1 U	1.2 U	--	1.3 U	1.1 U	1.2 U	--	--	1.1 U	1.2 UJ
	Propazine	µg/L	NE	320	10 U	--	9.5 U	9.5 U	9.7 U	--	11 U	9.5 U	9.7 U	--	--	9.5 U	9.7 UJ
	Ronnel	µg/L	NE	800	10 U	--	9.5 U	9.5 U	9.7 U	--	11 U	9.5 U	9.7 U	--	--	9.5 U	9.7 UJ
	Simazine[6]	µg/L	NE	0.729	10 U	--	9.5 U	9.5 U	9.7 U	--	11 U	9.5 U	9.7 U	--	--	9.5 U	9.7 UJ
	Sulfotepp	µg/L	NE	8.00	1.5 U	--	1.4 U	1.4 U	1.5 U	--	1.7 U	1.4 U	1.5 U	--	--	1.4 U	1.5 UJ
	Thionazin	µg/L	NE	NE	1.0 U	--	0.95 U	0.95 U	0.97 U	--	1.1 U	0.95 U	0.97 U	--	--	0.95 U	0.97 UJ
	Tokuthion (Prothiofos)	µg/L	NE	NE	1.6 U	--	1.5 U	1.5 U	1.6 U	--	1.8 U	1.5 U	1.6 U	--	--	1.5 U	1.6 UJ
	Trichloronate	µg/L	NE	NE	1.5 U	--	1.4 U	1.4 U	1.5 U	--	1.7 U	1.4 U	1.5 U	--	--	1.4 U	1.5 UJ
Chlorinated Herbicides[5]	2,4,5-T	µg/L	NE	160	1.1 U	0.27 U	0.97 U	0.95 U	0.96 U	0.28 U	0.96 U	0.95 U	0.97 U	0.27 U	0.27 U	0.97 U	0.95 U
	2,4-D	µg/L	NE	160	4.2 U	0.27 U	3.9 U	3.8 U	3.9 U	0.28 U	3.8 U	3.8 U	3.9 U	0.27 U	0.27 U	3.9 U	3.8 U
	2,4-DB	µg/L	NE	128	4.2 U	0.27 U	3.9 U	3.8 U	3.9 U	0.28 U	3.8 U	3.8 U	3.9 U	0.27 U	0.27 U	3.9 U	3.8 U
	Dalapon (DPA)	µg/L	NE	240	2.1 U	0.44 U	1.9 U	1.9 U	1.9 U	0.44 U	1.9 U	1.9 U	1.9 U	0.43 U	0.44 U	1.9 U	1.9 U
	Dicamba	µg/L	NE	480	2.1 U	0.27 U	1.9 U	1.9 U	1.9 U	0.28 U	1.9 U	1.9 U	1.9 U	0.27 U	0.27 U	1.9 U	1.9 U
	Dichlorprop	µg/L	NE	NE	4.2 U	0.27 U	3.9 U	3.8 U	3.9 U	0.28 U	3.8 U	3.8 U	3.9 U	0.27 U	0.27 U	3.9 U	3.8 U
	MCPA[6]	µg/L	NE	8.00	420 U	0.27 U	390 U	380 U	390 U	0.28 U	380 U	380 U	390 U	0.27 U	0.27 U	390 U	380 U
	Mecoprop (MCPP)[6]	µg/L	NE	16.0	420 U	**0.68**	390 U	380 U	390 U	0.28 U	380 U	380 U	390 U	0.27 U	0.27 U	390 U	380 U
	Silvex (Fenoprop or 2,4,5-TP)	µg/L	NE	128	1.1 U	0.27 U	0.97 U	0.95 U	0.96 U	0.28 U	0.96 U	0.95 U	0.97 U	0.27 U	0.27 U	0.97 U	0.95 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A-120717 12/07/17	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B:022217 2/22/2017
Organo-chlorine Pesticides[3]	4,4'-DDD	µg/L	NE	0.365	0.030 U	--	0.030 U	0.029 U	--	0.030 U	0.029 U	0.030 U	--	0.033 U	0.033 U	0.029 U	0.029 U
	4,4'-DDE	µg/L	NE	0.257	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	4,4'-DDT	µg/L	NL	0.257	0.030 U	--	0.030 U	0.029 U	--	0.030 U	0.029 U	0.030 U	--	0.033 U	0.033 U	0.029 U	0.029 U
	Aldrin[6]	µg/L	NE	0.00257	0.030 U	--	0.030 U	0.029 U	--	0.030 U	0.029 U	0.030 U	--	0.033 U	0.033 U	0.029 U	0.029 U
	Alpha-BHC[6]	µg/L	NE	0.0139	0.030 U	--	0.030 U	0.029 U	--	0.030 U	0.029 U	0.030 U	--	0.033 U	0.033 U	0.029 U	0.029 U
	alpha-Chlordane (cis)	µg/L	NE	NE	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Beta-BHC[6]	µg/L	NE	0.0486	0.049 U	--	0.050 U	0.049 U	--	0.049 U	0.049 U	0.050 U	--	0.055 U	0.056 U	0.049 U	0.049 U
	Delta-BHC	µg/L	NE	NE	0.049 U	--	0.050 U	0.049 U	--	0.049 U	0.049 U	0.050 U	--	0.055 U	0.056 U	0.049 U	0.049 U
	Dieldrin[6]	µg/L	NE	0.00547	0.030 U	--	0.030 U	0.029 U	--	0.030 U	0.029 U	0.030 U	--	0.033 U	0.033 U	0.029 U	0.029 U
	Endosulfan I	µg/L	NE	NE	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	**0.016 J**	**0.013 J**	0.020 U	0.020 U
	Endosulfan II	µg/L	NE	NE	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Endosulfan Sulfate	µg/L	NE	NE	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Endrin	µg/L	NE	4.80	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Endrin Aldehyde	µg/L	NE	NE	0.20 U	--	0.20 U	0.20 U	--	0.20 U	0.19 U	0.20 U	--	0.22 U	0.22 U	0.20 U	0.20 U
	Endrin Ketone	µg/L	NE	NE	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	gamma-Chlordane	µg/L	NE	NE	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Heptachlor[6]	µg/L	NE	0.0194	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Heptachlor Epoxide[6]	µg/L	NE	0.00481	0.020 U	--	0.020 U	0.020 U	--	0.020 U	0.019 U	0.020 U	--	0.022 U	0.022 U	0.020 U	0.020 U
	Lindane (Gamma-BHC)	µg/L	0.2	NL	0.030 U	--	0.030 U	0.029 U	--	0.030 U	0.029 U	0.030 U	--	0.033 U	0.033 U	0.029 U	0.029 U
	Methoxychlor	µg/L	NE	80.0	0.098 U	--	0.10 U	0.098 U	--	0.099 U	0.097 U	0.10 U	--	0.11 U	0.11 U	0.098 U	0.098 U
	Toxaphene[6]	µg/L	NE	0.0795	0.98 U	--	1.0 U	0.98 U	--	0.99 U	0.97 U	1.0 U	--	1.1 U	1.1 U	0.98 U	0.98 U
Organo-phosphorus Pesticides[4]	Atrazine[6]	µg/L	NE	0.380	10 U	--	9.5 U	9.7 U	--	9.5 U	9.7 U	9.7 U	--	9.5 U	9.6 U	9.5 U	10 U
	Azinphos-methyl	µg/L	NE	NE	2.5 U	--	2.4 U	2.4 U	--	2.4 U	2.4 U	2.4 U	--	2.4 U	2.4 U	2.4 U	2.6 U
	Bolstar (Sulprofos)	µg/L	NE	NE	1.0 U	--	0.95 U	0.97 U	--	0.95 U	0.97 U	0.97 U	--	0.95 U	0.96 U	0.95 U	1.0 U
	Chlorpyrifos	µg/L	NE	16.0	1.5 U	--	1.4 U	1.5 U	--	1.4 U	1.5 U	1.5 U	--	1.4 U	1.4 U	1.4 U	1.6 U
	Coumaphos	µg/L	NE	NE	1.0 U	--	0.95 U	0.97 U	--	0.95 U	0.97 U	0.97 U	--	0.95 U	0.96 U	0.95 U	1.0 U
	Demeton[6]	µg/L	NE	0.640	3.0 U	--	2.9 U	2.9 U	--	2.8 U	2.9 U	2.9 U	--	2.8 U	2.9 U	2.9 U	3.1 U
	Diazinon	µg/L	NE	11.2	0.50 U	--	0.48 U	0.49 U	--	0.47 U	0.48 U	0.48 U	--	0.47 U	0.48 U	0.48 U	0.52 U
	Dichlorvos (DDVP)[6]	µg/L	NE	0.151	0.50 U	--	0.48 U	0.49 U	--	0.47 U	0.48 U	0.48 U	--	0.47 U	0.48 U	0.48 U	0.52 U
	Dimethoate	µg/L	NE	3.20	1.5 U	--	1.4 U	1.5 U	--	1.4 U	1.5 U	1.5 U	--	1.4 U	1.4 U	1.4 U	1.6 U
	Disulfoton (Di-Syston)[6]	µg/L	NE	0.640	1.0 U	--	0.95 U	0.97 U	--	0.95 U	0.97 U	0.97 U	--	0.95 U	0.96 U	0.95 U	1.0 U
	EPN[6]	µg/L	NE	0.160	1.2 U	--	1.1 U	1.2 U	--	1.1 U	1.2 U	1.2 U	--	1.1 U	1.2 U	1.1 U	1.2 U
	Ethoprop	µg/L	NE	NE	1.5 U	--	1.4 U	1.5 U	--	1.4 U	1.5 U	1.5 U	--	1.4 U	1.4 U	1.4 U	1.6 U
	Famphur	µg/L	NE	NE	1.0 U	--	0.95 U	0.97 U	--	0.95 U	0.97 U	0.97 U	--	0.95 U	0.96 U	0.95 U	1.0 U
	Fensulfothion	µg/L	NE	NE	2.5 U	--	2.4 U	2.4 U	--	2.4 U	2.4 U	2.4 U	--	2.4 U	2.4 U	2.4 U	2.6 U
	Fenthion	µg/L	NE	NE	2.5 U	--	2.4 U	2.4 U	--	2.4 U	2.4 U	2.4 U	--	2.4 U	2.4 U	2.4 U	2.6 U
	Malathion	µg/L	NE	320	2.0 U	--	1.9 U	1.9 U	--	1.9 U	1.9 U	1.9 U	--	1.9 U	1.9 U	1.9 U	2.1 U
	Merphos[6]	µg/L	NE	0.480	5.0 U	--	4.8 U	4.9 U	--	4.7 U	4.8 U	4.8 U	--	4.7 U	4.8 U	4.8 U	5.2 U
	Methyl Parathion[6]	µg/L	NE	4.00	4.0 U	--	3.8 U	3.9 U	--	3.8 U	3.9 U	3.9 U	--	3.8 U	3.9 U	3.8 U	4.2 U
	Mevinphos	µg/L	NE	NE	6.2 U	--	5.9 U	6.0 U	--	5.9 U	6.0 U	6.0 U	--	5.9 U	6.0 U	5.9 U	6.5 U
	Parathion (ethyl)	µg/L	NE	96.0	1.0 U	--	0.95 U	0.97 U	--	0.95 U	0.97 U	0.97 U	--	0.95 U	0.96 U	0.95 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:120617 12/06/17	MW-5 MW-5-082316 8/23/2016	MW-5 MW-5:022217 2/22/2017	MW-5 MW-5-120717 12/07/17	MW-5A MW-5A-082316 8/23/2016	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A-120717 12/07/17	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B-082516 8/25/2016	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B:022217 2/22/2017
Organo-phosphorus Pesticides[4] (continued)	Phorate	µg/L	NE	3.20	1.2 U	--	1.1 U	1.2 U	--	1.1 U	1.2 U	1.2 U	--	1.1 U	1.2 U	1.1 U	1.2 U
	Propazine	µg/L	NE	320	10 U	--	9.5 U	9.7 U	--	9.5 U	9.7 U	9.7 U	--	9.5 U	9.6 U	9.5 U	10 U
	Ronnel	µg/L	NE	800	10 U	--	9.5 U	9.7 U	--	9.5 U	9.7 U	9.7 U	--	9.5 U	9.6 U	9.5 U	10 U
	Simazine[6]	µg/L	NE	0.729	10 U	--	9.5 U	9.7 U	--	9.5 U	9.7 U	9.7 U	--	9.5 U	9.6 U	9.5 U	10 U
	Sulfotepp	µg/L	NE	8.00	1.5 U	--	1.4 U	1.5 U	--	1.4 U	1.5 U	1.5 U	--	1.4 U	1.4 U	1.4 U	1.6 U
	Thionazin	µg/L	NE	NE	1.0 U	--	0.95 U	0.97 U	--	0.95 U	0.97 U	0.97 U	--	0.95 U	0.96 U	0.95 U	1.0 U
	Tokuthion (Prothiofos)	µg/L	NE	NE	1.6 U	--	1.5 U	1.6 U	--	1.5 U	1.5 U	1.5 U	--	1.5 U	1.5 U	1.5 U	1.7 U
	Trichloronate	µg/L	NE	NE	1.5 U	--	1.4 U	1.5 U	--	1.4 U	1.5 U	1.5 U	--	1.4 U	1.4 U	1.4 U	1.6 U
Chlorinated Herbicides[5]	2,4,5-T	µg/L	NE	160	1.0 U	0.26 U	0.97 U	0.97 U	0.28 U	0.96 U	0.96 U	0.97 U	0.27 U	0.97 U	0.96 U	0.96 U	0.97 U
	2,4-D	µg/L	NE	160	4.0 U	0.26 U	3.9 U	3.9 U	0.28 U	3.9 U	3.8 U	3.9 U	0.27 U	3.9 U	3.9 U	3.8 U	3.9 U
	2,4-DB	µg/L	NE	128	4.0 U	0.26 U	3.9 U	3.9 U	0.28 U	3.9 U	3.8 U	3.9 U	0.27 U	3.9 U	3.9 U	3.8 U	**0.55 J**
	Dalapon (DPA)	µg/L	NE	240	2.0 U	0.42 U	1.9 U	1.9 U	0.44 U	1.9 U	1.9 U	1.9 U	0.43 U	1.9 U	1.9 U	1.9 U	1.9 U
	Dicamba	µg/L	NE	480	2.0 U	0.26 U	1.9 U	1.9 U	0.28 U	1.9 U	1.9 U	1.9 U	0.27 U	1.9 U	1.9 U	1.9 U	1.9 U
	Dichlorprop	µg/L	NE	NE	4.0 U	0.26 U	3.9 U	3.9 U	0.28 U	3.9 U	3.8 U	3.9 U	0.27 U	3.9 U	3.9 U	3.8 U	3.9 U
	MCPA[6]	µg/L	NE	8.00	400 U	0.26 U	390 U	390 U	0.28 U	390 U	380 U	390 U	0.27 U	390 U	390 U	380 U	**35 J**
	Mecoprop (MCPP)[6]	µg/L	NE	16.0	400 U	0.26 U	390 U	**59 J**	0.28 U	390 U	380 U	390 U	0.27 U	390 U	390 U	380 U	390 U
	Silvex (Fenoprop or 2,4,5-TP)	µg/L	NE	128	1.0 U	0.26 U	0.97 U	0.97 U	0.28 U	0.96 U	0.96 U	0.97 U	0.27 U	0.97 U	0.96 U	0.96 U	0.97 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	MW-7B MW-7B:121217 12/12/2017	MW-7B DUP:121217 12/12/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:121217 12/12/2017	MW-8A MW-8A-082116 8/21/2016	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:120617 12/06/17	MW-8B MW-8B-082116 8/21/2016	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B:022017 2/20/2017
Organo-chlorine Pesticides[3]	4,4'-DDD	µg/L	NE	0.365	--	--	0.030 U	0.030 U	0.028 U		0.028 U	0.028 U	0.030 U	--	0.028 U	0.029 U	0.029 U
	4,4'-DDE	µg/L	NE	0.257	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	4,4'-DDT	µg/L	NL	0.257	--	--	0.030 U	0.030 U	0.028 U		0.028 U	0.028 U	0.030 U	--	0.028 U	0.029 U	0.029 U
	Aldrin[6]	µg/L	NE	0.00257	--	--	0.030 U	0.030 U	0.028 U		0.028 U	0.028 U	0.030 U	--	0.028 U	0.029 U	0.029 U
	Alpha-BHC[6]	µg/L	NE	0.0139	--	--	0.030 U	0.030 U	0.028 U		0.028 U	0.028 U	0.030 U	--	0.028 U	0.029 U	0.029 U
	alpha-Chlordane (cis)	µg/L	NE	NE	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Beta-BHC[6]	µg/L	NE	0.0486	--	--	0.050 U	0.050 U	0.047 U		0.047 U	0.046 U	0.050 U	--	0.047 U	0.048 U	0.048 U
	Delta-BHC	µg/L	NE	NE	--	--	0.050 U	0.050 U	0.047 U		0.047 U	0.046 U	0.050 U	--	0.047 U	0.048 U	0.048 U
	Dieldrin[6]	µg/L	NE	0.00547	--	--	0.030 U	0.030 U	0.028 U		0.028 U	0.028 U	0.030 U	--	0.028 U	0.029 U	0.029 U
	Endosulfan I	µg/L	NE	NE	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Endosulfan II	µg/L	NE	NE	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Endosulfan Sulfate	µg/L	NE	NE	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Endrin	µg/L	NE	4.80	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Endrin Aldehyde	µg/L	NE	NE	--	--	0.20 U	0.20 U	0.19 U		0.19 U	0.18 U	0.20 U	--	0.19 U	0.19 U	0.19 U
	Endrin Ketone	µg/L	NE	NE	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	gamma-Chlordane	µg/L	NE	NE	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Heptachlor[6]	µg/L	NE	0.0194	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Heptachlor Epoxide[6]	µg/L	NE	0.00481	--	--	0.020 U	0.020 U	0.019 U		0.019 U	0.018 U	0.020 U	--	0.019 U	0.019 U	0.019 U
	Lindane (Gamma-BHC)	µg/L	0.2	NL	--	--	0.030 U	0.030 U	0.028 U		0.028 U	0.028 U	0.030 U	--	0.028 U	0.029 U	0.029 U
	Methoxychlor	µg/L	NE	80.0	--	--	0.10 U	0.10 U	0.095 U		0.093 U	0.092 U	0.10 U	--	0.093 U	0.097 U	0.097 U
	Toxaphene[6]	µg/L	NE	0.0795	--	--	1.0 U	1.0 U	0.95 U		0.93 U	0.92 U	1.0 U	--	0.93 U	0.97 U	0.97 U
Organo-phosphorus Pesticides[4]	Atrazine[6]	µg/L	NE	0.380	--	--	9.5 U	10 U	11 U		9.5 U	9.6 U	9.9 U	--	9.5 U	9.6 U	9.5 U
	Azinphos-methyl	µg/L	NE	NE	--	--	2.4 U	2.6 U	2.7 U		2.4 U	2.4 U	2.5 U	--	2.4 U	2.4 U	2.4 U
	Bolstar (Sulprofos)	µg/L	NE	NE	--	--	0.95 U	1.0 U	1.1 U		0.95 U	0.96 U	0.99 U	--	0.95 U	0.96 U	0.95 U
	Chlorpyrifos	µg/L	NE	16.0	--	--	1.4 U	1.6 U	1.6 U		1.4 U	1.4 U	1.5 U	--	1.4 U	1.4 U	1.4 U
	Coumaphos	µg/L	NE	NE	--	--	0.95 U	1.0 U	1.1 U		0.95 U	0.96 U	0.99 U	--	0.95 U	0.96 U	0.95 U
	Demeton[6]	µg/L	NE	0.640	--	--	2.9 U	3.1 U	3.2 U		2.8 U	2.9 U	3.0 U	--	2.8 U	2.9 U	2.9 U
	Diazinon	µg/L	NE	11.2	--	--	0.48 U	0.52 U	0.53 U		0.47 U	0.48 U	0.50 U	--	0.47 U	0.48 U	0.48 U
	Dichlorvos (DDVP)[6]	µg/L	NE	0.151	--	--	0.48 U	0.52 U	0.53 U		0.47 U	0.48 U	0.50 U	--	0.47 U	0.48 U	0.48 U
	Dimethoate	µg/L	NE	3.20	--	--	1.4 U	1.6 U	1.6 U		1.4 U	1.4 U	1.5 U	--	1.4 U	1.4 U	1.4 U
	Disulfoton (Di-Syston)[6]	µg/L	NE	0.640	--	--	0.95 U	1.0 U	1.1 U		0.95 U	0.96 U	0.99 U	--	0.95 U	0.96 U	0.95 U
	EPN[6]	µg/L	NE	0.160	--	--	1.1 U	1.2 U	1.3 U		1.1 U	1.2 U	1.2 U	--	1.1 U	1.1 U	1.1 U
	Ethoprop	µg/L	NE	NE	--	--	1.4 U	1.6 U	1.6 U		1.4 U	1.4 U	1.5 U	--	1.4 U	1.4 U	1.4 U
	Famphur	µg/L	NE	NE	--	--	0.95 U	1.0 U	1.1 U		0.95 U	0.96 U	0.99 U	--	0.95 U	0.96 U	0.95 U
	Fensulfothion	µg/L	NE	NE	--	--	2.4 U	2.6 U	2.7 U		2.4 U	2.4 U	2.5 U	--	2.4 U	2.4 U	2.4 U
	Fenthion	µg/L	NE	NE	--	--	2.4 U	2.6 U	2.7 U		2.4 U	2.4 U	2.5 U	--	2.4 U	2.4 U	2.4 U
	Malathion	µg/L	NE	320	--	--	1.9 U	2.1 U	2.1 U		1.9 U	1.9 U	2.0 U	--	1.9 U	1.9 U	1.9 U
	Merphos[6]	µg/L	NE	0.480	--	--	4.8 U	5.2 U	5.3 U		4.7 U	4.8 U	5.0 U	--	4.7 U	4.8 U	4.8 U
	Methyl Parathion[6]	µg/L	NE	4.00	--	--	3.8 U	4.2 U	4.3 U		3.8 U	3.9 U	4.0 U	--	3.8 U	3.8 U	3.8 U
	Mevinphos	µg/L	NE	NE	--	--	5.9 U	6.5 U	6.6 U		5.9 U	6.0 U	6.2 U	--	5.9 U	5.9 U	5.9 U
	Parathion (ethyl)	µg/L	NE	96.0	--	--	0.95 U	1.0 U	1.1 U		0.95 U	0.96 U	0.99 U	--	0.95 U	0.96 U	0.95 U

Analyte Group	Analyte	Units	Sample Location	MW-7B	MW-7B	MW-7D	MW-7D	MW-7D	MW-7D	MW-8A	MW-8A	MW-8A	MW-8A	MW-8B	MW-8B	MW-8B
			Sample Name	MW-7B:121217	DUP:121217	MW-7D:082416	MW-7D:120116	MW-7D:022217	MW-7D:121217	MW-8A-082116	MW-8A:112816	MW-8A:022017	MW-8A:120617	MW-8B-082116	MW-8B:112816	MW-8B:022017
			Sample Date	12/12/2017	12/12/2017	8/24/2016	12/1/2016	2/22/2017	12/12/2017	8/21/2016	11/28/2016	2/20/2017	12/06/17	8/21/2016	11/28/2016	2/20/2017
			MTCA Method A CUL[2]													
			MTCA Method B CUL[2]													
Organo-phosphorus Pesticides[4] (continued)	Phorate	µg/L	NE	3.20	--	--	1.1 U	1.2 U	1.3 U		1.1 U	1.2 U	1.2 U	--	1.1 U	1.1 U	1.1 U
	Propazine	µg/L	NE	320	--	--	9.5 U	10 U	11 U		9.5 U	9.6 U	9.9 U	--	9.5 U	9.6 U	9.5 U
	Ronnel	µg/L	NE	800	--	--	9.5 U	10 U	11 U		9.5 U	9.6 U	9.9 U	--	9.5 U	9.6 U	9.5 U
	Simazine[6]	µg/L	NE	0.729	--	--	9.5 U	10 U	11 U		9.5 U	9.6 U	9.9 U	--	9.5 U	9.6 U	9.5 U
	Sulfotepp	µg/L	NE	8.00	--	--	1.4 U	1.6 U	1.6 U		1.4 U	1.4 U	1.5 U	--	1.4 U	1.4 U	1.4 U
	Thionazin	µg/L	NE	NE	--	--	0.95 U	1.0 U	1.1 U		0.95 U	0.96 U	0.99 U	--	0.95 U	0.96 U	0.95 U
	Tokuthion (Prothiofos)	µg/L	NE	NE	--	--	1.5 U	1.7 U	1.7 U		1.5 U	1.5 U	1.6 U	--	1.5 U	1.5 U	1.5 U
	Trichloronate	µg/L	NE	NE	--	--	1.4 U	1.6 U	1.6 U		1.4 U	1.4 U	1.5 U	--	1.4 U	1.4 U	1.4 U
Chlorinated Herbicides[5]	2,4,5-T	µg/L	NE	160	0.28 U	0.27 U	0.95 U	0.97 U	0.97 U	0.28 U	0.94 U	0.95 U	0.96 U	0.27 U	0.95 U	0.95 U	0.96 U
	2,4-D	µg/L	NE	160	0.28 U	0.27 U	3.8 U	3.9 U	3.9 U	0.28 U	3.8 U	3.8 U	3.9 U	0.27 U	3.8 U	3.8 U	3.9 U
	2,4-DB	µg/L	NE	128	0.28 U	0.27 U	3.8 U	3.9 U	3.9 U	0.28 U	3.8 U	3.8 U	**0.48 J**	0.27 U	3.8 U	3.8 U	3.9 U
	Dalapon (DPA)	µg/L	NE	240	0.44 U	0.44 U	1.9 U	1.9 U	1.9 U	0.45 U	1.9 U	1.9 U	1.9 U	0.43 U	1.9 U	1.9 U	1.9 U
	Dicamba	µg/L	NE	480	0.28 U	0.27 U	1.9 U	1.9 U	1.9 U	0.28 U	1.9 U	1.9 U	1.9 U	0.27 U	1.9 U	1.9 U	1.9 U
	Dichlorprop	µg/L	NE	NE	0.28 U	0.27 U	3.8 U	3.9 U	3.9 U	0.28 U	3.8 U	3.8 U	3.9 U	0.27 U	3.8 U	3.8 U	3.9 U
	MCPA[6]	µg/L	NE	8.00	0.28 U	0.27 U	380 U	390 U	390 U	0.28 U	380 U	380 U	390 U	0.27 U	380 U	380 U	390 U
	Mecoprop (MCPP)[6]	µg/L	NE	16.0	0.28 U	0.27 U	380 U	390 U	390 U	0.28 U	380 U	380 U	390 U	0.27 U	380 U	380 U	**34 J**
	Silvex (Fenoprop or 2,4,5-	µg/L	NE	128	0.28 U	0.27 U	0.95 U	0.97 U	0.97 U	0.28 U	0.94 U	0.95 U	0.96 U	0.27 U	0.95 U	0.95 U	0.96 U

Analyte Group	Analyte	Units	Sample Location	MW-8B	MW-9A	MW-9A	MW-9A	MW-9A	MW-11A	MW-11A	MW-11A	MW-11A	MW-12A	MW-12A	MW-12A	MW-12A
			Sample Name	MW-8B:120617	MW-9A-082116	MW-9A:113016	MW-9A:022217	MW-9A:121317	MW-11A:082416	MW-11A:112816	MW-11A:022117	MW-11A:121117	MW-12A-082516	MW-12A:113016	MW-12A:022217	MW-DUP:113016
			Sample Date	12/06/17	8/21/2016	11/30/2016	2/22/2017	12/13/2017	8/24/2016	11/28/2016	2/21/2017	12/11/17	8/25/2016	11/30/2016	2/22/2017	11/30/2016
			MTCA Method A CUL[2]													
			MTCA Method B CUL[2]													
Organo-chlorine Pesticides[3]	4,4'-DDD	µg/L	NE	0.365	--	0.027 U	0.028 U	0.029 U	--	0.030 U	0.032 U	0.029 U	--	0.030 U	0.032 U	0.030 U	0.031 U
	4,4'-DDE	µg/L	NE	0.257	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	4,4'-DDT	µg/L	NL	0.257	--	0.027 U	0.028 U	0.029 U	--	0.030 U	0.032 U	0.029 U	--	0.030 U	0.032 U	0.030 U	0.031 U
	Aldrin[6]	µg/L	NE	0.00257	--	0.027 U	0.028 U	0.029 U	--	0.030 U	0.032 U	0.029 U	--	0.030 U	0.032 U	0.030 U	0.031 U
	Alpha-BHC[6]	µg/L	NE	0.0139	--	0.027 U	0.028 U	0.029 U	--	0.030 U	0.032 U	0.029 U	--	0.030 U	0.032 U	0.030 U	0.031 U
	alpha-Chlordane (cis)	µg/L	NE	NE	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Beta-BHC[6]	µg/L	NE	0.0486	--	0.046 U	0.047 U	0.049 U	--	0.050 U	0.054 U	0.049 U	--	0.050 U	0.053 U	0.050 U	0.052 U
	Delta-BHC	µg/L	NE	NE	--	0.046 U	0.047 U	0.049 U	--	0.050 U	0.054 U	0.049 U	--	0.050 U	0.053 U	0.050 U	0.052 U
	Dieldrin[6]	µg/L	NE	0.00547	--	0.027 U	0.028 U	0.029 U	--	0.030 U	0.032 U	0.029 U	--	0.030 U	0.032 U	0.030 U	0.031 U
	Endosulfan I	µg/L	NE	NE	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Endosulfan II	µg/L	NE	NE	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Endosulfan Sulfate	µg/L	NE	NE	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Endrin	µg/L	NE	4.80	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Endrin Aldehyde	µg/L	NE	NE	--	0.18 U	0.19 U	0.20 U	--	0.20 U	0.22 U	0.20 U	--	0.20 U	0.21 U	0.20 U	0.21 U
	Endrin Ketone	µg/L	NE	NE	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	gamma-Chlordane	µg/L	NE	NE	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Heptachlor[6]	µg/L	NE	0.0194	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Heptachlor Epoxide[6]	µg/L	NE	0.00481	--	0.018 U	0.019 U	0.020 U	--	0.020 U	0.022 U	0.020 U	--	0.020 U	0.021 U	0.020 U	0.021 U
	Lindane (Gamma-BHC)	µg/L	0.2	NL	--	0.027 U	0.028 U	0.029 U	--	0.030 U	0.032 U	0.029 U	--	0.030 U	0.032 U	0.030 U	0.031 U
	Methoxychlor	µg/L	NE	80.0	--	0.092 U	0.094 U	0.098 U	--	0.10 U	0.11 U	0.098 U	--	0.10 U	0.11 U	0.10 U	0.10 U
	Toxaphene[6]	µg/L	NE	0.0795	--	0.92 U	0.94 U	0.98 U	--	1.0 U	1.1 U	0.98 U	--	1.0 U	1.1 U	1.0 U	1.0 U
Organo-phosphorus Pesticides[4]	Atrazine[6]	µg/L	NE	0.380	--	9.5 U	9.7 UJ	9.7 U	--	9.5 U	9.7 U	9.6 U	--	9.9 U	9.6 U	9.7 U	9.6 UJ
	Azinphos-methyl	µg/L	NE	NE	--	2.4 U	2.4 UJ	2.4 U	--	2.4 U	2.4 U	2.4 U	--	2.5 U	2.4 U	2.4 U	2.4 UJ
	Bolstar (Sulprofos)	µg/L	NE	NE	--	0.95 U	0.97 UJ	0.97 U	--	0.95 U	0.97 U	0.96 U	--	0.99 U	0.96 U	0.97 U	0.96 UJ
	Chlorpyrifos	µg/L	NE	16.0	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 U	1.4 U	--	1.5 U	1.4 U	1.5 U	1.4 UJ
	Coumaphos	µg/L	NE	NE	--	0.95 U	0.97 UJ	0.97 U	--	0.95 U	0.97 U	0.96 U	--	0.99 U	0.96 U	0.97 U	0.96 UJ
	Demeton[6]	µg/L	NE	0.640	--	2.9 U	2.9 UJ	2.9 U	--	2.8 U	2.9 U	2.9 U	--	3.0 U	2.9 U	2.9 U	2.9 UJ
	Diazinon	µg/L	NE	11.2	--	0.48 U	0.48 UJ	0.48 U	--	0.47 U	0.48 U	0.48 U	--	0.50 U	0.48 U	0.48 U	0.48 UJ
	Dichlorvos (DDVP)[6]	µg/L	NE	0.151	--	0.48 U	0.48 UJ	0.48 U	--	0.47 U	0.48 U	0.48 U	--	0.50 U	0.48 U	0.48 U	0.48 UJ
	Dimethoate	µg/L	NE	3.20	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 U	1.4 U	--	1.5 U	1.4 U	1.5 U	1.4 UJ
	Disulfoton (Di-Syston)[6]	µg/L	NE	0.640	--	0.95 U	0.97 UJ	0.97 U	--	0.95 U	0.97 U	0.96 U	--	0.99 U	0.96 U	0.97 U	0.96 UJ
	EPN[6]	µg/L	NE	0.160	--	1.1 U	1.2 UJ	1.2 U	--	1.1 U	1.2 U	1.2 U	--	1.2 U	1.2 U	1.2 U	1.2 UJ
	Ethoprop	µg/L	NE	NE	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 U	1.4 U	--	1.5 U	1.4 U	1.5 U	1.4 UJ
	Famphur	µg/L	NE	NE	--	0.95 U	0.97 UJ	0.97 U	--	0.95 U	0.97 U	0.96 U	--	0.99 U	0.96 U	0.97 U	0.96 UJ
	Fensulfothion	µg/L	NE	NE	--	2.4 U	2.4 UJ	2.4 U	--	2.4 U	2.4 U	2.4 U	--	2.5 U	2.4 U	2.4 U	2.4 UJ
	Fenthion	µg/L	NE	NE	--	2.4 U	2.4 UJ	2.4 U	--	2.4 U	2.4 U	2.4 U	--	2.5 U	2.4 U	2.4 U	2.4 UJ
	Malathion	µg/L	NE	320	--	1.9 U	1.9 UJ	1.9 U	--	1.9 U	1.9 U	1.9 U	--	2.0 U	1.9 U	1.9 U	1.9 UJ
	Merphos[6]	µg/L	NE	0.480	--	4.8 U	4.8 UJ	4.8 U	--	4.7 U	4.8 U	4.8 U	--	5.0 U	4.8 U	4.8 U	4.8 UJ
	Methyl Parathion[6]	µg/L	NE	4.00	--	3.8 U	3.9 UJ	3.9 U	--	3.8 U	3.9 U	3.8 U	--	4.0 U	3.8 U	3.9 U	3.8 UJ
	Mevinphos	µg/L	NE	NE	--	5.9 U	6.0 UJ	6.0 U	--	5.9 U	6.0 U	5.9 U	--	6.1 U	6.0 U	6.0 U	6.0 UJ
	Parathion (ethyl)	µg/L	NE	96.0	--	0.95 U	0.97 UJ	0.97 U	--	0.95 U	0.97 U	0.96 U	--	0.99 U	0.96 U	0.97 U	0.96 UJ

Analyte Group	Analyte	Units	Sample Location	MW-8B	MW-9A	MW-9A	MW-9A	MW-9A	MW-11A	MW-11A	MW-11A	MW-11A	MW-12A	MW-12A	MW-12A	MW-12A
			Sample Name	MW-8B:120617	MW-9A-082116	MW-9A:113016	MW-9A:022217	MW-9A:121317	MW-11A:082416	MW-11A:112816	MW-11A:022117	MW-11A:121117	MW-12A-082516	MW-12A:113016	MW-12A:022217	MW-DUP:113016
			Sample Date	12/06/17	8/21/2016	11/30/2016	2/22/2017	12/13/2017	8/24/2016	11/28/2016	2/21/2017	12/11/17	8/25/2016	11/30/2016	2/22/2017	11/30/2016
			MTCA Method A CUL[2]													
			MTCA Method B CUL[2]													
Organo-phosphorus Pesticides[4] (continued)	Phorate	µg/L	NE	3.20	--	1.1 U	1.2 UJ	1.2 U	--	1.1 U	1.2 U	1.2 U	--	1.2 U	1.2 U	1.2 U	1.2 UJ
	Propazine	µg/L	NE	320	--	9.5 U	9.7 UJ	9.7 U	--	9.5 U	9.7 U	9.6 U	--	9.9 U	9.6 U	9.7 U	9.6 UJ
	Ronnel	µg/L	NE	800	--	9.5 U	9.7 UJ	9.7 U	--	9.5 U	9.7 U	9.6 U	--	9.9 U	9.6 U	9.7 U	9.6 UJ
	Simazine[6]	µg/L	NE	0.729	--	9.5 U	9.7 UJ	9.7 U	--	9.5 U	9.7 U	9.6 U	--	9.9 U	9.6 U	9.7 U	9.6 UJ
	Sulfotepp	µg/L	NE	8.00	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 U	1.4 U	--	1.5 U	1.4 U	1.5 U	1.4 UJ
	Thionazin	µg/L	NE	NE	--	0.95 U	0.97 UJ	0.97 U	--	0.95 U	0.97 U	0.96 U	--	0.99 U	0.96 U	0.97 U	0.96 UJ
	Tokuthion (Prothiofos)	µg/L	NE	NE	--	1.5 U	1.5 UJ	1.5 U	--	1.5 U	1.5 U	1.5 U	--	1.6 U	1.5 U	1.6 U	1.5 UJ
	Trichloronate	µg/L	NE	NE	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 U	1.4 U	--	1.5 U	1.4 U	1.5 U	1.4 UJ
Chlorinated Herbicides[5]	2,4,5-T	µg/L	NE	160	0.28 U	0.95 U	0.95 U	0.97 U	0.28 U	0.95 U	0.96 U	0.95 U	0.27 U	0.96 U	0.96 U	0.97 U	1.0 U
	2,4-D	µg/L	NE	160	0.28 U	3.8 U	3.8 U	3.9 U	0.28 U	3.8 U	3.8 U	3.8 U	0.27 U	3.8 U	3.8 U	3.9 U	4.1 U
	2,4-DB	µg/L	NE	128	0.28 U	3.8 U	3.8 U	3.9 U	0.28 U	3.8 U	3.8 U	3.8 U	0.27 U	3.8 U	3.8 U	3.9 U	4.1 U
	Dalapon (DPA)	µg/L	NE	240	0.44 U	1.9 U	1.9 U	1.9 U	0.45 U	1.9 U	1.9 U	1.9 U	0.43 U	1.9 U	1.9 U	1.9 U	2.0 U
	Dicamba	µg/L	NE	480	0.28 U	1.9 U	1.9 U	1.9 U	0.28 U	1.9 U	1.9 U	1.9 U	0.27 U	1.9 U	1.9 U	1.9 U	2.0 U
	Dichlorprop	µg/L	NE	NE	0.28 U	3.8 U	3.8 U	3.9 U	0.28 U	3.8 U	3.8 U	3.8 U	0.27 U	3.8 U	3.8 U	3.9 U	4.1 U
	MCPA[6]	µg/L	NE	8.00	0.28 U	380 U	380 U	390 U	0.28 U	380 U	380 U	380 U	0.27 U	380 U	380 U	**17 J**	410 U
	Mecoprop (MCPP)[6]	µg/L	NE	16.0	0.28 U	380 U	380 U	390 U	0.28 U	380 U	380 U	380 U	0.27 U	380 U	380 U	390 U	410 U
	Silvex (Fenoprop or 2,4,5-TP)	µg/L	NE	128	0.28 U	0.95 U	0.95 U	0.97 U	0.28 U	0.95 U	0.96 U	0.95 U	0.27 U	0.96 U	0.96 U	0.97 U	1.0 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A-082316 8/23/2016	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17
Organo-chlorine Pesticides[3]	4,4'-DDD	µg/L	NE	0.365	0.030 U	--	0.030 U	0.028 U	0.029 U	--	0.030 U	0.030 U	0.029 U	0.030 U	0.029 U	0.029 U	--
	4,4'-DDE	µg/L	NE	0.257	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	4,4'-DDT	µg/L	NL	0.257	0.030 U	--	0.030 U	0.028 U	0.029 U	--	0.030 U	0.030 U	0.029 U	0.030 U	0.029 U	0.029 U	--
	Aldrin[6]	µg/L	NE	0.00257	0.030 U	--	0.030 U	0.028 U	0.029 U	--	0.030 U	0.030 U	0.029 U	0.030 U	0.029 U	0.029 U	--
	Alpha-BHC[6]	µg/L	NE	0.0139	0.030 U	--	0.030 U	0.028 U	0.029 U	--	0.030 U	0.030 U	0.029 U	0.030 U	0.029 U	0.029 U	--
	alpha-Chlordane (cis)	µg/L	NE	NE	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Beta-BHC[6]	µg/L	NE	0.0486	0.050 U	--	0.050 U	0.047 U	0.049 U	--	0.050 U	0.050 U	0.048 U	0.050 U	0.048 U	0.049 U	--
	Delta-BHC	µg/L	NE	NE	0.050 U	--	0.050 U	0.047 U	0.049 U	--	0.050 U	0.050 U	0.048 U	0.050 U	0.048 U	0.049 U	--
	Dieldrin[6]	µg/L	NE	0.00547	0.030 U	--	0.030 U	0.028 U	0.029 U	--	0.030 U	0.030 U	0.029 U	0.030 U	0.029 U	0.029 U	--
	Endosulfan I	µg/L	NE	NE	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Endosulfan II	µg/L	NE	NE	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Endosulfan Sulfate	µg/L	NE	NE	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Endrin	µg/L	NE	4.80	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Endrin Aldehyde	µg/L	NE	NE	0.20 U	--	0.20 U	0.19 U	0.19 U	--	0.20 U	0.20 U	0.19 U	0.20 U	0.19 U	0.19 U	--
	Endrin Ketone	µg/L	NE	NE	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	gamma-Chlordane	µg/L	NE	NE	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Heptachlor[6]	µg/L	NE	0.0194	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Heptachlor Epoxide[6]	µg/L	NE	0.00481	0.020 U	--	0.020 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.020 U	0.019 U	0.019 U	--
	Lindane (Gamma-BHC)	µg/L	0.2	NL	0.030 U	--	0.030 U	0.028 U	0.029 U	--	0.030 U	0.030 U	0.029 U	0.030 U	0.029 U	0.029 U	--
	Methoxychlor	µg/L	NE	80.0	0.099 U	--	0.10 U	0.094 U	0.097 U	--	0.10 U	0.10 U	0.095 U	0.10 U	0.096 U	0.097 U	--
	Toxaphene[6]	µg/L	NE	0.0795	0.99 U	--	1.0 U	0.94 U	0.97 U	--	1.0 U	1.0 U	0.95 U	1.0 U	0.96 U	0.97 U	--
Organo-phosphorus Pesticides[4]	Atrazine[6]	µg/L	NE	0.380	9.7 U	--	9.5 U	9.6 UJ	9.7 U	--	9.6 U	9.7 UJ	9.9 U	9.6 U	9.6 U	12 U	--
	Azinphos-methyl	µg/L	NE	NE	2.4 U	--	2.4 U	2.4 UJ	2.4 U	--	2.4 U	2.4 UJ	2.5 U	2.4 U	2.4 U	3.0 U	--
	Bolstar (Sulprofos)	µg/L	NE	NE	0.97 U	--	0.95 U	0.96 UJ	0.97 U	--	0.96 U	0.97 UJ	0.99 U	0.96 U	0.96 U	1.2 U	--
	Chlorpyrifos	µg/L	NE	16.0	1.5 U	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 UJ	1.5 U	1.4 U	1.4 U	1.8 U	--
	Coumaphos	µg/L	NE	NE	0.97 U	--	0.95 U	0.96 UJ	0.97 U	--	0.96 U	0.97 UJ	0.99 U	0.96 U	0.96 U	1.2 U	--
	Demeton[6]	µg/L	NE	0.640	2.9 U	--	2.9 U	2.9 UJ	2.9 U	--	2.9 U	2.9 UJ	3.0 U	2.9 U	2.9 U	3.6 U	--
	Diazinon	µg/L	NE	11.2	0.49 U	--	0.48 U	0.48 UJ	0.49 U	--	0.48 U	0.48 UJ	0.50 U	0.48 U	0.48 U	0.59 U	--
	Dichlorvos (DDVP)[6]	µg/L	NE	0.151	0.49 U	--	0.48 U	0.48 UJ	0.49 U	--	0.48 U	0.48 UJ	0.50 U	0.48 U	0.48 U	0.59 U	--
	Dimethoate	µg/L	NE	3.20	1.5 U	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 UJ	1.5 U	1.4 U	1.4 U	1.8 U	--
	Disulfoton (Di-Syston)[6]	µg/L	NE	0.640	0.97 U	--	0.95 U	0.96 UJ	0.97 U	--	0.96 U	0.97 UJ	0.99 U	0.96 U	0.96 U	1.2 U	--
	EPN[6]	µg/L	NE	0.160	1.2 U	--	1.1 U	1.2 UJ	1.2 U	--	1.1 U	1.2 UJ	1.2 U	1.1 U	1.2 U	1.4 U	--
	Ethoprop	µg/L	NE	NE	1.5 U	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 UJ	1.5 U	1.4 U	1.4 U	1.8 U	--
	Famphur	µg/L	NE	NE	0.97 U	--	0.95 U	0.96 UJ	0.97 U	--	0.96 U	0.97 UJ	0.99 U	0.96 U	0.96 U	1.2 U	--
	Fensulfothion	µg/L	NE	NE	2.4 U	--	2.4 U	2.4 UJ	2.4 U	--	2.4 U	2.4 UJ	2.5 U	2.4 U	2.4 U	3.0 U	--
	Fenthion	µg/L	NE	NE	2.4 U	--	2.4 U	2.4 UJ	2.4 U	--	2.4 U	2.4 UJ	2.5 U	2.4 U	2.4 U	3.0 U	--
	Malathion	µg/L	NE	320	1.9 U	--	1.9 U	1.9 UJ	1.9 U	--	1.9 U	1.9 UJ	2.0 U	1.9 U	1.9 U	2.4 U	--
	Merphos[6]	µg/L	NE	0.480	4.9 U	--	4.8 U	4.8 UJ	4.9 U	--	4.8 U	4.8 UJ	5.0 U	4.8 U	4.8 U	5.9 U	--
	Methyl Parathion[6]	µg/L	NE	4.00	3.9 U	--	3.8 U	3.9 UJ	3.9 U	--	3.8 U	3.9 UJ	4.0 U	3.8 U	3.8 U	4.8 U	--
	Mevinphos	µg/L	NE	NE	6.0 U	--	5.9 U	6.0 UJ	6.0 U	--	5.9 U	6.0 UJ	6.2 U	5.9 U	5.9 U	7.4 U	--
	Parathion (ethyl)	µg/L	NE	96.0	0.97 U	--	0.95 U	0.96 UJ	0.97 U	--	0.96 U	0.97 UJ	0.99 U	0.96 U	0.96 U	1.2 U	--

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A-120717 12/07/17	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14-120717 12/07/17	MW-15 MW-15-082316 8/23/2016	MW-15 MW-15:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15A MW-15A-082316 8/23/2016	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:121117 12/11/17
Organo-phosphorus Pesticides[4] (continued)	Phorate	µg/L	NE	3.20	1.2 U	--	1.1 U	1.2 UJ	1.2 U	--	1.1 U	1.2 UJ	1.2 U	1.1 U	1.2 U	1.4 U	--
	Propazine	µg/L	NE	320	9.7 U	--	9.5 U	9.6 UJ	9.7 U	--	9.6 U	9.7 UJ	9.9 U	9.6 U	9.6 U	12 U	--
	Ronnel	µg/L	NE	800	9.7 U	--	9.5 U	9.6 UJ	9.7 U	--	9.6 U	9.7 UJ	9.9 U	9.6 U	9.6 U	12 U	--
	Simazine[6]	µg/L	NE	0.729	9.7 U	--	9.5 U	9.6 UJ	9.7 U	--	9.6 U	9.7 UJ	9.9 U	9.6 U	9.6 U	12 U	--
	Sulfotepp	µg/L	NE	8.00	1.5 U	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 UJ	1.5 U	1.4 U	1.4 U	1.8 U	--
	Thionazin	µg/L	NE	NE	0.97 U	--	0.95 U	0.96 UJ	0.97 U	--	0.96 U	0.97 UJ	0.99 U	0.96 U	0.96 U	1.2 U	--
	Tokuthion (Prothiofos)	µg/L	NE	NE	1.6 U	--	1.5 U	1.5 UJ	1.6 U	--	1.5 U	1.5 UJ	1.6 U	1.5 U	1.5 U	1.9 U	--
	Trichloronate	µg/L	NE	NE	1.5 U	--	1.4 U	1.4 UJ	1.5 U	--	1.4 U	1.5 UJ	1.5 U	1.4 U	1.4 U	1.8 U	--
Chlorinated Herbicides[5]	2,4,5-T	µg/L	NE	160	0.97 U	0.27 U	0.95 U	0.97 U	0.95 U	0.28 U	1.1 U	0.96 U	1.0 U	0.97 U	0.96 U	1.1 U	0.27 U
	2,4-D	µg/L	NE	160	3.9 U	0.27 U	3.8 U	3.9 U	3.8 U	0.28 U	4.2 U	3.8 U	4.1 U	3.9 U	3.8 U	4.4 U	0.27 U
	2,4-DB	µg/L	NE	128	3.9 U	0.27 U	3.8 U	3.9 U	3.8 U	0.28 U	4.2 U	3.8 U	4.1 U	3.9 U	3.8 U	4.4 U	0.27 U
	Dalapon (DPA)	µg/L	NE	240	1.9 U	0.43 U	1.9 U	1.9 U	1.9 U	0.44 U	2.1 U	1.9 U	2.0 U	1.9 U	1.9 U	2.2 U	0.44 U
	Dicamba	µg/L	NE	480	1.9 U	0.27 U	1.9 U	1.9 U	1.9 U	0.28 U	2.1 U	1.9 U	2.0 U	1.9 U	1.9 U	2.2 U	0.27 U
	Dichlorprop	µg/L	NE	NE	3.9 U	0.27 U	3.8 U	3.9 U	3.8 U	0.28 U	4.2 U	3.8 U	4.1 U	3.9 U	3.8 U	4.4 U	0.27 U
	MCPA[6]	µg/L	NE	8.00	**19 J**	0.27 U	380 U	390 U	380 U	0.28 U	420 U	380 U	410 U	390 U	380 U	**54 J**	0.27 U
	Mecoprop (MCPP)[6]	µg/L	NE	16.0	390 U	0.27 U	380 U	390 U	**36 J**	0.28 U	420 U	380 U	410 U	390 U	380 U	440 U	0.27 U
	Silvex (Fenoprop or 2,4,5-	µg/L	NE	128	0.97 U	0.27 U	0.95 U	0.97 U	0.95 U	0.28 U	1.1 U	0.96 U	1.0 U	0.97 U	0.96 U	1.1 U	0.27 U

Analyte Group	Analyte	Units	MTCA Method A CUL[2]	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	MW-16 MW-16:082916 8/29/2016	MW-16 MW-16:113016 11/30/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16-120717 12/07/17	MW-16A MW-16A-082216 8/22/2016	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A120617 12/06/17
Organo-chlorine Pesticides[3]	4,4'-DDD	µg/L	NE	0.365	0.033 U	0.028 U	0.030 U	--	0.029 U	0.029 U	0.029 U	--
	4,4'-DDE	µg/L	NE	0.257	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	4,4'-DDT	µg/L	NL	0.257	0.033 U	0.028 U	0.030 U	--	0.029 U	0.029 U	0.029 U	--
	Aldrin[6]	µg/L	NE	0.00257	0.033 U	0.028 U	0.030 U	--	0.029 U	0.029 U	0.029 U	--
	Alpha-BHC[6]	µg/L	NE	0.0139	0.033 U	0.028 U	0.030 U	--	0.029 U	0.029 U	0.029 U	--
	alpha-Chlordane (cis)	µg/L	NE	NE	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Beta-BHC[6]	µg/L	NE	0.0486	0.055 U	0.047 U	0.049 U	--	0.048 U	0.048 U	0.049 U	--
	Delta-BHC	µg/L	NE	NE	0.055 U	0.047 U	0.049 U	--	0.048 U	0.048 U	0.049 U	--
	Dieldrin[6]	µg/L	NE	0.00547	0.033 U	0.028 U	0.030 U	--	0.029 U	0.029 U	0.029 U	--
	Endosulfan I	µg/L	NE	NE	**0.0098 J**	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Endosulfan II	µg/L	NE	NE	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Endosulfan Sulfate	µg/L	NE	NE	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Endrin	µg/L	NE	4.80	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Endrin Aldehyde	µg/L	NE	NE	0.22 U	0.19 U	0.20 U	--	0.19 U	0.19 U	0.20 U	--
	Endrin Ketone	µg/L	NE	NE	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	gamma-Chlordane	µg/L	NE	NE	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Heptachlor[6]	µg/L	NE	0.0194	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Heptachlor Epoxide[6]	µg/L	NE	0.00481	0.022 U	0.019 U	0.020 U	--	0.019 U	0.019 U	0.020 U	--
	Lindane (Gamma-BHC)	µg/L	0.2	NL	0.033 U	0.028 U	0.030 U	--	0.029 U	0.029 U	0.029 U	--
	Methoxychlor	µg/L	NE	80.0	0.11 U	0.094 U	0.099 U	--	0.096 U	0.096 U	0.098 U	--
	Toxaphene[6]	µg/L	NE	0.0795	1.1 U	0.94 U	0.99 U	--	0.96 U	0.96 U	0.98 U	--
Organo-phosphorus Pesticides[4]	Atrazine[6]	µg/L	NE	0.380	9.7 U	9.7 UJ	9.9 U	--	10 U	9.6 UJ	9.5 U	--
	Azinphos-methyl	µg/L	NE	NE	2.4 U	2.4 UJ	2.5 U	--	2.5 U	2.4 UJ	2.4 U	--
	Bolstar (Sulprofos)	µg/L	NE	NE	0.97 U	0.97 UJ	0.99 U	--	1.0 U	0.96 UJ	0.95 U	--
	Chlorpyrifos	µg/L	NE	16.0	1.5 U	1.5 UJ	1.5 U	--	1.5 U	1.4 UJ	1.4 U	--
	Coumaphos	µg/L	NE	NE	0.97 U	0.97 UJ	0.99 U	--	1.0 U	0.96 UJ	0.95 U	--
	Demeton[6]	µg/L	NE	0.640	2.9 U	2.9 UJ	3.0 U	--	3.1 U	2.9 UJ	2.8 U	--
	Diazinon	µg/L	NE	11.2	0.49 U	0.48 UJ	0.49 U	--	0.51 U	0.48 UJ	0.47 U	--
	Dichlorvos (DDVP)[6]	µg/L	NE	0.151	0.49 U	0.48 UJ	0.49 U	--	0.51 U	0.48 UJ	0.47 U	--
	Dimethoate	µg/L	NE	3.20	1.5 U	1.5 UJ	1.5 U	--	1.5 U	1.4 UJ	1.4 U	--
	Disulfoton (Di-Syston)[6]	µg/L	NE	0.640	0.97 U	0.97 UJ	0.99 U	--	1.0 U	0.96 UJ	0.95 U	--
	EPN[6]	µg/L	NE	0.160	1.2 U	1.2 UJ	1.2 U	--	1.2 U	1.2 UJ	1.1 U	--
	Ethoprop	µg/L	NE	NE	1.5 U	1.5 UJ	1.5 U	--	1.5 U	1.4 UJ	1.4 U	--
	Famphur	µg/L	NE	NE	0.97 U	0.97 UJ	0.99 U	--	1.0 U	0.96 UJ	0.95 U	--
	Fensulfothion	µg/L	NE	NE	2.4 U	2.4 UJ	2.5 U	--	2.5 U	2.4 UJ	2.4 U	--
	Fenthion	µg/L	NE	NE	2.4 U	2.4 UJ	2.5 U	--	2.5 U	2.4 UJ	2.4 U	--
	Malathion	µg/L	NE	320	1.9 U	1.9 UJ	2.0 U	--	2.0 U	1.9 UJ	1.9 U	--
	Merphos[6]	µg/L	NE	0.480	4.9 U	4.8 UJ	4.9 U	--	5.1 U	4.8 UJ	4.7 U	--
	Methyl Parathion[6]	µg/L	NE	4.00	3.9 U	3.9 UJ	4.0 U	--	4.1 U	3.8 UJ	3.8 U	--
	Mevinphos	µg/L	NE	NE	6.0 U	6.0 UJ	6.1 U	--	6.3 U	6.0 UJ	5.9 U	--
	Parathion (ethyl)	µg/L	NE	96.0	0.97 U	0.97 UJ	0.99 U	--	1.0 U	0.96 UJ	0.95 U	--

Analyte Group	Analyte	Units	Sample Location	MW-16	MW-16	MW-16	MW-16	MW-16A	MW-16A	MW-16A	MW-16A
			Sample Name	MW-16:082916	MW-16:113016	MW-16:022117	MW-16-120717	MW-16A-082216	MW-16A:113016	MW-16A:022017	MW-16A120617
			Sample Date	8/29/2016	11/30/2016	2/21/2017	12/07/17	8/22/2016	11/30/2016	2/20/2017	12/06/17
			MTCA Method A CUL[2]								
			MTCA Method B CUL[2]								
Organo-phosphorus Pesticides[4] (continued)	Phorate	µg/L	NE	3.20	1.2 U	1.2 UJ	1.2 U	--	1.2 U	1.2 UJ	1.1 U	--
	Propazine	µg/L	NE	320	9.7 U	9.7 UJ	9.9 U	--	10 U	9.6 UJ	9.5 U	--
	Ronnel	µg/L	NE	800	9.7 U	9.7 UJ	9.9 U	--	10 U	9.6 UJ	9.5 U	--
	Simazine[6]	µg/L	NE	0.729	9.7 U	9.7 UJ	9.9 U	--	10 U	9.6 UJ	9.5 U	--
	Sulfotepp	µg/L	NE	8.00	1.5 U	1.5 UJ	1.5 U	--	1.5 U	1.4 UJ	1.4 U	--
	Thionazin	µg/L	NE	NE	0.97 U	0.97 UJ	0.99 U	--	1.0 U	0.96 UJ	0.95 U	--
	Tokuthion (Prothiofos)	µg/L	NE	NE	1.6 U	1.5 UJ	1.6 U	--	1.6 U	1.5 UJ	1.5 U	--
	Trichloronate	µg/L	NE	NE	1.5 U	1.5 UJ	1.5 U	--	1.5 U	1.4 UJ	1.4 U	--
Chlorinated Herbicides[5]	2,4,5-T	µg/L	NE	160	0.95 U	0.96 U	0.99 U	0.27 U	0.95 U	0.95 U	0.97 U	0.27 U
	2,4-D	µg/L	NE	160	3.8 U	3.8 U	4.0 U	0.27 U	3.8 U	3.8 U	3.9 U	0.27 U
	2,4-DB	µg/L	NE	128	3.8 U	3.8 U	4.0 U	0.27 U	3.8 U	3.8 U	3.9 U	0.27 U
	Dalapon (DPA)	µg/L	NE	240	1.9 U	1.9 U	2.0 U	0.44 U	1.9 U	1.9 U	1.9 U	0.43 U
	Dicamba	µg/L	NE	480	1.9 U	1.9 U	2.0 U	0.27 U	1.9 U	1.9 U	1.9 U	0.27 U
	Dichlorprop	µg/L	NE	NE	3.8 U	3.8 U	4.0 U	0.27 U	3.8 U	3.8 U	3.9 U	0.27 U
	MCPA[6]	µg/L	NE	8.00	380 U	380 U	400 U	0.27 U	380 U	380 U	390 U	0.27 U
	Mecoprop (MCPP)[6]	µg/L	NE	16.0	380 U	380 U	**39 J**	0.27 U	380 U	380 U	**32 J**	0.27 U
	Silvex (Fenoprop or 2,4,5-T	µg/L	NE	128	0.95 U	0.96 U	0.99 U	0.27 U	0.95 U	0.95 U	0.97 U	0.27 U

Table 10

Groundwater Analytical Results - Dioxins/Furans[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date PQL[2]	MW-1A MW-1A-082516 8/25/2016	MW-2A MW-2A:022117 2/21/2017	MW-2A MW-2A:120116 12/1/2016	MW-2A MW-2A-082216 8/22/2016	MW-3 MW-3:022117 2/21/2017	MW-3 MW-3:082316 8/23/2016	MW-3 MW-3:120116 12/1/2016	MW-4A MW-4A:022117 2/21/2017	MW-4A MW-4A:112816 11/28/2016	MW-4A MW-4A-082216 8/22/2016	MW-5 MW-5:022217 2/22/2017
Dioxins/ Furans[3,4]	1,2,3,4,6,7,8-HpCDD	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	**0.61 J**	**0.74 J**
	1,2,3,4,6,7,8-HpCDF	pg/L	50	59 U	49 U	47 U	47 U	**0.56 J**	47 U	**1.2 J**	**0.34 J**	48 U	**0.46 J**	**0.54 J**
	1,2,3,4,7,8,9-HpCDF	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	49 U	49 U
	1,2,3,4,7,8-HxCDD	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	49 U	49 U
	1,2,3,4,7,8-HxCDF	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	**0.28 J**	48 U	49 U	49 U
	1,2,3,6,7,8-HxCDD	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	**0.22 J**	49 U
	1,2,3,6,7,8-HxCDF	pg/L	50	59 U	**0.15 J**	47 U	47 U	49 U	47 U	**0.45 J**	**0.21 J**	48 U	**0.40 J**	49 U
	1,2,3,7,8,9-HxCDD	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	49 U	49 U
	1,2,3,7,8,9-HxCDF	pg/L	50	59 U	**0.15 J**	**0.30 J**	47 U	49 U	47 U	48 U	**0.25 J**	48 U	49 U	**0.20 J**
	1,2,3,7,8-PeCDD	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	49 U	49 U
	1,2,3,7,8-PeCDF	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	49 U	49 U
	2,3,4,6,7,8-HxCDF	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	**0.22 J**	48 U	**0.33 J**	**0.39 J**
	2,3,4,7,8-PeCDF	pg/L	50	59 U	49 U	47 U	47 U	49 U	47 U	48 U	49 U	48 U	49 U	49 U
	2,3,7,8-TCDD	pg/L	10	12 U	9.8 U	9.5 U	9.5 U	9.8 U	9.5 U	9.6 U	9.8 U	9.5 U	9.9 U	9.7 U
	2,3,7,8-TCDF	pg/L	10	12 U	9.8 U	9.5 U	9.5 U	9.8 U	9.5 U	9.6 U	9.8 U	9.5 U	9.9 U	9.7 U
	OCDD	pg/L	100	120 U	**1.5 J**	**3.3 J**	95 U	**4.9 J**	95 U	**2.8 J**	**1.7 J**	95 U	99 U	**3.0 J**
	OCDF	pg/L	100	**1.4 J**	98 U	95 U	95 U	98 U	95 U	96 U	98 U	95 U	99 U	**1.1 J**
	Total Dioxin/Furan TEQ[5] (ND=0.5DL) - Human/Mammal	pg/L	114	**67**	**51**	**51**	54 U	**56**	54 U	**52**	**46**	55 U	**48**	**50**

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date PQL[2]	MW-5 MW-5-082316 8/23/2016	MW-5A MW-5A:022217 2/22/2017	MW-5A MW-5A:120116 12/1/2016	MW-5A MW-5A-082316 8/23/2016	MW-7B DUP-082516 8/25/2016	MW-7B MW-7B:022217 2/22/2017	MW-7B MW-7B:120116 12/1/2016	MW-7B MW-7B-082516 8/25/2016	MW-7D MW-7D:022217 2/22/2017	MW-7D MW-7D:082416 8/24/2016	MW-7D MW-7D:120116 12/1/2016
Dioxins/ Furans[3,4]	1,2,3,4,6,7,8-HpCDD	pg/L	50	**0.50 J**	**0.48 J**	50 U	47 U	48 U	**1.9 J**	48 U	48 U	50 U	48 U	50 U
	1,2,3,4,6,7,8-HpCDF	pg/L	50	53 U	**0.64 J**	**0.89 J**	47 U	48 U	**1.8 J**	**0.73 J**	48 U	**0.89 J**	48 U	**0.70 J**
	1,2,3,4,7,8,9-HpCDF	pg/L	50	53 U	**0.24 J**	**0.35 J**	47 U	48 U	**0.52 J**	48 U	48 U	50 U	48 U	50 U
	1,2,3,4,7,8-HxCDD	pg/L	50	53 U	49 U	50 U	47 U	48 U	48 U	48 U	48 U	50 U	48 U	50 U
	1,2,3,4,7,8-HxCDF	pg/L	50	53 U	49 U	50 U	47 U	48 U	**0.74 J**	48 U	48 U	50 U	48 U	50 U
	1,2,3,6,7,8-HxCDD	pg/L	50	53 U	49 U	50 U	47 U	48 U	48 U	**0.47 J**	48 U	50 U	48 U	50 U
	1,2,3,6,7,8-HxCDF	pg/L	50	53 U	49 U	50 U	47 U	48 U	**0.4 J**	**0.40 J**	48 U	50 U	48 U	50 U
	1,2,3,7,8,9-HxCDD	pg/L	50	53 U	49 U	50 U	47 U	48 U	48 U	**0.49 J**	48 U	50 U	48 U	50 U
	1,2,3,7,8,9-HxCDF	pg/L	50	53 U	**0.29 J**	50 U	47 U	48 U	48 U	**0.69 J**	48 U	**0.27 J**	48 U	50 U
	1,2,3,7,8-PeCDD	pg/L	50	53 U	**0.27 J**	50 U	47 U	48 U	48 U	48 U	48 U	50 U	48 U	50 U
	1,2,3,7,8-PeCDF	pg/L	50	53 U	**0.18 J**	50 U	47 U	48 U	**0.22 J**	48 U	48 U	50 U	48 U	50 U
	2,3,4,6,7,8-HxCDF	pg/L	50	53 U	**0.19 J**	**0.24 J**	47 U	48 U	**0.59 J**	48 U	48 U	50 U	48 U	50 U
	2,3,4,7,8-PeCDF	pg/L	50	53 U	**0.27 J**	50 U	47 U	48 U	**0.39 J**	48 U	48 U	50 U	48 U	50 U
	2,3,7,8-TCDD	pg/L	10	11 U	9.7 U	9.9 U	9.5 U	9.6 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	10 U
	2,3,7,8-TCDF	pg/L	10	11 U	9.7 U	9.9 U	9.5 U	9.6 U	**0.58 J**	9.6 U	9.6 U	10 U	9.6 U	**0.44 J**
	OCDD	pg/L	100	110 U	**4.4 J**	**3.0 J**	95 U	96 U	**7.2 J**	96 U	96 U	**6.6 J**	96 U	100 U
	OCDF	pg/L	100	110 U	**2.4 J**	99 U	95 U	96 U	**3.4 J**	**1.7 J**	96 U	100 U	**0.83 J**	**1.2 J**
	Total Dioxin/Furan TEQ[5] (ND=0.5DL) - Human/Mammal	pg/L	114	**60**	**18**	**54**	54 U	55 U	**39**	**45**	55 U	**54**	**55**	**56**

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date PQL[2]	MW-8A MW-8A:022017 2/20/2017	MW-8A MW-8A:112816 11/28/2016	MW-8A MW-8A-082116 8/21/2016	MW-8B MW-8B:022017 2/20/2017	MW-8B MW-8B:112816 11/28/2016	MW-8B MW-8B-082116 8/21/2016	MW-9A MW-9A:022217 2/22/2017	MW-9A MW-9A:113016 11/30/2016	MW-9A MW-9A-082116 8/21/2016	MW-11A MW-11A:022117 2/21/2017	MW-11A MW-11A:082416 8/24/2016
Dioxins/ Furans[3,4]	1,2,3,4,6,7,8-HpCDD	pg/L	50	50 U	48 U	**2.7 J**	49 U	48 U	**1.1 J**	49 U	48 U	**1.0 J**	48 U	53 U
	1,2,3,4,6,7,8-HpCDF	pg/L	50	50 U	**35 J**	47 U	49 U	48 U	47 U	**0.31 J**	**1.2 J**	48 U	48 U	53 U
	1,2,3,4,7,8,9-HpCDF	pg/L	50	**3.2 J**	48 U	47 U	49 U	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,4,7,8-HxCDD	pg/L	50	**2.8 J**	**0.80 J**	**1.6 J**	49 U	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,4,7,8-HxCDF	pg/L	50	**3.2 J**	**6.7 J**	**1.2 J**	**1.5 J**	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,6,7,8-HxCDD	pg/L	50	**3.0 J**	**1.4 J**	**1.8 J**	49 U	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,6,7,8-HxCDF	pg/L	50	**3.2 J**	**3.4 J**	47 U	**1.3 J**	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,7,8,9-HxCDD	pg/L	50	**2.5 J**	**1.4 J**	**2.1 J**	**1.9 J**	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,7,8,9-HxCDF	pg/L	50	**3.3 J**	**0.61 J**	**1.1 J**	**1.9 J**	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,7,8-PeCDD	pg/L	50	50 U	48 U	**1.2 J**	49 U	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	1,2,3,7,8-PeCDF	pg/L	50	**2.6 J**	**0.88 J**	47 U	**1.6 J**	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	2,3,4,6,7,8-HxCDF	pg/L	50	50 U	**3.8 J**	**2.0 J**	49 U	48 U	**0.63 J**	49 U	48 U	48 U	48 U	53 U
	2,3,4,7,8-PeCDF	pg/L	50	**2.5 J**	**1.3 J**	**0.78 J**	**0.98 J**	48 U	47 U	49 U	48 U	48 U	48 U	53 U
	2,3,7,8-TCDD	pg/L	10	**1.1 J**	9.5 U	9.5 U	**0.81 J**	9.5 U	9.5 U	9.7 U	9.6 U	9.5 U	9.6 U	11 U
	2,3,7,8-TCDF	pg/L	10	**1.1 J**	9.5 U	9.5 U	**0.45 J**	9.5 U	9.5 U	9.7 U	**0.41 J**	9.5 U	9.6 U	11 U
	OCDD	pg/L	100	100 U	95 U	**3.7 J**	98 U	95 U	**2.4 J**	**1.1 J**	96 U	**2.7 J**	**1.6 J**	110 U
	OCDF	pg/L	100	**10 J**	110 U	**4.7 J**	**5.2 J**	95 U	**1.1 J**	**0.38 J**	**2.2 J**	95 U	96 U	110 U
	Total Dioxin/Furan TEQ[5] (ND=0.5DL) - Human/Mammal	pg/L	114	**32**	**32**	**11**	**34**	55 U	**51**	**56**	**54**	**54**	**55**	61 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date PQL[2]	MW-11A MW-11A:112816 11/28/2016	MW-12A DUP:022217 2/22/2017	MW-12A MW-12A:022217 2/22/2017	MW-12A MW-12A:113016 11/30/2016	MW-12A MW-12A-082516 8/25/2016	MW-12A MW-DUP:113016 11/30/2016	MW-14 MW-14:022117 2/21/2017	MW-14 MW-14:082416 8/24/2016	MW-14 MW-14:113016 11/30/2016	MW-15 MW-15:022217 2/22/2017	MW-15 MW-15:113016 11/30/2016
Dioxins/ Furans[3,4]	1,2,3,4,6,7,8-HpCDD	pg/L	50	49 U	**2.0 J**	**0.87 J**	51 U	48 U	**4.9 J**	49 U	47 U	**17 J**	**2.2 J**	**0.70 J**
	1,2,3,4,6,7,8-HpCDF	pg/L	50	49 U	**1.6 J**	**0.31 J**	**1.8 J**	48 U	**5.8 J**	**0.28 J**	47 U	**24 J**	**1.8 J**	0.48 U
	1,2,3,4,7,8,9-HpCDF	pg/L	50	49 U	**0.32 J**	48 U	51 U	48 U	53 U	49 U	47 U	**4.8 J**	48 U	**0.38 J**
	1,2,3,4,7,8-HxCDD	pg/L	50	49 U	49 U	48 U	51 U	48 U	53 U	49 U	47 U	50 U	48 U	48 U
	1,2,3,4,7,8-HxCDF	pg/L	50	49 U	49 U	48 U	51 U	48 U	**1.5 J**	49 U	47 U	**5.4 J**	**0.36 J**	48 U
	1,2,3,6,7,8-HxCDD	pg/L	50	49 U	49 U	48 U	51 U	48 U	53 U	49 U	47 U	**1.3 J**	48 U	48 U
	1,2,3,6,7,8-HxCDF	pg/L	50	49 U	49 U	48 U	51 U	48 U	**0.84 J**	49 U	47 U	**1.8 J**	**0.17 J**	48 U
	1,2,3,7,8,9-HxCDD	pg/L	50	49 U	49 U	48 U	51 U	48 U	53 U	49 U	47 U	**1.5 J**	48 U	48 U
	1,2,3,7,8,9-HxCDF	pg/L	50	49 U	49 U	48 U	51 U	48 U	53 U	**0.31 J**	47 U	50 U	**0.34 J**	48 U
	1,2,3,7,8-PeCDD	pg/L	50	49 U	49 U	48 U	51 U	48 U	53 U	49 U	47 U	50 U	48 U	48 U
	1,2,3,7,8-PeCDF	pg/L	50	49 U	49 U	48 U	51 U	48 U	**0.51 J**	49 U	47 U	**0.85 J**	48 U	48 U
	2,3,4,6,7,8-HxCDF	pg/L	50	49 U	**0.31 J**	48 U	51 U	48 U	53 U	49 U	47 U	50 U	48 U	48 U
	2,3,4,7,8-PeCDF	pg/L	50	49 U	49 U	48 U	51 U	48 U	**0.72 J**	49 U	47 U	**1.8 J**	48 U	48 U
	2,3,7,8-TCDD	pg/L	10	9.8 U	9.7 U	9.7 U	10 U	9.5 U	11 U	9.7 U	9.5 U	10 U	9.6 U	9.6 U
	2,3,7,8-TCDF	pg/L	10	9.8 U	**0.36 J**	9.7 U	**0.37 J**	9.5 U	**1.1 J**	9.7 U	9.5 U	**2.1 J**	9.6 U	9.6 U
	OCDD	pg/L	100	98 U	**7.9 J**	**7.9 J**	100 U	95 U	**18 J**	**1.6 J**	95 U	100 U	**17 J**	**2.6 J**
	OCDF	pg/L	100	98 U	**2.8 J**	**0.71 J**	**4.5 J**	95 U	110 U	97 U	95 U	**68 J**	**8.0 J**	96 U
	Total Dioxin/Furan TEQ[5] (ND=0.5DL) - Human/Mammal	pg/L	114	56 U	**52**	**54**	**57**	55 U	**46**	**53**	54 U	**40**	**47**	**54**

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date PQL[2]	MW-15 MW-15-082316 8/23/2016	MW-15A MW-15A:022217 2/22/2017	MW-15A MW-15A:120116 12/1/2016	MW-15A MW-15A-082316 8/23/2016	MW-16 MW-16:022117 2/21/2017	MW-16 MW-16:082916 8/29/2016	MW-16 MW-16:113016 11/30/2016	MW-16A MW-16A:022017 2/20/2017	MW-16A MW-16A:113016 11/30/2016	MW-16A MW-16A-082216 8/22/2016
Dioxins/ Furans[3,4]	1,2,3,4,6,7,8-HpCDD	pg/L	50	54 U	**1.2 J**	48 U	48 U	50 U	47 U	47 U	49 U	48 U	47 U
	1,2,3,4,6,7,8-HpCDF	pg/L	50	54 U	**0.75 J**	48 U	48 U	**1.7 J**	47 U	**1.1 J**	49 U	**0.66 J**	**0.30 J**
	1,2,3,4,7,8,9-HpCDF	pg/L	50	54 U	56 U	48 U	48 U	**0.76 J**	47 U	47 U	**0.86 J**	48 U	47 U
	1,2,3,4,7,8-HxCDD	pg/L	50	54 U	56 U	48 U	48 U	**0.77 J**	47 U	47 U	**0.86 J**	48 U	47 U
	1,2,3,4,7,8-HxCDF	pg/L	50	54 U	56 U	48 U	48 U	**1.0 J**	47 U	47 U	**0.86 J**	48 U	47 U
	1,2,3,6,7,8-HxCDD	pg/L	50	54 U	56 U	48 U	48 U	**0.74 J**	47 U	47 U	49 U	48 U	47 U
	1,2,3,6,7,8-HxCDF	pg/L	50	54 U	56 U	48 U	48 U	**0.67 J**	47 U	47 U	**1.1 J**	48 U	47 U
	1,2,3,7,8,9-HxCDD	pg/L	50	54 U	56 U	48 U	48 U	**0.75 J**	47 U	47 U	**0.83 J**	48 U	47 U
	1,2,3,7,8,9-HxCDF	pg/L	50	54 U	56 U	48 U	48 U	**0.89 J**	47 U	47 U	**1.0 J**	48 U	47 U
	1,2,3,7,8-PeCDD	pg/L	50	54 U	56 U	48 U	48 U	50 U	47 U	47 U	49 U	48 U	47 U
	1,2,3,7,8-PeCDF	pg/L	50	54 U	56 U	48 U	48 U	**0.62 J**	47 U	47 U	49 U	48 U	47 U
	2,3,4,6,7,8-HxCDF	pg/L	50	54 U	56 U	48 U	48 U	**0.92 J**	47 U	47 U	49 U	48 U	47 U
	2,3,4,7,8-PeCDF	pg/L	50	54 U	56 U	48 U	48 U	**0.55 J**	47 U	47 U	**1.1 J**	48 U	47 U
	2,3,7,8-TCDD	pg/L	10	11 U	11 U	9.5 U	9.6 U	10 U	9.5 U	9.5 U	**0.80 J**	9.5 U	9.5 U
	2,3,7,8-TCDF	pg/L	10	11 U	**0.81 J**	9.5 U	9.6 U	**0.50 J**	9.5 U	**0.41 J**	9.7 U	**0.26 J**	9.5 U
	OCDD	pg/L	100	110 U	**3.6 J**	95 U	96 U	**2.5 J**	95 U	95 U	97 U	95 U	95 U
	OCDF	pg/L	100	110 U	**1.6 J**	**1.1 J**	96 U	100 U	95 U	**2.2 J**	**3.5 J**	**1.6 J**	95 U
	Total Dioxin/Furan TEQ[5] (ND=0.5DL) - Human/Mammal	pg/L	114	62 U	**63**	**55**	55 U	**31**	54 U	**53**	**33**	**54**	**53**

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Practical Quantitation Limit (PQL) provided by TestAmerica Laboratories and submitted in the Quality Assurance Project Plan (QAPP). PQLs are when MTCA Method A or B, is less than the PQL, as stated in the QAPP.

[3]Dioxins/Furans analyzed by EPA Method 8290.

[4]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for dioxins/furans.

[5]Total Dioxins/Furans toxic equivalency (TEQ) calculated using toxicity equivalency factors (TEF) from MTCA Table 708-1, based on methodology described in MTCA Cleanup Regulation WAC 173-340-900.

J = estimated result; U = analyte was not detected above the reporting limit; pg/L = picograms per Liter

Bold indicates that the analyte was detected above the laboratory reporting limit.

Table 11

Surface Water Analytical Results - Metals, TPH, PCBs and GC[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
TPH[3]	Gasoline-range hydrocarbons	µg/L	NE	100 U	100 U	150 U
	Diesel-range hydrocarbons	mg/L	NE	0.14 U	0.13 U	0.13 U
	Lube Oil-range Hydrocarbons	mg/L	NE	0.23 U	0.21 U	0.21 U
Dissolved Metals[4]	Antimony	mg/L	1.04	0.00040 U	**0.00010 J**	**0.00015 J**
	Arsenic	mg/L	0.0000982	**0.0020**	**0.0014**	**0.0018**
	Barium	mg/L	NE	**0.045**	**0.047**	**0.042**
	Beryllium	mg/L	0.273	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	NE	**0.000032 J**	0.00040 U	0.00040 U
	Chromium	mg/L	0.486	**0.00027 J**	**0.00019 J**	**0.00029 J**
	Copper	mg/L	2.88	**0.00093 J**	0.0020 U	**0.00080 J**
	Iron	mg/L	NE	0.040 U	0.040 U	**0.20**
	Lead	mg/L	0.00054	0.00040 U	0.00040 U	**0.00020 J**
	Manganese	mg/L	NE	**0.0010 J**	**0.0012 J**	**0.018**
	Mercury[5]	mg/L	0.000012	0.00020 U	0.00020 U	0.00020 U
	Nickel	mg/L	1.10	0.0030 U	0.0030 U	**0.00040 J**
	Selenium	mg/L	2.70	0.0010 U	0.0010 U	0.0010 U
	Silver	mg/L	25.9	0.00040 U	0.00040 U	0.00040 U
	Thallium[5]	mg/L	0.000216	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	**0.0058**	**0.0061**	**0.0094**
	Zinc	mg/L	16.5	**0.0024 J**	0.0070 U	0.0070 U
Total Metals[4]	Antimony	mg/L	1.04	0.00040 U	**0.000089 J**	**0.00021 J**
	Arsenic	mg/L	0.0000982	**0.0016**	**0.0014**	**0.0020**
	Barium	mg/L	NE	**0.050**	**0.046**	**0.043**
	Beryllium	mg/L	0.273	0.00040 U	0.00040 U	0.00040 U
	Cadmium	mg/L	NE	0.00040 U	0.00040 U	0.00040 U
	Chromium	mg/L	243	**0.00082**	**0.00020 J**	**0.00047**
	Copper	mg/L	2.88	**0.0011 J**	0.0020 U	**0.00065 J**
	Iron	mg/L	NE	**0.018 J**	**0.048**	**0.26**
	Lead	mg/L	0.00054	0.00040 U	0.00040 U	**0.00033 J**
	Manganese	mg/L	NE	**0.0012 J**	**0.0012 J**	**0.019**
	Mercury[5]	mg/L	0.000012	0.00020 U	0.00020 U	0.00020 U
	Nickel	mg/L	1.10	0.0030 U	0.0030 U	**0.00040 J**
	Selenium	mg/L	2.70	0.0010 U	0.0010 U	**0.00030 J**
	Silver	mg/L	25.9	0.00040 U	0.00040 U	0.00040 U
	Thallium[5]	mg/L	0.000216	0.0010 U	0.0010 U	0.0010 U
	Vanadium	mg/L	NE	**0.0053**	**0.0063**	**0.010**
	Zinc	mg/L	16.5	0.0070 U	0.0070 U	0.0070 U
Anions[6]	Chloride	mg/L	230	**45**	**13**	**12**
	Nitrate	mg/L	NE	**0.26**	**1.5**	**1.4**
	Nitrite-nitrogen	mg/L	NE	0.20 U	0.20 U	0.20 U
	Sulfate	mg/L	NE	**23**	**11**	**16**

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
Cation[7]	Ammonia	mg/L	NE	**0.075 J**	**0.17**	0.10 U
Nitriles[8]	Cyanide	mg/L	1.56	0.010 U	0.010 U	0.010 U
General Chemistry[9]	Chemical Oxygen Demand	mg/L	NE	20 U	**11 J**	**26**
	Total Organic Carbon	mg/L	NE	**2.2**	**3.5**	**9.0**
	E. Coli	MPN/100mL	NE	**4.0**	**2.0**	**1.0**
	Total Coliform	MPN/100mL	NE	**1,600**	**2,419.6**	**370**
PCBs[5,10]	PCB-Aroclor 1016	µg/L	0.000105	0.10 U	0.099 U	0.094 U
	PCB-Aroclor 1221	µg/L		0.10 U	0.099 U	0.094 U
	PCB-Aroclor 1232	µg/L		0.10 U	0.099 U	0.094 U
	PCB-Aroclor 1242	µg/L		0.10 U	0.099 U	0.094 U
	PCB-Aroclor 1248	µg/L		0.10 U	0.099 U	0.094 U
	PCB-Aroclor 1254	µg/L		0.10 U	0.099 U	0.094 U
	PCB-Aroclor 1260	µg/L		0.10 U	0.099 U	0.094 U
	Total PCBs[11]	µg/L		0.10 U	0.099 U	0.094 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. Values presented are the lowest MTCA Method B formula values (human health) and water quality criteria (aquatic life; WAC 173-201, national toxics rule and Clean Water Act). When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Diesel- and lube oil-range petroleum hydrocarbons were analyzed using Northwest Method NWTPH-Dx. Gasoline-range petroleum hydrocarbons were analyzed using Northwest Method NWTPH-Gx.

[4]Total and dissolved metals analyzed using EPA Method 200.8

[5]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

[6]Anions analyzed using EPA Method 300.0.

[7]Cations analyzed using EPA Method 350.1.

[8]Nitriles analyzed using EPA Method 335.4.

[9]Chemical Oxygen Demand analyzed using EPA Method 410.04, Total Organic Carbon analyzed using EPA Method 5310C, E. Coli and Total Coliform analyzed using EPA Method 9223B.

[10]PCBs analyzed using EPA Method 8082A.

[11]Total PCBs is the sum of all PCBs.

GC = general chemistry; J = estimated result; NE = not established; NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level; mg/L = milligrams per liter; MPN/100mL = most probable number of coliform per 100 milliliters; µg/L= micrograms per liter; U = analyte was not detected greater than the reporting limit.

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Bold and shading indicates analyte was detected greater than the applicable cleanup level.

Table 12

Surface Water Analytical Results - VOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
VOCs[3]	1,1,1,2-Tetrachloroethane	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	µg/L	925,926	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane	µg/L	6.48	2.0 U	2.0 U	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane	µg/L	25.3	1.0 U	1.0 U	2.0 U
	1,1-Dichloroethane	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethene	µg/L	23,148	1.0 U	1.0 U	1.0 U
	1,1-Dichloropropene	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,2,3-Trichloropropane	µg/L	NE	1.0 U	1.0 U	2.0 U
	1,2,4-Trichlorobenzene	µg/L	2.03	1.0 U	1.0 U	1.0 U
	1,2,4-Trimethylbenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-Chloropropane	µg/L	NE	10 U	10 U	10 U
	1,2-Dibromoethane[4]	µg/L	NE	0.010 U	0.010 U	1.0 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	4,167	1.0 U	1.0 U	1.0 U
	1,2-Dichloroethane	µg/L	59.4	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	µg/L	43.9	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	µg/L	NE	1.0 U	1.0 U	2.0 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	21.4	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	µg/L	NE	2.0 U	2.0 U	2.0 U
	2-Butanone (MEK)	µg/L	NE	10 U	10 U	10 U
	2-Chlorotoluene	µg/L	NE	1.0 U	1.0 U	1.0 U
	2-Hexanone	µg/L	NE	10 U	10 U	10 U
	4-Chlorotoluene	µg/L	NE	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
VOCs[3]	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	µg/L	NE	10 U	10 U	10 U
	Acetone	µg/L	NE	25 U	25 U	30 U
	Benzene	µg/L	22.7	0.20 U	0.20 U	0.40 U
	Bromobenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	Bromochloromethane	µg/L	NE	1.0 U	1.0 U	2.0 U
	Bromodichloromethane	µg/L	27.5	1.0 U	1.0 U	1.0 U
	Bromoform (Tribromomethane)	µg/L	216	2.0 U	2.0 U	5.0 U
	Bromomethane	µg/L	955	5.0 U	5.0 U	5.0 U
	Carbon Disulfide	µg/L	NE	1.0 U	1.0 U	5.0 U
	Carbon Tetrachloride	µg/L	4.87	1.0 U	1.0 U	1.0 U
	Chlorobenzene	µg/L	5,185	1.0 U	1.0 U	1.0 U
	Chloroethane	µg/L	NE	2.0 U	2.0 U	2.0 U
	Chloroform	µg/L	55	1.0 U	1.0 U	1.0 U
	Chloromethane	µg/L	NE	3.0 U	3.0 U	3.0 U
	cis-1,2-Dichloroethene	µg/L	NE	1.0 U	1.0 U	1.0 U
	cis-1,3-Dichloropropene	µg/L	NE	1.0 U	1.0 U	1.0 U
	Dibromochloromethane	µg/L	20.3	1.0 U	1.0 U	2.0 U
	Dibromomethane	µg/L	NE	1.0 U	1.0 U	2.0 U
	Dichlorodifluoromethane (CFC-12)	µg/L	NE	2.0 U	2.0 U	2.0 U
	Ethylbenzene	µg/L	6,823	1.0 U	1.0 U	1.0 U
	HCFC-21	µg/L	NE	1.0 U	1.0 U	1.0 U
	Hexachlorobutadiene	µg/L	29.7	2.0 U	2.0 U	2.0 U
	Isopropylbenzene (Cumene)	µg/L	NE	1.0 U	1.0 U	1.0 U
	Methyl t-butyl ether	µg/L	NE	1.0 U	1.0 U	1.0 U
	Methylene Chloride	µg/L	3,601	**4.6 J**	5.0 U	5.0 U
	Naphthalene	µg/L	4,714	2.0 U	2.0 U	2.0 U
	n-Butylbenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	n-Hexane	µg/L	NE	1.0 U	1.0 U	1.0 U
	n-Propylbenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene	µg/L	NE	1.0 U	1.0 U	1.0 U
	Sec-Butylbenzene	µg/L	NE	1.0 U	1.0 U	1.0 U
	Styrene	µg/L	NE	1.0 U	1.0 U	1.0 U
	Tert-Butylbenzene	µg/L	NE	1.0 U	1.0 U	1.0 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
VOCs[3]	Tetrachloroethene	µg/L	99.6	1.0 U	1.0 U	1.0 U
	Toluene	µg/L	18,855	1.0 U	1.0 U	1.0 U
	Trans-1,2-Dichloroethene	µg/L	32,407	1.0 U	1.0 U	1.0 U
	Trans-1,3-Dichloropropene	µg/L	NE	1.0 U	1.0 U	1.0 U
	Trichloroethene	µg/L	12.8	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	µg/L	NE	1.0 U	1.0 U	1.0 U
	Vinyl Chloride	µg/L	3.7	0.20 U	0.20 U	0.40 U
	Xylene, m-,p-	µg/L	NE	2.0 U	2.0 U	2.0 U
	Xylene, o-	µg/L	NE	1.0 U	1.0 U	1.0 U
	Total Xylenes	µg/L	NE	3.0 U	3.0 U	3.0 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. Values presented are the lowest MTCA Method B formula values (human health) and water quality criteria (aquatic life; WAC 173-201, national toxics rule and Clean Water Act). When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Volatile organic compounds (VOCs) analyzed by EPA Method 8260C.

[4]1,2-Dibromoethane analyzed by EPA Method 8011.

NE = not established; U = analyte was not detected greater than the reporting limit; µg/L = micrograms per Liter

NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level.

Bold indicates analyte was detected greater than the method reporting limit.

Table 13

Surface Water Analytical Results - SVOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
SVOCs[3]	1,2,4-Trichlorobenzene	µg/L	2.03	0.38 U	0.38 U	0.39 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	4,167	0.38 U	0.38 U	0.39 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/L	NE	0.38 U	0.38 U	0.39 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/L	21.4	0.38 U	0.38 U	0.39 U
	1-Methylnaphthalene	µg/L	4,713[6]	0.057 U	0.057 U	0.058 U
	2-Methylnaphthalene	µg/L		0.19 U	0.19 U	0.19 U
	Naphthalene	µg/L		0.38 U	0.38 U	0.39 U
	2,2'-Oxybis[1-chloropropane]	µg/L	37	0.38 U	0.38 U	0.39 U
	2,4,5-Trichlorophenol	µg/L	NE	0.38 U	0.38 U	0.39 U
	2,4,6-Trichlorophenol	µg/L	3.93	0.57 U	0.57 U	0.58 U
	2,4-Dichlorophenol	µg/L	190	0.38 U	0.38 U	0.39 U
	2,4-Dimethylphenol	µg/L	552	1.9 U	1.9 U	1.9 U
	2,4-Dinitrophenol	µg/L	3,457	4.7 U	4.8 U	4.9 U
	2,4-Dinitrotoluene	µg/L	5.50	0.38 U	0.38 U	0.39 U
	2,6-Dinitrotoluene	µg/L	NE	0.38 U	0.38 U	0.39 U
	2-Chloronaphthalene	µg/L	1,037	0.057 U	0.057 U	0.058 U
	2-Chlorophenol	µg/L	99.7	0.38 U	0.38 U	0.39 U
	2-methylphenol (o-Cresol)	µg/L	NE	0.38 U	0.38 U	0.39 U
	2-Nitroaniline	µg/L	NE	0.38 U	0.38 U	0.39 U
	2-Nitrophenol	µg/L	NE	0.38 U	0.38 U	0.39 U
	3 & 4 Methylphenol	µg/L	NE	0.76 U	0.76 U	0.78 U
	3,3'-Dichlorobenzidine[4]	µg/L	0.0465	1.9 U	1.9 U	1.9 U
	3-Nitroaniline	µg/L	NE	0.38 U	0.38 U	0.39 U
	4,6-Dinitro-2-Methylphenol	µg/L	NE	3.8 U	3.8 U	3.9 U
	4-Bromophenyl phenyl ether	µg/L	NE	0.38 U	0.38 U	0.39 U
	4-Chloro-3-Methylphenol	µg/L	NE	0.38 U	0.38 U	0.39 U
	4-Chloroaniline	µg/L	NE	0.38 U	0.38 U	0.39 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
SVOCs[3]	4-Chlorophenyl-Phenylether	µg/L	NE	0.38 U	0.38 U	0.39 U
	4-Nitroaniline	µg/L	NE	0.57 U	0.57 U	0.58 U
	4-Nitrophenol (p-Nitrophenol)	µg/L	NE	2.8 U	2.9 U	2.9 U
	Acenaphthene	µg/L	648	0.095 U	0.095 U	0.097 U
	Acenaphthylene	µg/L	NE	0.076 U	0.076 U	0.078 U
	Anthracene	µg/L	25,926	0.038 U	0.038 U	0.039 U
	Benzo(a)anthracene	µg/L	0.296	0.057 U	0.057 U	0.058 U
	Benzo(a)pyrene[4]	µg/L	0.0296	0.038 U	0.038 U	0.039 U
	Benzo(b)fluoranthene	µg/L	0.296	0.076 U	0.076 U	0.078 U
	Benzo(g,h,i)perylene	µg/L	NE	0.057 U	0.057 U	0.058 U
	Benzo(k)fluoranthene	µg/L	2.96	0.057 U	0.057 U	0.058 U
	Benzoic Acid	µg/L	NE	2.8 U	**0.81 J**	2.9 U
	Benzyl Alcohol	µg/L	NE	0.38 U	0.38 U	0.39 U
	Bis(2-Chloroethoxy)Methane	µg/L	NE	0.38 U	0.38 U	0.39 U
	Bis(2-Chloroethyl)Ether	µg/L	0.854	0.38 U	0.38 U	0.39 U
	Bis(2-Ethylhexyl) Phthalate	µg/L	3.56	2.8 U	**26 J**	2.9 U
	Butyl benzyl Phthalate	µg/L	8.32	0.57 U	**0.27 J**	0.38 J
	Carbazole	µg/L	NE	0.38 U	0.38 U	0.39 U
	Chrysene	µg/L	29.6	0.038 U	0.038 U	0.039 U
	Dibenzo(a,h)anthracene[4]	µg/L	0.0296	0.057 U	0.057 U	0.058 U
	Dibenzofuran	µg/L	NE	0.38 U	0.38 U	0.39 U
	Dibutyl Phthalate	µg/L	2,913	0.38 U	**0.16 J**	0.17 J
	Diethyl Phthalate	µg/L	28,412	0.38 U	0.38 U	0.39 U
	Dimethyl Phthalate	µg/L	NE	0.38 U	0.38 U	0.39 U
	Di-N-Octyl Phthalate	µg/L	NE	0.38 U	0.38 U	0.39 U
	Fluoranthene	µg/L	86.4	0.047 U	0.048 U	0.049 U
	Fluorene	µg/L	3,457	0.057 U	0.057 U	0.058 U
	Hexachlorobenzene[4]	µg/L	0.000466	0.38 U	0.38 U	0.39 U
	Hexachlorobutadiene	µg/L	29.7	0.57 U	0.57 U	0.58 U
	Hexachlorocyclopentadiene	µg/L	3,618	1.9 U	1.9 U	1.9 U
	Hexachloroethane	µg/L	1.86	0.57 U	0.57 U	0.58 U
	Indeno(1,2,3-c,d)pyrene	µg/L	0.296	0.057 U	0.057 U	0.058 U
	Isophorone	µg/L	1,551	0.38 U	0.38 U	0.39 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
SVOCs[3]	Nitrobenzene	µg/L	1,788	0.38 U	0.38 U	0.39 U
	N-Nitrosodi-n-propylamine	µg/L	0.842	0.38 U	0.38 U	0.39 U
	N-Nitrosodiphenylamine (as diphenylamine)	µg/L	9.45	0.38 U	0.38 U	0.39 U
	Pentachlorophenol	µg/L	1.47	0.66 U	0.67 U	0.68 U
	Phenanthrene	µg/L	NE	0.076 U	0.076 U	0.078 U
	Phenol	µg/L	555,556	0.57 U	0.57 U	0.58 U
	Pyrene	µg/L	2,593	0.057 U	0.057 U	0.058 U
	Total cPAH TEQ (ND=0.5RL)[4,5]	µg/L	0.0296	0.034 U	0.034 U	0.035 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. Values presented are the lowest MTCA Method B formula values (human health) and water quality criteria (aquatic life; WAC 173-201, national toxics rule and Clean Water Act). When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Semi-volatile Organic Compounds (SVOCs) analyzed using EPA Method 8270D.

[4]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

[5]Carcinogenic PAH (cPAH) toxic equivalency (TEQ) calculated using toxicity equivalency factors (TEF) from MTCA Table 708-2, based on methodology described in MTCA Cleanup Regulation WAC 173-340-708.

[6]Total value for naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

NE = not established; U = analyte was not detected greater than the reporting limit; µg/L = milligrams per Liter

NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level as discussed in Section 2.2.5.

Table 14

Surface Water Analytical Results - Pesticides[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location / Sample Name / Sample Date / MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
Organo-chlorine Pesticides[3]	4,4'-DDD[4]	µg/L	0.0005	0.030 U	0.029 U	0.028 U
	4,4'-DDE[4]	µg/L	0.000353	0.020 U	0.019 U	0.019 U
	4,4'-DDT[4]	µg/L	0.000353	0.030 U	0.029 U	0.028 U
	Aldrin[4]	µg/L	0.0000811	0.030 U	0.029 U	0.028 U
	Alpha-BHC[4]	µg/L	0.00791	0.030 U	0.029 U	0.028 U
	alpha-Chlordane (cis)	µg/L	NE	0.020 U	0.019 U	0.019 U
	Beta-BHC[4]	µg/L	0.0277	0.051 U	0.048 U	0.047 U
	Delta-BHC	µg/L	NE	0.051 U	0.048 U	0.047 U
	Dieldrin[4]	µg/L	0.0000862	0.030 U	0.029 U	0.028 U
	Endosulfan I	µg/L	NE	0.020 U	0.019 U	0.019 U
	Endosulfan II	µg/L	NE	0.020 U	0.019 U	0.019 U
	Endosulfan Sulfate	µg/L	NE	0.020 U	0.019 U	0.019 U
	Endrin	µg/L	0.194	0.020 U	0.019 U	0.019 U
	Endrin Aldehyde	µg/L	NE	0.20 U	0.19 U	0.19 U
	Endrin Ketone	µg/L	NE	0.020 U	0.019 U	0.019 U
	gamma-Chlordane	µg/L	NE	0.020 U	0.019 U	0.019 U
	Heptachlor[4]	µg/L	0.000131	0.020 U	0.019 U	0.019 U
	Heptachlor Epoxide[4]	µg/L	0.0000648	0.020 U	0.019 U	0.019 U
	Lindane (Gamma-BHC)	µg/L	0.0453	0.030 U	0.029 U	0.028 U
	Methoxychlor	µg/L	8.10	0.10 U	0.097 U	0.094 U
	Toxaphene[4]	µg/L	0.000453	1.0 U	0.97 U	0.94 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
Organo-phosphorus Pesticides[5]	Atrazine	µg/L	NE	9.7 U	9.7 U	9.6 U
	Azinphos-methyl	µg/L	NE	2.4 U	2.4 U	2.4 U
	Bolstar (Sulprofos)	µg/L	NE	0.97 U	0.97 U	0.96 U
	Chlorpyrifos[4]	µg/L	0.041	1.5 U	1.4 U	1.4 U
	Coumaphos	µg/L	NE	0.97 U	0.97 U	0.96 U
	Demeton	µg/L	NE	2.9 U	2.9 U	2.9 U
	Diazinon	µg/L	NE	0.48 U	0.48 U	0.48 U
	Dichlorvos (DDVP)	µg/L	NE	0.48 U	0.48 U	0.48 U
	Dimethoate	µg/L	NE	1.5 U	1.4 U	1.4 U
	Disulfoton (Di-Syston)	µg/L	NE	0.97 U	0.97 U	0.96 U
	EPN	µg/L	NE	1.2 U	1.2 U	1.2 U
	Ethoprop	µg/L	NE	1.5 U	1.4 U	1.4 U
	Famphur	µg/L	NE	0.97 U	0.97 U	0.96 U
	Fensulfothion	µg/L	NE	2.4 U	2.4 U	2.4 U
	Fenthion	µg/L	NE	2.4 U	2.4 U	2.4 U
	Malathion[4]	µg/L	0.10	1.9 U	1.9 U	1.9 U
	Merphos	µg/L	NE	4.8 U	4.8 U	4.8 U
	Methyl Parathion	µg/L	NE	3.9 U	3.9 U	3.8 U
	Mevinphos	µg/L	NE	6.0 U	6.0 U	5.9 U
	Parathion (ethyl)[4]	µg/L	0.013	0.97 U	0.97 U	0.96 U
	Phorate	µg/L	NE	1.2 U	1.2 U	1.2 U
	Propazine	µg/L	NE	9.7 U	9.7 U	9.6 U
	Ronnel	µg/L	NE	9.7 U	9.7 U	9.6 U
	Simazine	µg/L	NE	9.7 U	9.7 U	9.6 U
	Sulfotepp	µg/L	NE	1.5 U	1.4 U	1.4 U
	Thionazin	µg/L	NE	0.97 U	0.97 U	0.96 U
	Tokuthion (Prothiofos)	µg/L	NE	1.5 U	1.5 U	1.5 U
	Trichloronate	µg/L	NE	1.5 U	1.4 U	1.4 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B CUL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
Chlorinated Herbicides[6]	2,4,5-T	µg/L	NE	0.95 U	0.95 U	0.96 U
	2,4-D	µg/L	NE	3.8 U	3.8 U	3.8 U
	2,4-DB	µg/L	NE	3.8 U	3.8 U	3.8 U
	Dalapon (DPA)	µg/L	NE	1.9 U	1.9 U	1.9 U
	Dicamba	µg/L	NE	1.9 U	1.9 U	1.9 U
	Dichlorprop	µg/L	NE	3.8 U	3.8 U	3.8 U
	MCPA	µg/L	NE	380 U	380 U	380 U
	Mecoprop (MCPP)	µg/L	NE	380 U	380 U	380 U
	Silvex (Fenoprop or 2,4,5-TI	µg/L	NE	0.95 U	0.95 U	0.96 U

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. Values presented are the lowest MTCA Method B formula values (human health) and water quality criteria (aquatic life; WAC 173-201, national toxics rule and Clean Water Act). When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Organochlorine Pesticides were analyzed using EPA Method 8081B.

[4]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

[5]Organophosphorus Pesticides analyzed using EPA Method 8141B.

[6]Chlorinated Herbicides analyzed using EPA Method 8151A.

NE = not established; U = analyte was not detected greater than the reporting limit; µg/L = micrograms per Liter

Table 15

Surface Water Analytical Results - Dioxins/Furans[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date PQL[2]	SW-1 SW-1:082916 8/29/2016	SW-1 SW-1:113016 11/30/2016	SW-1 SW-1:022317 2/23/2017
Dioxins/Furans[3]	1,2,3,4,6,7,8-HpCDD	pg/L	50	48.0 U	**1.6 J**	**0.73 J**
	1,2,3,4,6,7,8-HpCDF	pg/L	50	**0.54 J**	48 U	**0.23 J**
	1,2,3,4,7,8,9-HpCDF	pg/L	50	48 U	48 U	48 U
	1,2,3,4,7,8-HxCDD	pg/L	50	48 U	48 U	48 U
	1,2,3,4,7,8-HxCDF	pg/L	50	48 U	**0.54 J**	48 U
	1,2,3,6,7,8-HxCDD	pg/L	50	48 U	48 U	48 U
	1,2,3,6,7,8-HxCDF	pg/L	50	48 U	**0.36 J**	48 U
	1,2,3,7,8,9-HxCDD	pg/L	50	48 U	48 U	48 U
	1,2,3,7,8,9-HxCDF	pg/L	50	48 U	48 U	**0.40 J**
	1,2,3,7,8-PeCDD	pg/L	50	48 U	48 U	48 U
	1,2,3,7,8-PeCDF	pg/L	50	48 U	48 U	48 U
	2,3,4,6,7,8-HxCDF	pg/L	50	48 U	48 U	48 U
	2,3,4,7,8-PeCDF	pg/L	50	48 U	48 U	48 U
	2,3,7,8-TCDD	pg/L	10	9.6 U	9.5 U	9.5 U
	2,3,7,8-TCDF	pg/L	10	9.6 U	**0.32 J**	9.5 U
	OCDD	pg/L	100	96 U	**5.8 J**	**2.6 J**
	OCDF	pg/L	100	96 U	95 U	95 U
	Total Dioxin/Furan TEQ (ND=0.5DL) - Human/Mammal[4]	pg/L	870	**55**	**49**	**52**

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Practical Quantitation Limit (PQL) provided by TestAmerica Laboratories and submitted in the Quality Assurance Project Plan (QAPP). PQLs are used in place of MTCA Method B, as stated in the QAPP.

[3]Dioxins/Furans analyzed using EPA Method 8290.

[4]Total Dioxins/Furans toxic equivalency (TEQ) calculated using toxicity equivalency factors (TEF) from MTCA Table 708-1, based on methodology described in MTCA Cleanup Regulation WAC 173-340-900.

U = analyte was not detected greater than the reporting limit; pg/L = picograms per Liter

Table 16

Soil Vapor Analytical Results - VOCs[1]

Marshall Landfill Site

Spokane County, Washington

Analyte Group	Analyte	Units	Sample Location / Sample Name / Sample Date	LFB-3 LFB-3:091615 9/16/2015	LFB-3 LFB-3-082616 8/26/2016	LFB-3 LFB-3:120216 12/2/2016	LFB-3 LFB-3:022417 2/24/2017	LFB-4 LFB-4:091615 9/16/2015	LFB-4 LFB-4-082616 8/26/2016	LFB-4 LFB-4:120216 12/2/2016	LFB-4 LFB-4:022417 2/24/2017	LFB-5 LFB-5:091615 9/16/2015	LFB-5 LFB-5-082616 8/26/2016
			MTCA Method B CUL[2]										
VOCs[3]	1,1,1-Trichloroethane	mg/m3	76.2	0.014 U	0.040 U	0.057 U	0.033 U	0.014 U	0.022 U	0.030 U	0.042 U	0.036 U	0.026 U
	1,1,2,2-Tetrachloroethane[4]	mg/m3	0.00144	0.024 U	0.067 U	0.096 U	0.056 U	0.024 U	0.037 U	0.051 U	0.071 U	0.060 U	0.044 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	mg/m3	457	0.027 U	0.074 U	0.11 U	0.063 U	0.027 U	0.041 U	0.056 U	0.079 U	0.067 U	0.049 U
	1,1,2-Trichloroethane[4]	mg/m3	0.00305	0.019 U	0.053 U	0.076 U	0.045 U	0.019 U	0.029 U	0.040 U	0.056 U	0.048 U	0.035 U
	1,1-Dichloroethane[4]	mg/m3	0.0521	**0.015**	**0.011 J**	0.042 U	0.025 U	0.011 U	**0.0097 J**	**0.0072 J**	0.031 U	0.027 U	0.020 U
	1,1-Dichloroethene	mg/m3	3.05	0.028 U	0.077 U	0.11 U	0.065 U	**0.0063 J**	0.043 U	0.058 U	0.082 U	0.069 U	0.051 U
	1,2,4-Trichlorobenzene[4]	mg/m3	0.0305	0.13 U	0.36 U	0.52 U	0.30 U	0.13 U	0.20 U	0.27 U	0.38 U	0.33 U	0.24 U
	1,2,4-Trimethylbenzene[4]	mg/m3	0.107	**0.47**	**0.19**	**0.18**	**0.23**	**0.39**	**0.26**	**0.40**	**0.26**	**0.060 J**	0.063 U
	1,2-Dibromoethane[4]	mg/m3	0.000139	0.054 U	0.15 U	0.22 U	0.13 U	0.054 U	0.083 U	0.11 U	0.16 U	0.13 U	0.099 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)[4]	mg/m3	3.05	0.021 U	0.058 U	0.084 U	0.049 U	**0.066**	**0.024 J**	0.044 U	0.062 U	0.053 U	0.039 U
	1,2-Dichloroethane[4]	mg/m3	0.00321	0.028 U	0.079 U	0.11 U	0.066 U	0.028 U	**0.017 J**	**0.013 J**	0.083 U	0.071 U	**0.0074 J**
	1,2-Dichloropropane[4]	mg/m3	0.00833	0.016 U	0.045 U	0.065 U	0.038 U	0.016 U	0.025 U	0.034 U	0.048 U	0.040 U	0.030 U
	1,3,5-Trimethylbenzene	mg/m3	NE	**0.24**	**0.11**	**0.096**	**0.13**	**0.15**	**0.13**	**0.19**	**0.11**	**0.020 J**	0.032 U
	1,3-Butadiene[4]	mg/m3	0.00278	--	0.043 U	0.062 U	0.036 U	--	0.024 U	0.033 U	0.045 U	--	0.029 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	mg/m3	NE	**0.019 J**	0.058 U	0.084 U	0.049 U	**0.011 J**	0.032 U	0.044 U	0.062 U	0.053 U	0.039 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)[4]	mg/m3	0.00758	**0.11**	**0.045 J**	0.084 U	0.049 U	**1.7**	**0.64**	**0.24**	**0.45**	**0.19**	**0.065**
	1,4-Dioxane[4]	mg/m3	0.0167	--	**0.028 J**	0.10 U	0.059 U	--	**0.011 J**	0.053 U	0.074 U	--	0.046 U
	1-Propene	mg/m3	NE	--	**1.8**	**1.2**	**0.83**	--	**1.0**	**1.2**	**1.0**	--	**1.6**
	2,2,4-Trimethylpentane	mg/m3	NE	--	**0.046**	**0.053 J**	**0.055**	--	**0.031**	**0.038**	0.048 U	--	**0.024 J**
	2-Butanone (MEK)	mg/m3	76.2	**0.010 J**	0.057 U	0.083 U	0.048 U	**0.0092 J**	0.032 U	0.043 U	0.061 U	**0.017 J**	**0.011 J**
	2-Chlorotoluene	mg/m3	NE	--	**0.14**	**0.11**	**0.25**	--	0.028 U	0.038 U	0.053 U	--	**0.0068 J**
	2-Hexanone	mg/m3	NE	**0.011 J**	0.040 U	0.057 U	0.033 U	**0.0090 J**	0.022 U	0.030 U	0.042 U	0.036 U	0.026 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	mg/m3	45.7	**0.11**	**0.029 J**	0.057 U	0.033 U	**0.092**	0.022 U	0.030 U	0.042 U	0.036 U	0.026 U
	Acetone	mg/m3	472	**0.083 J**	**0.11 J**	**0.066 J**	0.24 U	**0.036 J**	**0.046 J**	**0.024 J**	0.31 U	**0.077 J**	**0.098 J**
	Allyl Chloride (3-Chloropropene)[4]	mg/m3	0.0139	--	0.061 U	0.088 U	0.051 U	--	0.034 U	0.046 U	0.064 U	--	0.040 U
	Benzene[4]	mg/m3	0.0107	**0.26**	**0.19**	**0.15**	**0.21**	**0.19**	**0.11**	**0.11**	**0.14**	**0.17**	**0.022**
	Benzene, 1-Ethyl-4-Methyl-	mg/m3	NE	**0.079**	**0.047**	**0.037 J**	**0.078**	**0.027**	**0.035**	**0.041**	**0.057**	0.043 U	0.032 U
	Benzyl chloride[4]	mg/m3	0.0017	**0.026 J**	0.10 U	0.14 U	0.084 U	0.036 U	**0.033 J**	0.076 U	0.11 U	0.091 U	0.067 U
	Bromodichloromethane[4]	mg/m3	0.00225	0.018 U	0.049 U	0.070 U	0.041 U	0.018 U	0.027 U	0.037 U	0.052 U	0.044 U	0.032 U
	Bromoform (Tribromomethane)[4]	mg/m3	0.0758	0.036 U	0.10 U	0.14 U	0.084 U	0.036 U	0.056 U	0.076 U	0.11 U	0.091 U	0.067 U
	Bromomethane[4]	mg/m3	0.0762	0.027 U	0.075 U	0.11 U	0.063 U	0.027 U	0.042 U	0.057 U	0.080 U	0.068 U	0.050 U
	Carbon Disulfide[4]	mg/m3	10.7	**0.44**	**5.7**	**3.8**	**2.3**	**0.021 J**	**0.040**	**0.022 J**	0.064 U	**0.025 J**	**0.89**
	Carbon Tetrachloride[4]	mg/m3	0.0139	0.044 U	0.12 U	0.18 U	0.10 U	0.044 U	0.068 U	0.093 U	0.13 U	0.11 U	0.081 U
	CFC-114[4]	mg/m3	NE	**0.24**	**0.13**	**0.20**	**0.14**	**0.75**	**0.33**	**0.81**	**0.73**	**0.11**	**0.064**
	Chlorobenzene[4]	mg/m3	0.762	**0.70**	**0.30**	**0.18**	**0.38**	**0.56**	**0.25**	**0.17**	**0.26**	**0.11**	**0.022 J**
	Chloroethane	mg/m3	152	**0.024**	**0.036 J**	**0.033 J**	0.043 U	0.018 U	**0.044**	**0.035 J**	0.054 U	0.046 U	0.034 U
	Chloroform[4]	mg/m3	0.00362	0.013 U	0.036 U	0.051 U	0.030 U	0.013 U	0.020 U	0.027 U	0.038 U	0.032 U	0.024 U

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			MTCA Method B CUL[2]										
VOCs[3]	Chloromethane	mg/m^3	1.37	**0.013**	**0.20**	**0.19**	**0.093**	0.014 U	**0.14**	**0.074**	**0.052**	**0.0080**	**0.069**
	cis-1,2-Dichloroethene	mg/m^3	NE	**0.084**	**0.071**	**0.046 J**	**0.072**	**0.11**	**0.12**	**0.077**	**0.080**	**0.23**	**0.094**
	cis-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.016 U	0.044 U	0.064 U	0.037 U	0.016 U	0.024 U	0.033 U	0.047 U	0.040 U	0.029 U
	Cyclohexane	mg/m^3	91.4	--	**0.034**	**0.031 J**	**0.040**	--	**0.17**	**0.33**	**0.48**	--	**0.041**
	Dibromochloromethane[4]	mg/m^3	0.00309	0.030 U	0.083 U	0.12 U	0.070 U	0.030 U	0.046 U	0.063 U	0.088 U	0.075 U	0.055 U
	Dichlorodifluoromethane (CFC-12)	mg/m^3	1.52	**0.19**	**0.13**	**0.14**	**0.24**	**0.55**	**0.34**	**0.55**	**0.57**	**0.15**	**0.069**
	Ethanol	mg/m^3	NE	--	0.046 U	0.066 U	0.038 U	--	0.025 U	0.035 U	0.048 U	--	**0.0083 J**
	Ethylbenzene	mg/m^3	15.2	**0.86**	**0.50**	**0.37**	**0.43**	**7.2 J**	**2.8**	**3.6**	**3.5**	**0.97**	**0.15**
	Gasoline-range hydrocarbons	mg/m^3	NE	**280**	**230**	**160**	**190**	**690**	**580**	**530**	**460**	**99**	**43**
	Hexachlorobutadiene[4]	mg/m^3	0.00379	0.19 U	0.52 U	0.75 U	0.44 U	0.19 U	0.29 U	0.39 U	0.55 U	0.47 U	0.34 U
	Isopropyl Alcohol	mg/m^3	NE	--	**0.034 J**	**0.023 J**	0.10 U	--	**0.062 J**	**0.045 J**	0.13 U	--	**0.066 J**
	Isopropylbenzene (Cumene)	mg/m^3	6.10	--	**0.21**	**0.20**	**0.26**	--	**0.19**	**0.35**	**0.32**	--	**0.12**
	Methyl Methacrylate	mg/m^3	10.7	--	0.079 U	0.11 U	0.067 U	--	0.044 U	0.060 U	0.084 U	--	0.053 U
	Methyl t-butyl ether[4]	mg/m^3	0.32	--	0.070 U	0.10 U	0.059 U	--	0.039 U	0.053 U	0.074 U	--	0.046 U
	Methylene Chloride	mg/m^3	8.33	**0.0044 J**	0.034 U	0.049 U	0.028 U	**0.0027 J**	0.019 U	0.026 U	0.036 U	0.030 U	0.022 U
	Naphthalene[4]	mg/m^3	0.00245	--	0.10 U	0.15 U	0.086 U	--	**0.15**	0.077 U	0.11 U	--	0.068 U
	n-Heptane	mg/m^3	NE	--	**0.25**	**0.24**	**0.28**	--	**0.29**	**0.40**	**0.42**	--	**0.026 J**
	n-Hexane	mg/m^3	10.7	--	**0.36**	**0.33**	**0.28**	--	**0.40**	**0.69**	**0.85**	--	**0.27**
	Styrene	mg/m^3	15.2	0.015 U	**0.016 J**	0.060 U	0.035 U	**0.083**	**0.043**	0.031 U	0.044 U	**0.035 J**	0.027 U
	Tetrachloroethene[4]	mg/m^3	0.32	**0.018 J**	**0.012 J**	0.095 U	0.055 U	**0.012 J**	**0.0069 J**	**0.0090 J**	0.070 U	0.059 U	0.044 U
	Tetrahydrofuran	mg/m^3	NE	--	**0.27**	**0.15**	**0.17**	--	**0.33**	**0.27**	**0.21**	--	**0.067**
	Toluene	mg/m^3	76.2	**0.19**	**0.13**	**0.10**	**0.15**	**0.18**	**0.098**	**0.086**	**0.086**	**0.071**	**0.011 J**
	Trans-1,2-Dichloroethene[4]	mg/m^3	NE	**0.014**	**0.0096 J**	0.056 U	0.032 U	**0.0059 J**	**0.0062 J**	0.029 U	0.041 U	0.035 U	0.026 U
	Trans-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.016 U	0.044 U	0.064 U	0.037 U	0.016 U	0.024 U	0.033 U	0.047 U	0.040 U	0.029 U
	Trichloroethene[4]	mg/m^3	0.0123	**0.019**	**0.013 J**	0.075 U	0.044 U	**0.13**	**0.075**	**0.061**	**0.095**	0.047 U	0.035 U
	Trichlorofluoromethane (CFC-11)	mg/m^3	10.7	**0.015 J**	0.054 U	0.079 U	0.046 U	0.020 U	0.030 U	0.041 U	0.058 U	0.049 U	0.036 U
	Vinyl Acetate	mg/m^3	3.05	0.025 U	0.068 U	0.099 U	0.057 U	0.025 U	0.038 U	0.052 U	0.072 U	0.062 U	0.045 U
	Vinyl Bromide[4]	mg/m^3	0.0026	--	0.085 U	0.12 U	0.071 U	--	0.047 U	0.064 U	0.090 U	--	0.056 U
	Vinyl Chloride[4]	mg/m^3	0.00933	**1.2**	**0.93**	**0.97**	**1.2**	**0.28**	**0.68**	**0.74**	**0.44**	**0.29**	**0.24**
	Xylene, m-,p-	mg/m^3	1.52	**0.50**	**0.30**	**0.23**	**0.32**	**0.87**	**1.2**	**1.3**	**1.6**	**0.077**	**0.022 J**
	Xylene, o-	mg/m^3	1.52	**0.33**	**0.18**	**0.15**	**0.22**	**0.15**	**0.35**	**0.27**	**0.47**	**0.038**	**0.0091 J**

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			MTCA Method B CUL[2]										
VOCs[3]	1,1,1-Trichloroethane	mg/m^3	76.2	0.030 U	0.027 U	0.0016 U	**0.0061**	**0.0083**	0.016 U	0.0016 U	**0.00041 J**	**0.00064 J**	0.0063 U
	1,1,2,2-Tetrachloroethane[4]	mg/m^3	0.00144	0.051 U	0.045 U	0.0027 U	0.0027 U	0.0048 U	0.027 U	0.0027 U	0.0027 U	0.0027 U	0.011 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	mg/m^3	457	0.057 U	0.050 U	**0.0019 J**	0.0031 U	**0.0035 J**	0.030 U	0.0031 U	**0.0014 J**	**0.0041**	0.012 U
	1,1,2-Trichloroethane[4]	mg/m^3	0.00305	0.040 U	0.036 U	0.0022 U	0.0022 U	0.0038 U	0.021 U	0.0022 U	0.0022 U	0.0022 U	0.0084 U
	1,1-Dichloroethane[4]	mg/m^3	0.0521	0.022 U	0.020 U	**0.00092 J**	**0.0013**	**0.0024**	**0.015**	0.0012 U	0.0012 U	**0.0019**	0.0047 U
	1,1-Dichloroethene	mg/m^3	3.05	0.059 U	0.052 U	0.0032 U	0.0032 U	0.0056 U	0.031 U	0.0032 U	0.0032 U	0.0032 U	0.012 U
	1,2,4-Trichlorobenzene[4]	mg/m^3	0.0305	0.27 U	0.24 U	0.015 U	0.015 U	0.026 U	0.14 U	0.015 U	0.015 U	0.027 U	0.057 U
	1,2,4-Trimethylbenzene[4]	mg/m^3	0.107	0.073 U	0.064 U	**0.0016 J**	0.0039 U	**0.0025 J**	0.038 U	**0.0017 J**	0.0039 U	0.0072 U	0.015 U
	1,2-Dibromoethane[4]	mg/m^3	0.000139	0.11 U	0.10 U	0.0061 U	0.0061 U	0.011 U	0.060 U	0.0061 U	0.0061 U	0.0061 U	0.024 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)[4]	mg/m^3	3.05	0.044 U	0.039 U	0.0024 U	0.0024 U	0.0042 U	0.023 U	0.0024 U	0.0024 U	0.0024 U	0.0092 U
	1,2-Dichloroethane[4]	mg/m^3	0.00321	**0.0079 J**	0.053 U	0.0032 U	**0.00092 J**	0.0057 U	0.031 U	0.0032 U	0.0032 U	0.0032 U	0.012 U
	1,2-Dichloropropane[4]	mg/m^3	0.00833	0.034 U	0.030 U	0.0018 U	0.0018 U	0.0032 U	0.018 U	0.0018 U	0.0018 U	0.0018 U	0.0071 U
	1,3,5-Trimethylbenzene	mg/m^3	NE	0.036 U	0.032 U	0.0020 U	0.0020 U	0.0034 U	0.019 U	0.0020 U	0.0020 U	0.0020 U	0.0075 U
	1,3-Butadiene[4]	mg/m^3	0.00278	0.033 U	**0.053**	--	0.0018 U	0.0031 U	0.017 U	--	0.0018 U	0.0018 U	0.0068 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	mg/m^3	NE	0.044 U	0.039 U	**0.0018 J**	**0.00073 J**	0.0042 U	0.023 U	**0.0022 J**	0.0024 U	0.0024 U	0.0092 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)[4]	mg/m^3	0.00758	**0.047**	0.039 U	0.0024 U	0.0024 U	0.0042 U	0.023 U	0.0024 U	0.0024 U	0.0024 U	0.0092 U
	1,4-Dioxane[4]	mg/m^3	0.0167	0.053 U	0.047 U	--	0.0029 U	**0.00076 J**	0.028 U	--	0.0029 U	0.0053 U	0.011 U
	1-Propene	mg/m^3	NE	**1.1**	**0.70**	--	**0.0030**	**0.087**	**0.53**	--	**0.0012**	**0.00078**	**0.017**
	2,2,4-Trimethylpentane	mg/m^3	NE	**0.020 J**	0.031 U	--	**0.0010 J**	0.0033 U	0.018 U	--	0.0019 U	0.0019 U	0.0072 U
	2-Butanone (MEK)	mg/m^3	76.2	0.044 U	0.039 U	**0.0035**	**0.0035**	**0.0016 J**	0.023 U	**0.0040**	**0.0020 J**	0.0043 U	0.0090 U
	2-Chlorotoluene	mg/m^3	NE	0.038 U	0.034 U	--	0.0021 U	0.0036 U	0.020 U	--	0.0021 U	0.0021 U	0.0079 U
	2-Hexanone	mg/m^3	NE	0.030 U	0.027 U	0.0016 U	**0.00048 J**	0.0029 U	0.016 U	**0.00055 J**	**0.00052 J**	0.0016 U	0.0063 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	mg/m^3	45.7	0.030 U	0.027 U	**0.0096**	0.0016 U	0.0029 U	0.016 U	**0.010**	0.0016 U	0.0030 U	0.0063 U
	Acetone	mg/m^3	472	**0.028 J**	0.19 U	**0.041**	**0.020**	**0.0055 J**	0.12 U	**0.030**	**0.012**	**0.0040 J**	0.045 U
	Allyl Chloride (3-Chloropropene)[4]	mg/m^3	0.0139	0.046 U	0.041 U	--	0.0025 U	0.0044 U	0.024 U	--	0.0025 U	0.0025 U	0.0096 U
	Benzene[4]	mg/m^3	0.0107	**0.024**	**0.060**	0.0013 U	**0.00082 J**	0.0022 U	0.012 U	0.0013 U	0.0013 U	**0.00042 J**	0.0049 U
	Benzene, 1-Ethyl-4-Methyl-	mg/m^3	NE	0.036 U	0.032 U	0.0020 U	0.0020 U	0.0034 U	0.019 U	0.0020 U	0.0020 U	0.0020 U	0.0075 U
	Benzyl chloride[4]	mg/m^3	0.0017	0.077 U	0.068 U	0.0041 U	0.0041 U	0.0072 U	0.040 U	0.0041 U	0.0041 U	0.0076 U	0.016 U
	Bromodichloromethane[4]	mg/m^3	0.00225	0.037 U	0.033 U	0.0020 U	0.0020 U	0.0035 U	0.019 U	0.0020 U	0.0020 U	0.0020 U	0.0077 U
	Bromoform (Tribromomethane)[4]	mg/m^3	0.0758	0.076 U	0.068 U	0.0041 U	0.0041 U	0.0072 U	0.040 U	0.0041 U	0.0041 U	0.0041 U	0.016 U
	Bromomethane[4]	mg/m^3	0.0762	0.057 U	0.051 U	0.0031 U	0.0031 U	0.0054 U	0.030 U	0.0031 U	0.0031 U	0.0031 U	0.012 U
	Carbon Disulfide[4]	mg/m^3	10.7	**0.021 J**	0.041 U	**0.00066 J**	**0.026**	0.0044 U	0.024 U	0.0025 U	**0.00087 J**	0.0025 U	0.0095 U
	Carbon Tetrachloride[4]	mg/m^3	0.0139	0.093 U	0.083 U	0.0050 U	0.0050 U	0.0088 U	0.049 U	0.0050 U	0.0050 U	0.0050 U	0.019 U
	CFC-11[4]	mg/m^3	NE	**0.094**	**0.070**	0.0028 U	0.0028 U	**0.010**	**0.052**	0.0028 U	0.0028 U	**0.010**	**0.025**
	Chlorobenzene[4]	mg/m^3	0.762	0.026 U	**0.029**	0.0014 U	0.0014 U	0.0024 U	0.013 U	0.0014 U	0.0014 U	0.0014 U	0.0053 U
	Chloroethane	mg/m^3	152	**0.015 J**	0.035 U	0.0021 U	**0.0011 J**	**0.0016 J**	**0.062**	0.0021 U	0.0021 U	0.0021 U	**0.013**
	Chloroform[4]	mg/m^3	0.00362	0.027 U	0.024 U	**0.00097 J**	**0.0025**	**0.00089 J**	0.014 U	**0.0066**	**0.00077 J**	**0.00074 J**	0.0056 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date	LFB-5 LFB-5:120216 12/2/2016	LFB-5 LFB-5:022417 2/24/2017	LFB-8 LFB-8:091615 9/16/2015	LFB-8 LFB-8-082616 8/26/2016	LFB-8 LFB-8:120216 12/2/2016	LFB-8 LFB-8:022417 2/24/2017	LFB-9 LFB-9:091615 9/16/2015	LFB-9 LFB-9-082616 8/26/2016	LFB-9 LFB-9:120216 12/2/2016	LFB-9 LFB-9:022417 2/24/2017
			MTCA Method B CUL[2]										
VOCs[3]	Chloromethane	mg/m^3	1.37	**0.064**	0.027 U	0.0017 U	**0.017**	0.0029 U	0.016 U	0.0017 U	**0.00045 J**	0.0017 U	0.0063 U
	cis-1,2-Dichloroethene	mg/m^3	NE	**0.072**	**0.097**	0.0016 U	0.0016 U	0.0028 U	0.015 U	0.0016 U	0.0016 U	0.0016 U	0.0061 U
	cis-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.034 U	0.030 U	0.0018 U	0.0018 U	0.0032 U	0.018 U	0.0018 U	0.0018 U	0.0018 U	0.0070 U
	Cyclohexane	mg/m^3	91.4	**0.031**	**0.032**	--	**0.00038 J**	**0.00058 J**	0.013 U	--	0.0014 U	0.0014 U	0.0053 U
	Dibromochloromethane[4]	mg/m^3	0.00309	0.063 U	0.056 U	0.0034 U	0.0034 U	0.0060 U	0.033 U	0.0034 U	0.0034 U	0.0034 U	0.013 U
	Dichlorodifluoromethane (CFC-12)	mg/m^3	1.52	**0.10**	**0.11**	**0.18**	**0.011**	**0.11**	**0.24**	**0.0075**	**0.013**	**0.078**	**0.11**
	Ethanol	mg/m^3	NE	0.035 U	**0.084**	--	**0.0034**	**0.0043**	0.018 U	--	**0.019**	**0.0012 J**	0.0072 U
	Ethylbenzene	mg/m^3	15.2	**0.14**	**0.090**	**0.0011 J**	**0.00063 J**	**0.0013 J**	0.017 U	**0.00097 J**	0.0017 U	0.0017 U	**0.030**
	Gasoline-range hydrocarbons	mg/m^3	NE	**43**	**22**	**0.36 J**	**1.7**	**0.33 J**	4.0 U	**0.24 J**	**0.57**	**0.18 J**	**2.0**
	Hexachlorobutadiene[4]	mg/m^3	0.00379	0.39 U	0.35 U	0.021 U	0.021 U	0.037 U	0.21 U	0.021 U	0.021 U	0.039 U	0.082 U
	Isopropyl Alcohol	mg/m^3	NE	**0.036 J**	0.081 U	--	**0.0045 J**	**0.0029 J**	0.048 U	--	**0.0026 J**	0.0090 U	0.019 U
	Isopropylbenzene (Cumene)	mg/m^3	6.10	**0.091**	**0.065**	--	**0.00079 J**	0.0069 U	0.038 U	--	0.0039 U	0.0039 U	0.015 U
	Methyl Methacrylate	mg/m^3	10.7	0.061 U	0.054 U	--	0.0033 U	**0.0013 J**	0.032 U	--	0.0033 U	0.0060 U	0.013 U
	Methyl t-butyl ether[4]	mg/m^3	0.32	0.053 U	0.047 U	--	0.0029 U	0.0050 U	0.028 U	--	0.0029 U	0.0029 U	0.011 U
	Methylene Chloride	mg/m^3	8.33	0.026 U	0.023 U	**0.0013 J**	**0.00028 J**	0.0024 U	0.013 U	**0.00044 J**	**0.00028 J**	0.0014 U	0.0053 U
	Naphthalene[4]	mg/m^3	0.00245	0.078 U	0.069 U	--	0.0042 U	0.0073 U	0.041 U	--	0.0042 U	0.0077 U	0.016 U
	n-Heptane	mg/m^3	NE	**0.048 J**	**0.12**	--	**0.0027 J**	**0.0016 J**	0.032 U	--	0.0033 U	0.0033 U	0.013 U
	n-Hexane	mg/m^3	10.7	**0.17**	**0.22**	--	**0.0053**	**0.0029 J**	0.027 U	--	**0.00041 J**	0.0028 U	**0.027**
	Styrene	mg/m^3	15.2	0.032 U	0.028 U	0.0017 U	**0.00066 J**	**0.0043**	0.017 U	0.0017 U	0.0017 U	0.0017 U	0.0065 U
	Tetrachloroethene[4]	mg/m^3	0.32	0.050 U	0.044 U	**0.065**	**0.038**	**0.051**	**0.063**	**0.0061**	**0.035**	**0.11**	**0.033**
	Tetrahydrofuran	mg/m^3	NE	**0.032 J**	0.039 U	--	0.0024 U	0.0041 U	0.023 U	--	0.0024 U	0.0024 U	0.0090 U
	Toluene	mg/m^3	76.2	**0.012 J**	0.025 U	**0.0034**	**0.0023**	**0.00049 J**	0.015 U	**0.0028**	**0.00080 J**	**0.00032 J**	0.0058 U
	Trans-1,2-Dichloroethene[4]	mg/m^3	NE	0.029 U	0.026 U	0.0016 U	0.0016 U	0.0028 U	0.015 U	0.0016 U	0.0016 U	0.0016 U	0.0061 U
	Trans-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.034 U	0.030 U	0.0018 U	0.0018 U	0.0032 U	0.018 U	0.0018 U	0.0018 U	0.0018 U	0.0070 U
	Trichloroethene[4]	mg/m^3	0.0123	0.040 U	0.035 U	**0.0040**	0.0021 U	0.0038 U	**0.065**	0.0021 U	0.0021 U	**0.0065**	**0.033**
	Trichlorofluoromethane (CFC-11)	mg/m^3	10.7	0.042 U	0.037 U	**0.033**	**0.10**	**0.44**	**0.060**	**0.037**	**0.56**	**0.097**	**0.70**
	Vinyl Acetate[4]	mg/m^3	3.05	0.052 U	0.046 U	0.0028 U	0.0028 U	**0.0020 J**	0.027 U	0.0028 U	0.0028 U	0.0052 U	0.011 U
	Vinyl Bromide[4]	mg/m^3	0.0026	0.065 U	0.057 U	--	0.0035 U	0.0061 U	0.034 U	--	0.0035 U	0.0035 U	0.013 U
	Vinyl Chloride[4]	mg/m^3	0.00933	**0.23**	**0.17**	0.0010 U	**0.00030 J**	0.0018 U	**0.025**	0.0010 U	0.0010 U	0.0010 U	0.0039 U
	Xylene, m-,p-	mg/m^3	1.52	0.064 U	0.057 U	**0.0041**	**0.0021 J**	0.0061 U	0.034 U	**0.0044**	**0.00056 J**	**0.00045 J**	0.013 U
	Xylene, o-	mg/m^3	1.52	0.032 U	0.028 U	**0.0015 J**	**0.00083 J**	0.0030 U	0.017 U	**0.0015 J**	**0.00025 J**	0.0017 U	0.0067 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date MTCA Method B	LFB-10 LFB-10:120216 12/2/2016	LFB-10 LFB-10:091615 9/16/2015	LFB-10 LFB-10-082616 8/26/2016	LFB-10 LFB-10:022417 2/24/2017	LFB-11 LFB-11:091615 9/16/2015	LFB-11 LFB-11-082616 8/26/2016	LFB-11 LFB-11:120216 12/2/2016	LFB-11 LFB-11:022417 2/24/2017	LFB-15 LFB-15:091615 9/16/2015	LFB-15 LFB-15-082616 8/26/2016
VOCs[3]	1,1,1-Trichloroethane	mg/m3	76.2	**0.0049**	**0.0031**	**0.0024**	**0.0050**	0.12 U	0.022 U	0.088 U	0.038 U	**0.0016**	**0.0017**
	1,1,2,2-Tetrachloroethane[4]	mg/m3	0.00144	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.19 U	0.037 U	0.15 U	0.064 U	0.0027 U	0.0027 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (C	mg/m3	457	**0.0044**	**0.0027 J**	**0.0022 J**	**0.0055**	0.22 U	0.042 U	0.17 U	0.072 U	0.0031 U	0.0031 U
	1,1,2-Trichloroethane[4]	mg/m3	0.00305	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.15 U	0.030 U	0.12 U	0.051 U	0.0022 U	0.0022 U
	1,1-Dichloroethane[4]	mg/m3	0.0521	**0.00090 J**	**0.00073 J**	**0.0010 J**	0.0012 U	**0.038 J**	**0.046**	**0.040 J**	**0.032**	0.0012 U	**0.0025**
	1,1-Dichloroethene	mg/m3	3.05	0.0032 U	0.0032 U	0.0032 U	0.0032 U	**0.037 J**	**0.030 J**	**0.030 J**	0.074 U	0.0032 U	0.0032 U
	1,2,4-Trichlorobenzene[4]	mg/m3	0.0305	0.015 U	0.015 U	0.015 U	0.015 U	1.1 U	0.20 U	0.80 U	0.35 U	0.015 U	0.015 U
	1,2,4-Trimethylbenzene[4]	mg/m3	0.107	**0.00082 J**	**0.0022 J**	0.0039 U	**0.0066**	**4.0**	**1.8**	**0.15 J**	**1.7**	**0.0011 J**	0.0039 U
	1,2-Dibromoethane[4]	mg/m3	0.000139	0.0061 U	0.0061 U	0.0061 U	0.0061 U	0.44 U	0.084 U	0.33 U	0.14 U	0.0061 U	0.0061 U
	1,2-Dichlorobenzene (o-Dichlorobenzer	mg/m3	3.05	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.17 U	**0.026 J**	0.13 U	0.056 U	0.0024 U	0.0024 U
	1,2-Dichloroethane[4]	mg/m3	0.00321	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.23 U	0.044 U	0.17 U	0.076 U	0.0032 U	**0.0022 J**
	1,2-Dichloropropane[4]	mg/m3	0.00833	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.13 U	0.025 U	0.10 U	0.043 U	0.0018 U	0.0018 U
	1,3,5-Trimethylbenzene	mg/m3	NE	0.0020 U	**0.0011 J**	0.0020 U	0.0020 U	**0.84**	**0.39**	**0.047 J**	**0.31**	0.0020 U	0.0020 U
	1,3-Butadiene[4]	mg/m3	0.00278	0.0018 U	--	0.0018 U	0.0018 U	--	0.024 U	0.095 U	0.041 U	--	0.0018 U
	1,3-Dichlorobenzene (m-Dichlorobenze	mg/m3	NE	0.0024 U	**0.0022 J**	0.0024 U	0.0024 U	0.17 U	0.033 U	0.13 U	0.056 U	**0.0028**	0.0024 U
	1,4-Dichlorobenzene (p-Dichlorobenzer	mg/m3	0.00758	0.0024 U	**0.0026**	**0.0015 J**	**0.0038**	**0.65**	**0.48**	**0.14**	**0.79**	0.0024 U	0.0024 U
	1,4-Dioxane[4]	mg/m3	0.0167	**0.00094 J**	--	**0.00055 J**	0.0029 U	--	**0.013 J**	0.16 U	0.067 U	--	0.0029 U
	1-Propene	mg/m3	NE	**0.00071**	--	**0.0037**	**0.014**	--	**3.2**	**2.7**	**2.7**	--	**0.0034**
	2,2,4-Trimethylpentane	mg/m3	NE	0.0019 U	--	**0.00049 J**	0.0019 U	--	**0.074**	**0.14**	**0.066**	--	0.0019 U
	2-Butanone (MEK)	mg/m3	76.2	0.0024 U	**0.0029**	**0.0016 J**	0.0024 U	**0.083 J**	0.032 U	0.13 U	0.055 U	**0.0043**	**0.0061**
	2-Chlorotoluene	mg/m3	NE	0.0021 U	--	0.0021 U	0.0021 U	--	0.028 U	0.11 U	0.048 U	--	0.0021 U
	2-Hexanone	mg/m3	NE	0.0016 U	**0.00049 J**	0.0016 U	0.0016 U	0.12 U	0.022 U	0.088 U	0.038 U	**0.0012 J**	0.0016 U
	4-Methyl-2-Pentanone (Methyl isobutyl	mg/m3	45.7	0.0016 U	**0.0067**	0.0016 U	0.0016 U	0.12 U	0.022 U	0.088 U	0.038 U	**0.011**	0.0016 U
	Acetone	mg/m3	472	**0.0038 J**	**0.019**	**0.013**	0.012 U	**0.13 J**	**0.041 J**	**0.036 J**	0.28 U	**0.029**	**0.030**
	Allyl Chloride (3-Chloropropene)[4]	mg/m3	0.0139	0.0025 U	--	0.0025 U	0.0025 U	--	0.034 U	0.13 U	0.059 U	--	0.0025 U
	Benzene[4]	mg/m3	0.0107	**0.00028 J**	0.0013 U	**0.0012 J**	**0.0039**	**0.54**	**0.43**	**0.35**	**0.43**	**0.00026 J**	**0.00076 J**
	Benzene, 1-Ethyl-4-Methyl-	mg/m3	NE	0.0020 U	0.0020 U	0.0020 U	0.0020 U	**0.52**	**0.24**	**0.080 J**	**0.21**	0.0020 U	0.0020 U
	Benzyl chloride[4]	mg/m3	0.0017	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.29 U	**0.029 J**	0.22 U	0.097 U	0.0041 U	0.0041 U
	Bromodichloromethane[4]	mg/m3	0.00225	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.14 U	0.027 U	0.11 U	0.047 U	0.0020 U	0.0020 U
	Bromoform (Tribromomethane)[4]	mg/m3	0.0758	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.29 U	0.056 U	0.22 U	0.097 U	0.0041 U	0.0041 U
	Bromomethane[4]	mg/m3	0.0762	0.0031 U	0.0031 U	0.0031 U	0.0031 U	0.22 U	0.042 U	0.17 U	0.073 U	0.0031 U	0.0031 U
	Carbon Disulfide[4]	mg/m3	10.7	0.0025 U	**0.00048 J**	**0.015**	0.0025 U	**0.045 J**	**0.0041 J**	0.13 U	0.058 U	**0.0016 J**	**0.016**
	Carbon Tetrachloride[4]	mg/m3	0.0139	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.36 U	0.069 U	0.27 U	0.12 U	0.0050 U	0.0050 U
	CFC-11[4]	mg/m3	NE	**0.0047**	**0.011**	**0.011**	**0.019**	**0.19 J**	**0.15**	**0.15 J**	**0.16**	**0.046**	**0.039**
	Chlorobenzene[4]	mg/m3	0.762	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.098 U	**0.11**	**0.080**	**0.17**	0.0014 U	0.0014 U
	Chloroethane	mg/m3	152	0.0021 U	0.0021 U	0.0021 U	**0.012**	**6.5**	**4.6**	**4.6**	**2.6**	0.0021 U	**0.0037**
	Chloroform[4]	mg/m3	0.00362	**0.00091 J**	0.0015 U	**0.0024**	0.0015 U	0.10 U	0.020 U	0.079 U	0.034 U	0.0015 U	**0.00055 J**

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date	LFB-10 LFB-10:120216 12/2/2016	LFB-10 LFB-10:091615 9/16/2015	LFB-10 LFB-10-082616 8/26/2016	LFB-10 LFB-10:022417 2/24/2017	LFB-11 LFB-11:091615 9/16/2015	LFB-11 LFB-11-082616 8/26/2016	LFB-11 LFB-11:120216 12/2/2016	LFB-11 LFB-11:022417 2/24/2017	LFB-15 LFB-15:091615 9/16/2015	LFB-15 LFB-15-082616 8/26/2016
			MTCA Method B										
VOCs[3]	Chloromethane	mg/m^3	1.37	0.0017 U	**0.00047 J**	0.0017 U	0.0017 U	0.12 U	0.023 U	**0.027 J**	0.039 U	**0.00044 J**	**0.033**
	cis-1,2-Dichloroethene	mg/m^3	NE	0.0016 U	0.0016 U	0.0016 U	0.0016 U	**0.36**	**0.38**	**0.27**	**0.26**	0.0016 U	0.0016 U
	cis-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.13 U	0.025 U	0.098 U	0.042 U	0.0018 U	0.0018 U
	Cyclohexane	mg/m^3	91.4	0.0014 U	--	0.0014 U	**0.0016**	--	**0.16**	**0.16**	**0.37**	--	0.0014 U
	Dibromochloromethane[4]	mg/m^3	0.00309	0.0034 U	0.0034 U	0.0034 U	0.0034 U	0.24 U	0.046 U	0.18 U	0.080 U	0.0034 U	0.0034 U
	Dichlorodifluoromethane (CFC-12)	mg/m^3	1.52	**0.057**	**0.058**	**0.071**	**0.057**	**0.17**	**0.22**	**0.24**	**0.35**	**0.067**	**0.053**
	Ethanol	mg/m^3	NE	**0.00086 J**	--	**0.0023**	0.0019 U	--	0.026 U	0.10 U	0.044 U	--	**0.0016 J**
	Ethylbenzene	mg/m^3	15.2	**0.00032 J**	**0.0016 J**	**0.00027 J**	**0.033**	**11**	**8.0**	**2.7**	**6.7**	**0.0014 J**	**0.00046 J**
	Gasoline-range hydrocarbons	mg/m^3	NE	**0.32 J**	**0.54**	**0.69**	**1.5**	**520**	**640**	**290**	**360**	**1.3**	**3.3**
	Hexachlorobutadiene[4]	mg/m^3	0.00379	0.021 U	0.021 U	0.021 U	0.021 U	1.5 U	0.29 U	1.1 U	0.50 U	0.021 U	0.021 U
	Isopropyl Alcohol	mg/m^3	NE	**0.0013 J**	--	**0.0029 J**	0.0049 U	--	**0.086**	**0.052 J**	0.12 U	--	**0.0039 J**
	Isopropylbenzene (Cumene)	mg/m^3	6.10	0.0039 U	--	0.0039 U	**0.0041**	--	**0.98**	**0.26**	**0.99**	--	**0.0030 J**
	Methyl Methacrylate	mg/m^3	10.7	0.0033 U	--	0.0033 U	0.0033 U	--	0.045 U	0.18 U	0.077 U	--	**0.0023 J**
	Methyl t-butyl ether[4]	mg/m^3	0.32	0.0029 U	--	0.0029 U	0.0029 U	--	0.039 U	0.16 U	0.067 U	--	0.0029 U
	Methylene Chloride	mg/m^3	8.33	0.0014 U	**0.00027 J**	**0.00026 J**	0.0014 U	0.099 U	**0.014 J**	0.075 U	0.033 U	**0.00087 J**	**0.00048 J**
	Naphthalene[4]	mg/m^3	0.00245	0.0042 U	--	0.0042 U	**0.0089**	--	**0.066**	0.23 U	**0.13**	--	0.0042 U
	n-Heptane	mg/m^3	NE	0.0033 U	--	**0.00043 J**	**0.012**	--	**1.3**	**0.92**	**3.1**	--	**0.0012 J**
	n-Hexane	mg/m^3	10.7	0.0028 U	--	**0.0015 J**	**0.026**	--	**1.4**	**1.4**	**6.6**	--	**0.0039**
	Styrene	mg/m^3	15.2	0.0017 U	**0.00083 J**	0.0017 U	0.0017 U	0.12 U	**0.054**	0.092 U	0.040 U	**0.00027 J**	0.0017 U
	Tetrachloroethene[4]	mg/m^3	0.32	**0.12**	**0.057**	**0.061**	**0.12**	**0.047 J**	**0.035 J**	**0.036 J**	0.063 U	**0.19**	**0.20**
	Tetrahydrofuran	mg/m^3	NE	0.0024 U	--	**0.00042 J**	**0.0025**	--	**0.50**	**0.25**	**0.47**	--	**0.0010 J**
	Toluene	mg/m^3	76.2	**0.00039 J**	**0.0019**	**0.00067 J**	0.0015 U	**0.45**	**0.29**	**0.23**	**0.24**	**0.0019**	**0.0010 J**
	Trans-1,2-Dichloroethene[4]	mg/m^3	NE	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.11 U	0.022 U	0.085 U	0.037 U	0.0016 U	0.0016 U
	Trans-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.13 U	0.025 U	0.098 U	0.042 U	0.0018 U	0.0018 U
	Trichloroethene[4]	mg/m^3	0.0123	**0.0050**	**0.0031**	**0.0029**	**0.0050**	**0.044 J**	**0.041**	**0.032 J**	0.050 U	**0.0029**	**0.0034**
	Trichlorofluoromethane (CFC-11)	mg/m^3	10.7	**0.072**	**0.028**	**0.040**	**0.10**	**6.8**	**0.38**	**0.55**	**0.62**	**0.027**	**0.018**
	Vinyl Acetate[4]	mg/m^3	3.05	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.20 U	0.038 U	0.15 U	0.066 U	0.0028 U	0.0028 U
	Vinyl Bromide[4]	mg/m^3	0.0026	0.0035 U	--	0.0035 U	0.0035 U	--	0.048 U	0.19 U	0.082 U	--	0.0035 U
	Vinyl Chloride[4]	mg/m^3	0.00933	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.073 U	**0.066**	**0.069**	**0.044**	0.0010 U	**0.0017**
	Xylene, m-,p-	mg/m^3	1.52	**0.00070 J**	**0.0035**	**0.0011 J**	**0.0052**	**2.8**	**1.6**	**0.70**	**1.1**	**0.0031 J**	**0.0011 J**
	Xylene, o-	mg/m^3	1.52	**0.00025 J**	**0.0012 J**	**0.00036 J**	**0.0024**	**1.4**	**0.76**	**0.48**	**0.52**	**0.0011 J**	**0.00045 J**

Analyte Group	Analyte	Units	Sample Location	LFB-15	LFB-15	LFB-16	LFB-16	LFB-16	LFB-16	LFB-17	LFB-17	LFB-17	LFB-17
			Sample Name	LFB-15:120216	LFB-15:022417	LFB-16:091615	LFB-16-082616	LFB-16:120216	LFB-16:022417	LFB-17:091615	LFB-17-082616	LFB-17:120216	LFB-17:022417
			Sample Date	12/2/2016	2/24/2017	9/16/2015	8/26/2016	12/2/2016	2/24/2017	9/16/2015	8/26/2016	12/2/2016	2/24/2017
			MTCA Method B CUL[2]										
VOCs[3]	1,1,1-Trichloroethane	mg/m^3	76.2	**0.0014 J**	0.0079 U	**0.0054**	**0.0023**	**0.00043 J**	0.0037 U	0.028 U	0.022 U	**0.0015 J**	0.0032 U
	1,1,2,2-Tetrachloroethane[4]	mg/m^3	0.00144	0.0027 U	0.013 U	0.0027 U	0.0027 U	0.0027 U	0.0062 U	0.048 U	0.037 U	0.0048 U	0.0054 U
	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	mg/m^3	457	0.0031 U	0.015 U	0.0031 U	0.0031 U	0.0031 U	0.0069 U	0.053 U	0.041 U	0.0054 U	0.0060 U
	1,1,2-Trichloroethane[4]	mg/m^3	0.00305	0.0022 U	0.011 U	0.0022 U	0.0022 U	0.0022 U	0.0049 U	0.038 U	0.029 U	0.0038 U	0.0043 U
	1,1-Dichloroethane[4]	mg/m^3	0.0521	**0.0049**	0.0059 U	**0.00067 J**	**0.0026**	**0.0010 J**	0.0027 U	0.021 U	**0.0096 J**	**0.0026**	**0.0043**
	1,1-Dichloroethene	mg/m^3	3.05	0.0032 U	0.015 U	0.0032 U	0.0032 U	0.0032 U	0.0071 U	0.055 U	0.043 U	0.0056 U	0.0062 U
	1,2,4-Trichlorobenzene[4]	mg/m^3	0.0305	0.019 U	0.072 U	0.015 U	0.015 U	0.017 U	0.033 U	0.26 U	0.20 U	0.026 U	0.029 U
	1,2,4-Trimethylbenzene[4]	mg/m^3	0.107	0.0050 U	0.019 U	**0.00095 J**	0.0039 U	0.0044 U	0.0088 U	**0.024 J**	0.053 U	**0.0025 J**	0.0077 U
	1,2-Dibromoethane[4]	mg/m^3	0.000139	0.0061 U	0.030 U	0.0061 U	0.0061 U	0.0061 U	0.014 U	0.11 U	0.083 U	0.011 U	0.012 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)[4]	mg/m^3	3.05	0.0024 U	0.012 U	0.0024 U	0.0024 U	0.0024 U	0.0054 U	**0.016 J**	0.032 U	**0.0019 J**	0.0047 U
	1,2-Dichloroethane[4]	mg/m^3	0.00321	**0.0024 J**	0.016 U	0.0032 U	**0.0017 J**	**0.00069 J**	0.0073 U	0.056 U	0.044 U	0.0057 U	0.0063 U
	1,2-Dichloropropane[4]	mg/m^3	0.00833	0.0018 U	0.0089 U	0.0018 U	0.0018 U	0.0018 U	0.0041 U	0.032 U	0.025 U	0.0032 U	0.0036 U
	1,3,5-Trimethylbenzene	mg/m^3	NE	0.0020 U	0.0095 U	0.0020 U	0.0020 U	0.0020 U	0.0044 U	0.034 U	0.027 U	0.0034 U	0.0038 U
	1,3-Butadiene[4]	mg/m^3	0.00278	0.0018 U	0.0085 U	--	0.0018 U	0.0018 U	0.0040 U	--	0.024 U	0.0031 U	0.0035 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	mg/m^3	NE	0.0024 U	0.012 U	**0.0016 J**	**0.00088 J**	0.0024 U	0.0054 U	0.042 U	0.032 U	**0.0016 J**	0.0047 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)[4]	mg/m^3	0.00758	0.0024 U	0.012 U	0.0024 U	0.0024 U	0.0024 U	0.0054 U	**0.18**	**0.093**	**0.087**	**0.030**
	1,4-Dioxane[4]	mg/m^3	0.0167	0.0037 U	0.014 U	--	0.0029 U	0.0032 U	0.0065 U	--	**0.024 J**	**0.0022 J**	0.0056 U
	1-Propene	mg/m^3	NE	**0.0036**	**0.0093**	--	**0.00088**	**0.0011**	**0.0026**	**--**	**0.81**	**0.085**	**0.068**
	2,2,4-Trimethylpentane	mg/m^3	NE	0.0019 U	0.0090 U	--	0.0019 U	0.0019 U	0.0042 U	--	**0.0060 J**	**0.0034**	0.0036 U
	2-Butanone (MEK)	mg/m^3	76.2	0.0030 U	0.011 U	**0.0021 J**	**0.0024**	**0.0014 J**	0.0053 U	**0.029 J**	0.032 U	0.0041 U	0.0046 U
	2-Chlorotoluene	mg/m^3	NE	0.0021 U	0.010 U	--	0.0021 U	0.0021 U	0.0046 U	--	0.028 U	0.0036 U	0.0040 U
	2-Hexanone	mg/m^3	NE	0.0016 U	0.0079 U	0.0016 U	0.0016 U	0.0016 U	0.0037 U	0.028 U	0.022 U	0.0029 U	0.0032 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	mg/m^3	45.7	0.0021 U	0.0079 U	**0.0042**	0.0016 U	0.0018 U	0.0037 U	0.028 U	0.022 U	0.0029 U	0.0032 U
	Acetone	mg/m^3	472	**0.0056 J**	0.057 U	**0.014**	**0.013**	**0.0065 J**	0.027 U	**0.11 J**	**0.041 J**	**0.011 J**	0.023 U
	Allyl Chloride (3-Chloropropene)[4]	mg/m^3	0.0139	0.0025 U	0.012 U	--	0.0025 U	0.0025 U	0.0056 U	--	0.034 U	0.0044 U	0.0049 U
	Benzene[4]	mg/m^3	0.0107	**0.00092 J**	0.0062 U	0.0013 U	**0.00076 J**	**0.00036 J**	0.0029 U	**0.060**	**0.034**	**0.0069**	**0.0059**
	Benzene, 1-Ethyl-4-Methyl-	mg/m^3	NE	0.0020 U	0.0095 U	0.0020 U	0.0020 U	0.0020 U	0.0044 U	**0.018 J**	0.027 U	0.0034 U	**0.0067**
	Benzyl chloride[4]	mg/m^3	0.0017	0.0053 U	0.020 U	0.0041 U	0.0041 U	0.0046 U	0.0093 U	0.072 U	0.056 U	0.0072 U	0.0081 U
	Bromodichloromethane[4]	mg/m^3	0.00225	0.0020 U	0.0097 U	0.0020 U	0.0020 U	0.0020 U	0.0045 U	0.035 U	0.027 U	0.0035 U	0.0039 U
	Bromoform (Tribromomethane)[4]	mg/m^3	0.0758	0.0041 U	0.020 U	0.0041 U	0.0041 U	0.0041 U	0.0093 U	0.072 U	0.056 U	0.0072 U	0.0081 U
	Bromomethane[4]	mg/m^3	0.0762	0.0031 U	0.015 U	0.0031 U	0.0031 U	0.0031 U	0.0070 U	0.054 U	0.042 U	0.0054 U	0.0061 U
	Carbon Disulfide[4]	mg/m^3	10.7	**0.016**	0.012 U	**0.00084 J**	**0.0082**	**0.0022 J**	0.0056 U	**0.029 J**	**0.024 J**	**0.00071 J**	**0.0050**
	Carbon Tetrachloride[4]	mg/m^3	0.0139	0.0050 U	0.024 U	**0.0068**	0.0050 U	0.0050 U	0.011 U	0.087 U	0.068 U	0.0088 U	0.0098 U
	CFC-11[4]	mg/m^3	NE	**0.070**	**0.032**	**0.042**	**0.019**	**0.015**	**0.020**	**0.062**	**0.072**	**0.029**	**0.0095**
	Chlorobenzene[4]	mg/m^3	0.762	0.0014 U	0.0067 U	0.0014 U	0.0014 U	0.0014 U	0.0031 U	**0.032**	**0.0092 J**	**0.0020 J**	0.0027 U
	Chloroethane	mg/m^3	152	**0.0066**	0.010 U	0.0021 U	**0.0032**	**0.0013 J**	0.0047 U	0.037 U	**0.012 J**	0.0037 U	**0.0051**
	Chloroform[4]	mg/m^3	0.00362	0.0015 U	0.0071 U	0.0015 U	**0.00087 J**	0.0015 U	0.0033 U	0.025 U	0.020 U	0.0026 U	0.0029 U

Analyte Group	Analyte	Units	Sample Location Sample Name Sample Date	LFB-15 LFB-15:120216 12/2/2016	LFB-15 LFB-15:022417 2/24/2017	LFB-16 LFB-16:091615 9/16/2015	LFB-16 LFB-16-082616 8/26/2016	LFB-16 LFB-16:120216 12/2/2016	LFB-16 LFB-16:022417 2/24/2017	LFB-17 LFB-17:091615 9/16/2015	LFB-17 LFB-17-082616 8/26/2016	LFB-17 LFB-17:120216 12/2/2016	LFB-17 LFB-17:022417 2/24/2017
			MTCA Method B CUL[2]										
VOCs[3]	Chloromethane	mg/m^3	1.37	**0.038**	**0.023**	0.0017 U	**0.023**	**0.0061**	**0.015**	0.029 U	**0.095**	**0.00075 J**	**0.020**
	cis-1,2-Dichloroethene	mg/m^3	NE	0.0016 U	0.0076 U	0.0016 U	0.0016 U	0.0016 U	0.0036 U	**0.10**	**0.055**	**0.011**	**0.011**
	cis-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.0018 U	0.0088 U	0.0018 U	0.0018 U	0.0018 U	0.0041 U	0.031 U	0.025 U	0.0032 U	0.0035 U
	Cyclohexane	mg/m^3	91.4	0.0014 U	0.0066 U	--	0.0014 U	0.0014 U	0.0031 U	--	**0.0056 J**	**0.0037**	0.0027 U
	Dibromochloromethane[4]	mg/m^3	0.00309	0.0034 U	0.016 U	0.0034 U	0.0034 U	0.0034 U	0.0076 U	0.059 U	0.046 U	0.0060 U	0.0066 U
	Dichlorodifluoromethane (CFC-12)	mg/m^3	1.52	**0.044**	**0.022**	**0.024**	**0.017**	**0.0080**	**0.0051**	**0.13**	**0.16**	**0.064**	**0.014**
	Ethanol	mg/m^3	NE	**0.0020 J**	0.0091 U	--	**0.0014 J**	**0.0019 J**	0.0042 U	--	0.025 U	**0.012**	**0.011**
	Ethylbenzene	mg/m^3	15.2	0.0017 U	**0.31**	**0.00053 J**	**0.00056 J**	0.0017 U	**0.10**	**0.17**	**0.057**	**0.022**	**0.053**
	Gasoline-range hydrocarbons	mg/m^3	NE	**2.1**	**5.3**	**0.50**	**3.4**	**0.90**	**2.5**	**25**	**35**	**9.2**	**5.6**
	Hexachlorobutadiene[4]	mg/m^3	0.00379	0.027 U	0.10 U	0.021 U	0.021 U	0.024 U	0.048 U	0.37 U	0.29 U	0.037 U	0.042 U
	Isopropyl Alcohol	mg/m^3	NE	**0.0010 J**	0.024 U	--	**0.0031 J**	**0.00085 J**	0.011 U	--	**0.0093 J**	**0.0041 J**	0.0096 U
	Isopropylbenzene (Cumene)	mg/m^3	6.10	**0.0034 J**	**0.024**	--	**0.0029 J**	**0.0018 J**	0.0088 U	--	**0.077**	**0.050**	**0.016**
	Methyl Methacrylate	mg/m^3	10.7	0.0042 U	0.016 U	--	**0.0020 J**	**0.0015 J**	0.0073 U	--	0.044 U	0.0057 U	0.0064 U
	Methyl t-butyl ether[4]	mg/m^3	0.32	0.0029 U	0.014 U	--	0.0029 U	0.0029 U	0.0065 U	--	0.039 U	0.0050 U	0.0056 U
	Methylene Chloride	mg/m^3	8.33	**0.00028 J**	0.0067 U	**0.00036 J**	0.0014 U	0.0014 U	0.0031 U	**0.011 J**	0.019 U	0.0024 U	0.0027 U
	Naphthalene[4]	mg/m^3	0.00245	0.0054 U	0.020 U	--	0.0042 U	0.0047 U	0.0094 U	--	0.057 U	0.0073 U	0.0082 U
	n-Heptane	mg/m^3	NE	**0.0015 J**	0.016 U	--	**0.00093 J**	**0.00042 J**	0.0073 U	--	**0.044**	**0.0076**	**0.0085**
	n-Hexane	mg/m^3	10.7	**0.0011 J**	0.014 U	--	**0.0043**	**0.00043 J**	0.0063 U	--	**0.056**	**0.026**	**0.012**
	Styrene	mg/m^3	15.2	0.0017 U	0.0082 U	0.0017 U	**0.0011 J**	**0.00026 J**	0.0038 U	**0.040**	**0.0091 J**	**0.0024 J**	0.0033 U
	Tetrachloroethene[4]	mg/m^3	0.32	**0.12**	**0.095**	**0.049**	**0.098**	**0.072**	**0.068**	**0.15**	**0.24**	**0.25**	**0.16**
	Tetrahydrofuran	mg/m^3	NE	0.0024 U	0.011 U	--	**0.00073 J**	0.0024 U	0.0053 U	--	**0.018 J**	**0.018**	**0.0053**
	Toluene	mg/m^3	76.2	**0.0010 J**	0.0073 U	**0.00097 J**	**0.0011 J**	**0.00045 J**	0.0034 U	**0.071**	**0.041**	**0.0072**	**0.0078**
	Trans-1,2-Dichloroethene[4]	mg/m^3	NE	0.0016 U	0.0076 U	0.0016 U	0.0016 U	0.0016 U	0.0036 U	0.027 U	0.021 U	0.0028 U	0.0031 U
	Trans-1,3-Dichloropropene[4]	mg/m^3	0.0208	0.0018 U	0.0088 U	0.0018 U	0.0018 U	0.0018 U	0.0041 U	0.031 U	0.025 U	0.0032 U	0.0035 U
	Trichloroethene[4]	mg/m^3	0.0123	**0.0016 J**	0.010 U	0.0021 U	0.0021 U	0.0021 U	0.0048 U	**0.046**	**0.033**	**0.018**	**0.014**
	Trichlorofluoromethane (CFC-11)	mg/m^3	10.7	**0.067**	**0.022**	**0.013**	**0.073**	**0.022**	**0.035**	**2.0**	**0.50**	**0.054**	**0.22**
	Vinyl Acetate[4]	mg/m^3	3.05	0.0036 U	0.014 U	0.0028 U	0.0028 U	0.0032 U	0.0063 U	0.049 U	0.038 U	0.0049 U	0.0055 U
	Vinyl Bromide[4]	mg/m^3	0.0026	0.0035 U	0.017 U	--	0.0035 U	0.0035 U	0.0078 U	--	0.047 U	0.0061 U	0.0068 U
	Vinyl Chloride[4]	mg/m^3	0.00933	**0.0034**	**0.0049**	0.0010 U	**0.0016**	**0.00070 J**	0.0023 U	**0.083**	**0.038**	**0.00071 J**	**0.0054**
	Xylene, m-,p-	mg/m^3	1.52	**0.00071 J**	**1.3**	**0.0017 J**	**0.0015 J**	**0.00074 J**	**0.45**	**0.078**	**0.031 J**	**0.015**	**0.18**
	Xylene, o-	mg/m^3	1.52	**0.00027 J**	**0.55**	**0.00063 J**	**0.00056 J**	**0.00029 J**	**0.20**	**0.057**	**0.014 J**	**0.0069**	**0.093**

Notes:

[1]Samples analyzed by TestAmerica Laboratories.

[2]Model Toxics Control Act (MTCA) 2015 Sub-slab Soil Gas Screening Level Method B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet dated July 2015. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]Volatile organic compounds (VOCs) analyzed by EPA Air Method Toxic Organics - 15.

[4]The reporting limit exceeds the MTCA cleanup level for some or all samples analyzed for this compound.

J = estimated result; NE = not established; U = analyte was not detected greater than the reporting limit; mg/m^3 = milligram per cubic meter

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Bold and gray shading indicates analyte was detected above the selected cleanup level.

Table 17

Methane Screening Results

Marshall Landfill Site

Spokane County, Washington

Location	Methane Screening Results (percent)		
	August 2016	November 2016	March 2017
LFB-3	11.2	6.9	3.3
LFB-4	6.2	7.2	3
LFB-5	7.0	4.5	1.5
LFB-8	0.0	0.4	0.0
LFB-9	0.0	0.1	25.9
LFB-10	0.0	0.1	0.0
LFB-11	29.7	30.5	2
LFB-15	0.0	0.2	0.0
LFB-16	0.0	0.2	0.0
LFB-17	4.6	1.1	0.1

Notes:

Landfill gas measurements taken with a Landtec GEM 2000+ (carbon dioxide, oxygen and balance results also obtained).

Shading indicates methane concentration is greater than the lower explosive limit of 5 percent.

Table 19

Groundwater Elevation Summary

Marshall Landfill

Spokane County, Washington

Well Number	Aquifer	Top of Casing Elevation[1] (feet)	Ground Surface Elevation[1] (feet)	Date Measured	Well Headspace (ppm)	Depth to Groundwater (feet bpvc)[2]	Depth to Groundwater (feet bg)[3]	Groundwater Elevation[1] (feet)	Change in Groundwater Elevation[4] (feet)
MW-1A	Weathered Basement	2,335.52	2,335.04	11/18/15	0.1	207.80	207.33	2,127.72	NA
				08/21/16	0.0	206.38	205.91	2,129.14	1.42
				11/28/16	0.1	Dry	>209	<2126.04	<-3.10
				02/20/17	0.0	Dry	>209	<2126.04	NA
				12/06/17	0.1	195.46	194.99	2,140.06	>14.02
MW-2	Glaciofluvial	2,176.05	2,176.26	11/18/15	0.0	Dry	>83	<2093.26	NA
				08/21/16	0.0	Dry	>83	<2093.26	NA
				11/28/16	0.0	Dry	>83	<2093.26	NA
				02/20/17	0.0	Dry	>83	<2093.26	NA
				12/06/17	0.0	47.52	47.05	2,128.53	>35.27
MW-2A	Glaciofluvial	2,175.80	2,175.98	11/18/15	0.0	103.57	103.76	2,072.23	NA
				08/21/16	0.0	86.68	86.87	2,089.12	16.89
				11/28/16	0.2	91.20	91.39	2,084.60	-4.52
				02/20/17	0.0	86.57	86.76	2,089.23	4.63
				12/06/17	0.1	47.28	47.47	2,128.52	39.29
MW-3	Glaciofluvial	2,182.30	2,180.64	11/18/15	0.0	116.20	114.54	2,066.10	NA
				08/21/16	0.0	98.64	96.98	2,083.66	17.56
				11/28/16	0.1	105.67	104.01	2,076.63	-7.03
				02/20/17	0.0	100.73	99.07	2,081.57	4.94
				12/06/17	0.0	56.76	55.10	2,125.54	43.97
MW-4	Glaciofluvial	2,161.27	2,160.44	11/18/15	NM	Dry	>48	<2112.44	NA
				08/21/16	0.0	Dry	>48	<2112.44	NA
				11/28/16	0.0	Dry	>48	<2112.44	NA
				02/20/17	0.0	Dry	>48	<2112.44	NA
				12/06/17	0.0	28.65	27.82	2,132.62	>20.18

Well Number	Aquifer	Top of Casing Elevation[1] (feet)	Ground Surface Elevation[1] (feet)	Date Measured	Well Headspace (ppm)	Depth to Groundwater (feet bpvc)[2]	Depth to Groundwater (feet bg)[3]	Groundwater Elevation[1] (feet)	Change in Groundwater Elevation[4] (feet)
MW-4A	Glaciofluvial	2,159.26	2,157.81	11/18/15	0.0	79.44	77.99	2,079.82	NA
				08/21/16	0.0	64.15	62.70	2,095.11	15.29
				11/28/16	0.3	63.65	62.20	2,095.61	0.50
				02/20/17	0.0	57.88	56.43	2,101.38	5.77
				12/06/17	0.0	26.12	24.67	2,133.14	31.76
MW-5	Glaciofluvial	2,187.91	2,188.01	11/18/15	0.0	Dry	>119	<2069.01	NA
				08/21/16	0.0	110.58	110.68	2,077.33	>8.32
				11/28/16	0.0	Dry	>119	<2069.01	<-8.32
				02/20/17	0.0	112.33	112.43	2,075.58	>6.57
				12/06/17	0.0	67.03	67.13	2,120.88	45.30
MW-5A	Glaciofluvial	2,187.46	2,186.15	11/18/15	0.0	126.18	124.86	2,061.28	NA
				08/21/16	0.0	109.97	108.65	2,077.49	16.21
				11/28/16	0.2	117.40	116.08	2,070.06	-7.43
				02/20/17	0.0	112.99	111.67	2,074.47	4.41
				12/07/17	0.0	66.42	65.10	2,121.04	46.57
MW-6	Basement	2,180.72	2,178.80	Not Found					
MW-7A	Basement	2,321.50	2,320.30	Not Found					
MW-7B	Basement	2,327.48	2,327.00	11/18/15	0.0	225.94	225.46	2,101.54	NA
				08/21/16	0.0	220.81	220.33	2,106.67	5.13
				11/28/16	0.4	224.02	223.54	2,103.46	-3.21
				02/20/17	0.0	223.05	222.57	2,104.43	0.97
				12/06/17	0.0	196.60	196.12	2,130.88	26.45
MW-7C	Basement	2,320.70	2,318.60	Not Found					
MW-7D	Basement	2,331.70	2,329.02	11/18/15	0.0	221.25	218.57	2,110.45	NA
				08/21/16	0.0	218.20	215.52	2,113.50	3.05
				11/28/16	0.2	220.43	217.75	2,111.27	-2.23
				02/20/17	0.0	220.42	217.74	2,111.28	0.01
				12/06/17	0.0	199.59	196.91	2,132.11	20.83
MW-8A	Basement	2,139.65	2,138.32	11/18/15	0.0	84.65	83.32	2,055.00	NA
				08/21/16	0.0	69.00	67.67	2,070.65	15.65
				11/28/16	0.0	76.93	75.60	2,062.72	-7.93
				02/20/17	0.0	72.26	70.93	2,067.39	4.67
				12/06/17	0.0	22.35	21.02	2,117.30	49.91

Well Number	Aquifer	Top of Casing Elevation[1] (feet)	Ground Surface Elevation[1] (feet)	Date Measured	Well Headspace (ppm)	Depth to Groundwater (feet bpvc)[2]	Depth to Groundwater (feet bg)[3]	Groundwater Elevation[1] (feet)	Change in Groundwater Elevation[4] (feet)
MW-8B	Glaciofluvial	2,139.56	2,137.34	11/18/15	0.0	84.85	82.63	2,054.71	NA
				08/21/16	0.0	69.14	66.92	2,070.42	15.71
				11/28/16	0.0	76.74	74.52	2,062.82	-7.60
				02/20/17	0.0	72.12	69.90	2,067.44	4.62
				12/06/17	0.0	22.19	19.97	2,117.37	49.93
MW-9A	Glaciofluvial	2,156.97	2,155.28	11/18/15	0.0	Dry	>68.5	<2086.78	NA
				08/21/16	0.0	60.62	58.93	2,096.35	>9.57
				11/28/16	0.0	57.96	56.27	2,099.01	2.66
				02/21/17	0.0	47.51	45.82	2,109.46	10.45
				12/06/17	0.0	22.34	20.65	2,134.63	25.17
MW-11A	Weathered Basement	2,324.51	2,323.58	11/18/15	0.0	227.97	227.04	2,096.54	NA
				08/21/16	0.0	211.85	210.92	2,112.66	16.12
				11/28/16	0.0	221.02	220.09	2,103.49	-9.17
				02/20/17	0.0	217.38	216.45	2,107.13	3.64
				12/06/17	0.0	181.81	180.88	2,142.70	35.57
MW-12A	CRBG	2,353.36	2,351.11	11/18/15	0.0	117.93	115.68	2,235.43	NA
				08/21/16	0.0	112.46	110.21	2,240.90	5.47
				11/28/16	7.2	113.83	111.58	2,239.53	-1.37
				02/20/17	1.0	111.05	108.80	2,242.31	2.78
				12/06/17	0.6	114.69	112.44	2,238.67	-3.64
MW-14	Glaciofluvial	2,313.83	2,310.99	11/18/15	0.0	232.18	229.35	2,081.65	NA
				08/21/16	0.0	213.25	210.42	2,100.58	18.93
				11/28/16	0.1	221.43	218.60	2,092.40	-8.18
				02/20/17	0.0	217.25	214.42	2,096.58	4.18
				12/06/17	0.0	180.59	177.76	2,133.24	36.66
MW-15	Glaciofluvial	2,236.04	2,233.52	11/18/15	0.3	172.62	170.10	2,063.42	NA
				08/21/16	0.0	155.33	152.81	2,080.71	17.29
				11/28/16	0.4	162.70	160.18	2,073.34	-7.37
				02/20/17	0.0	157.67	155.15	2,078.37	5.03
				12/06/17	0.0	112.64	110.12	2,123.40	45.03

Well Number	Aquifer	Top of Casing Elevation[1] (feet)	Ground Surface Elevation[1] (feet)	Date Measured	Well Headspace (ppm)	Depth to Groundwater (feet bpvc)[2]	Depth to Groundwater (feet bg)[3]	Groundwater Elevation[1] (feet)	Change in Groundwater Elevation[4] (feet)
MW-15A	Glaciofluvial	2,237.26	2,234.29	11/18/15	0.0	173.51	170.54	2,063.75	NA
				08/21/16	0.0	156.55	153.58	2,080.71	16.96
				11/28/16	1.2	163.86	160.89	2,073.40	-7.31
				02/20/17	2.9	158.90	155.93	2,078.36	4.96
				12/06/17	0.8	113.85	110.88	2,123.41	45.05
MW-16	Glaciofluvial	2,170.24	2,167.61	11/18/15	0.0	Dry	>86.5	<2081.11	NA
				08/21/16	0.0	76.69	74.05	2,093.55	>12.45
				11/28/16	0.0	78.18	75.54	2,092.06	-1.49
				02/20/17	0.0	73.09	70.45	2,097.15	5.09
				12/06/17	0.0	38.59	35.95	2,131.65	34.50
MW-16A	Basement	2,167.89	2,165.04	11/18/15	0.0	90.26	87.41	2,077.63	NA
				08/21/16	0.0	74.23	71.38	2,093.66	16.03
				11/28/16	0.2	75.70	72.85	2,092.19	-1.47
				02/20/17	0.1	70.58	67.73	2,097.31	5.12
				12/06/17	0.0	36.11	33.26	2,131.78	34.47

Notes:

[1]Groundwater elevations are referenced to NAVD88 datum.

[2]Depth to groundwater in this column is referenced to the top of PVC well casing (bpvc).

[3]Depth to groundwater in this column is referenced to existing site grade (bg).

[4]Change in groundwater elevation referenced to previous measurement.

NA = not applicable; NM = not measured; ppm = parts per million

Table 21

Summary of Cleanup Levels

Marshall Landfill Site

Spokane County, Washington

Analyte	Groundwater	Air	Basis for Cleanup Level
Groundwater			
2,6-dinitrotoluene	0.058 µg/L	na	Method B
Bis(2-ethylhexyl)phthalate	6.0 µg/L	na	MCL
Cadmium	5.0 µg/L	na	MCL
Cyanide	9.6 µg/L	na	Method B
Lead	15 µg/L	na	MCL
MCPA	8.0 µg/L	na	Method B
MCPP	16 µg/L	na	Method B
Nitrate	10,000 µg/L	na	MCL
Air			
1,2-dichloroethane	na	0.096 $\mu g/m^3$	Method B
1,2,4-trimethylbenzene	na	3.2 $\mu g/m^3$	Method B
1,3-butadiene	na	0.083 $\mu g/m^3$	Method B
1,4-dichlorobenzene	na	0.23 $\mu g/m^3$	Method B
1,4-dioxane	na	0.5 $\mu g/m^3$	Method B
Benzene	na	0.32 $\mu g/m^3$	Method B
Benzyl chloride	na	0.051 $\mu g/m^3$	Method B
Chloroethane	na	4,570 $\mu g/m^3$	Method B
Naphthalene	na	0.074 $\mu g/m^3$	Method B
Trichloroethene	na	0.37 $\mu g/m^3$	Method B
Vinyl chloride	na	0.28 $\mu g/m^3$	Method B
Xylenes	na	46 $\mu g/m^3$	Method B
Landfill Gas			
Methane - onsite structures	na	1.25 percent	WAC 173-304-460
Methane - property boundary	na	5 percent	WAC 173-304-460
Methane - offsite structures	na	100 ppmv	WAC 173-304-460

Notes:

MCL = maximum contaminant level; obtained from CLARC Master Spreadsheet dated July 2015.

Method B = MTCA Method B drinking water or air cleanup levels; obtained from CLARC Master Spreadsheet dated July 2015.

na = compound is not an indicator hazardous substance for this medium, therefore, no cleanup level is needed.

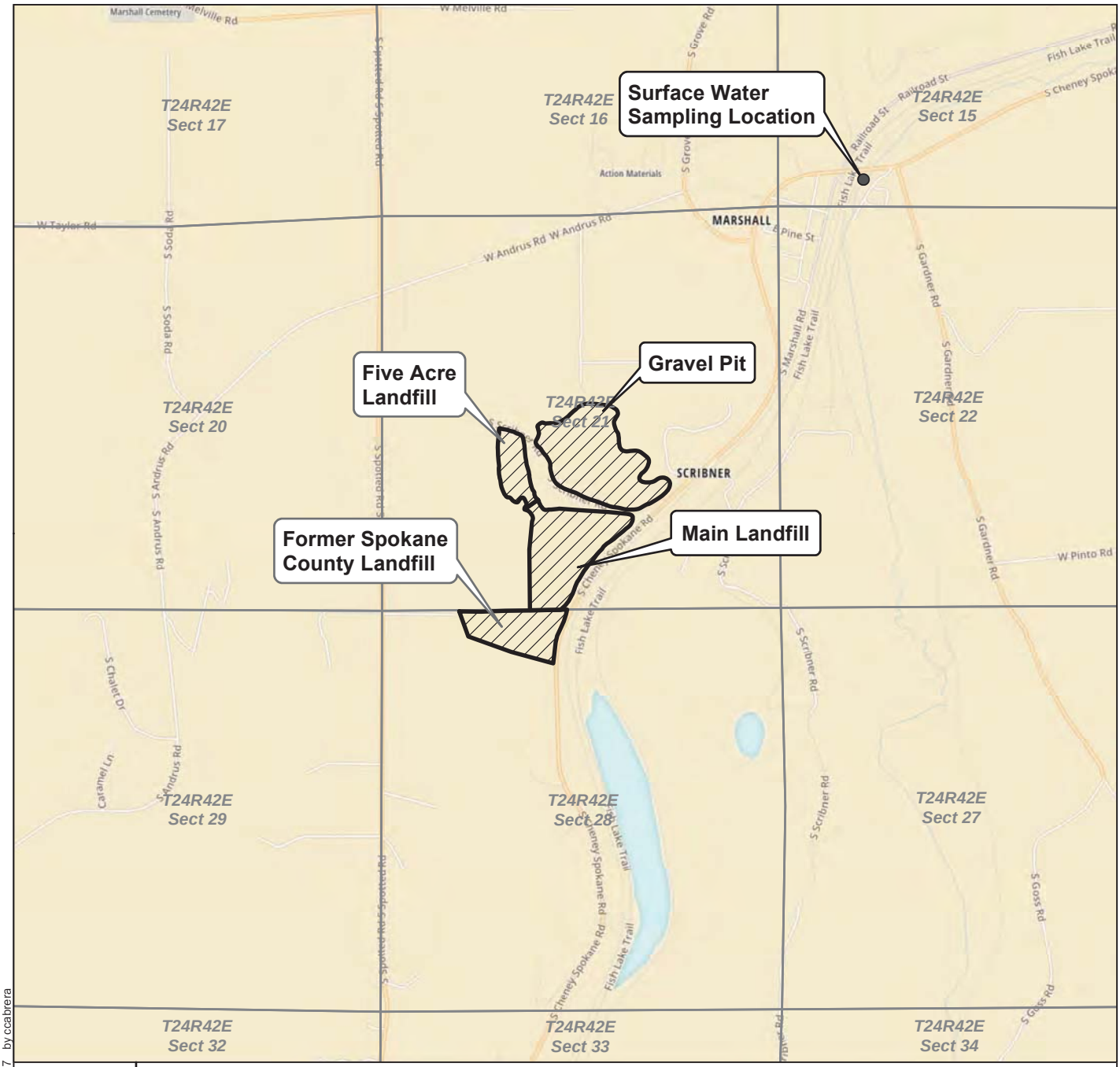
ppmv = parts per million by volume

µg/L = microgram per liter

$\mu g/m^3$ = microgram per cubic meter

FIGURES

GeoEngineers





N
W E
S

2,000 0 2,000
Feet

Notes:

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Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 11N

Vicinity Map

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 1

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Legend

- MW-7D — Monitoring Well (installed by GeoEngineers) Designation and Approximate Location
- MW-1A — Monitoring Well (installed by others) Designation and Approximate Location
- Marshall Landfill — Marshall Landfill Groundwater Supply Well Approximate Location
- Countryman A & D — Private and/or Community Well Designation and Approximate Location (Fetrow Engineering, 1991)
- CH-1 — Abandoned Exploratory Boring and Approximate Location (Fetrow Engineering, 1991)
- Ephemeral Stream
- Approximate Landfill Boundaries[3]
- Approximate Limits of Adjacent Landfill or Mining Land Use[3]

N W E S

400 0 400
Feet

Data Source: Aerial from ESRI Data Online. Water features from PNW Hydrography.

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

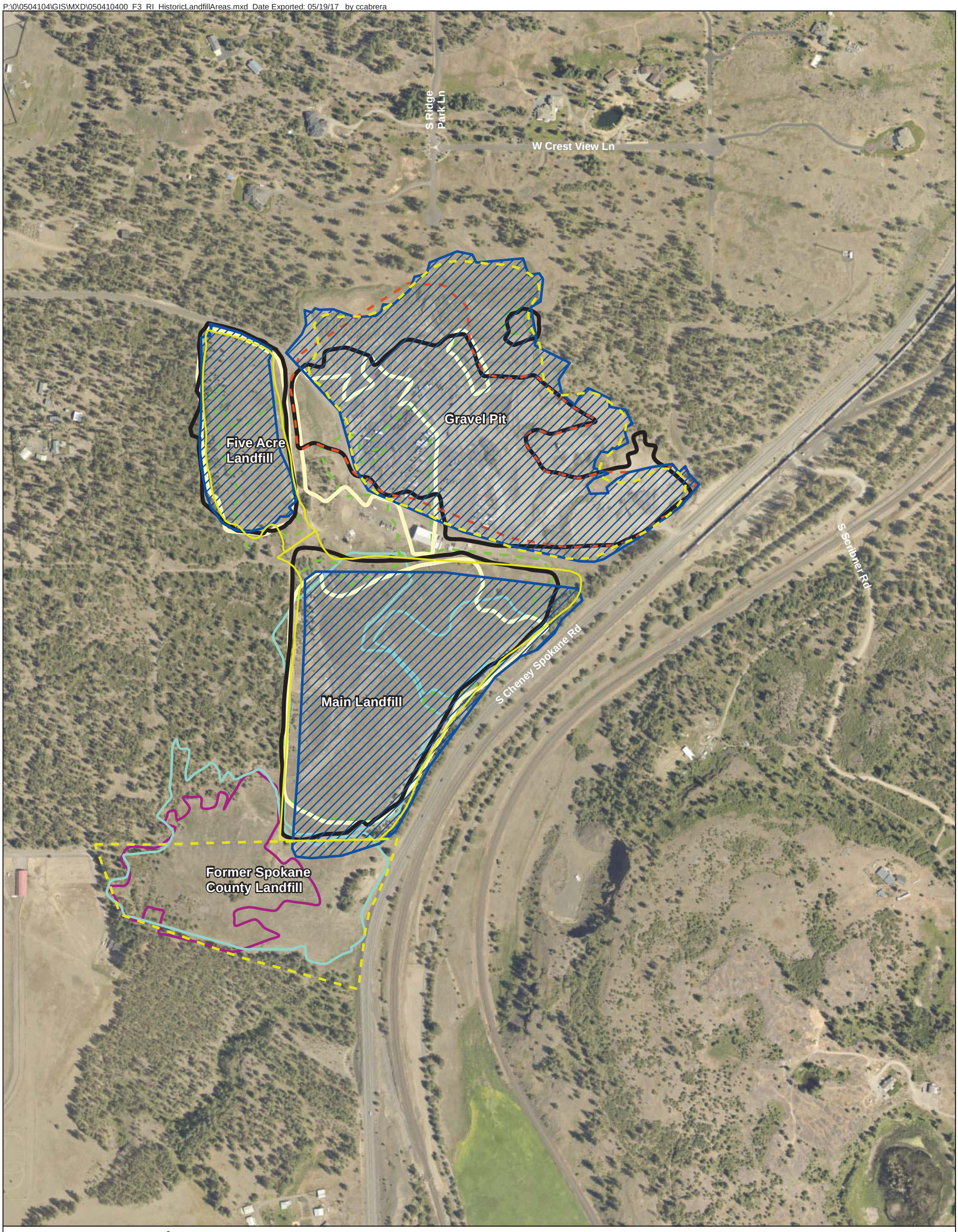
Site Plan and Monitoring Well Map

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 2

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[3]

Approximate Areas of Disturbed Land

2011 | 1992 | 1974 | Approximate Landfill Boundaries[4]

2000 | 1986 | 1968 | Approximate Limits of Adjacent Landfill or Mining Land Use[4]

1994 | 1979

*Layers not shown for a specific landfill area indicate the disturbed area did not vary from an earlier aerial photograph.

N
W E
S

450 0 450

Feet

Notes:

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3. Areas of disturbed land were approximated based on examination of Washington State Department of Natural Resources Aerial Photographs taken during the specified years.
4. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1941) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).

Data Source: ArcGIS Online; Aerial photograph from ESRI Data Online 2014.

Projection: NAD 1983 UTM Zone 11N

Historic Limits of Disturbed Land

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 3



Legend

MW-1A — Monitoring Well Number and Approximate Location

Ephemeral Stream

Approximate Landfill Boundaries[5]

Approximate Limits of Adjacent Landfill or Mining Land Use[5]

Peak Historical Contaminant Levels (PGG, 2005; LAWS, 2010)

- 1,1,1-TCA (Screening Level: 200 ug/L)
- 1,1-DCA (Screening Level: 1 ug/L)
- PCE (Screening Level: 0.8 ug/L)
- 1,1 DCE (Screening Level: 7 ug/L)
- Dichloromethane (Screening Level: 5 ug/L)
- CFC-11 (No Screening Level Established: red = detected; green = not detected)

- Exceed Cleanup Criteria Between 1989-2005
- Less Than Cleanup Criteria Between 1989-2005
- Not Tested
- Exceed Cleanup Criteria Between 1991-2005, Less Than Cleanup Criteria in June 2010

N W E S

400 0 400

Feet

Data Source: Aerial from ESRI Data Online. Water features from PNW Hydrography.

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Screening Criteria based on WAC 173-200 standards.
4. Method reporting limit for Dichloromethane was greater than the screening level during some groundwater sampling events.
5. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1941) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).
6. PGG = Pacific Groundwater Group; LAWS = Land and Water Services, Inc.; VOC = Volatile Organic Compounds; 1,1,1–TCA = trichloroethane; 1,1–DCA = 1,1–dichloroethane; PCE = tetrachloroethane; 1,1–DCE= dichloroethene; CFC–11 = Trichlorofluoromethane.
Projection: NAD 1983 UTM Zone 11N

Historic Data Primary VOC Groundwater Contaminants

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 4

Office: PORT Path: P:\0\0504104\GIS\MXD\050410400_F05_SecondaryVOC.mxd Map Revised: 06 October 2017 ccabrera



Legend

MW-1A — Monitoring Well Number and Approximate Location

Ephemeral Stream

Approximate Landfill Boundaries[9]

Approximate Limits of Adjacent Landfill or Mining Land Use[9]

Peak Historical Contaminant Levels (PGG, 2005; LAWS, 2010)

- 1, 2-DCA (Screening Level: 0.5 ug/L)
- TCE (Screening Level: 3 ug/L)
- cis-1, 2-DCE (Screening Level: 70 ug/L)
- Total 1, 2 DCE (No Screening Level Established: red = detected; green = not detected)
- 1, 2-Dichloropropane (Screening Level: 0.5 ug/L)
- Chloroform (Screening Level: 70 ug/L)
- Benzene (Screening Level: 1 ug/L)

- Exceed Cleanup Criteria Between 1989-2005
- Less Than Cleanup Criteria Between 1989-2005
- Exceed Cleanup Criteria Between 1991-2005, Less Than Cleanup Criteria in June 2010

N W E S

400 0 400
Feet

Data Source: Aerial from ESRI Data Online. Water features from PNW Hydrography.

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Screening Criteria based on WAC 173-200 standards.
4. Method reporting limit (MRL) for 1,2-dichloroethane was greater than the screening level during some groundwater sampling events.
5. MRL for 1 2-Dichloropropane was greater than the screening level during some groundwater sampling events.
6. MRL for 1,2-DCA was greater than the screening level during some groundwater sampling events.
7. MRL for TCE was greater than the screening level during some groundwater sampling events.
8. MRL for Benzene was greater than the screening level during some groundwater sampling events.
9. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).
10. PGG = Pacific Groundwater Group; LAWS = Land and Water Services, Inc.; VOC = Volatile Organic Compounds; 1, 2-DCA = 1,2-dichloroethane; TCE = Trichloroethylene; cis-1, 2-DCE = cis-1,2-Dichloroethene; Total 1, 2 DCE = 1,2-Dichloroethene.

Projection: NAD 1983 UTM Zone 11N

Historic Data Secondary VOC Groundwater Contaminants

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 5

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Legend

MW-1A — Groundwater Monitoring Well Designation and Approximate Location

LFB-3 — Land Fill Gas Monitoring Well and Approximate Location

LFB-13 — Soil Boring Designation and Approximate Location

TPC-1 — Test Pit Designation and Approximate Location

Approximate Boundary of Main Landfill[3]

Ephemeral Stream

N W E S

200 0 200

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Landfill boundaries have been modified with respect to Fetrow Engineering (1991) based on Remedial Investigation explorations.

Data Source: Street labels and parcels from Spokane County GIS.

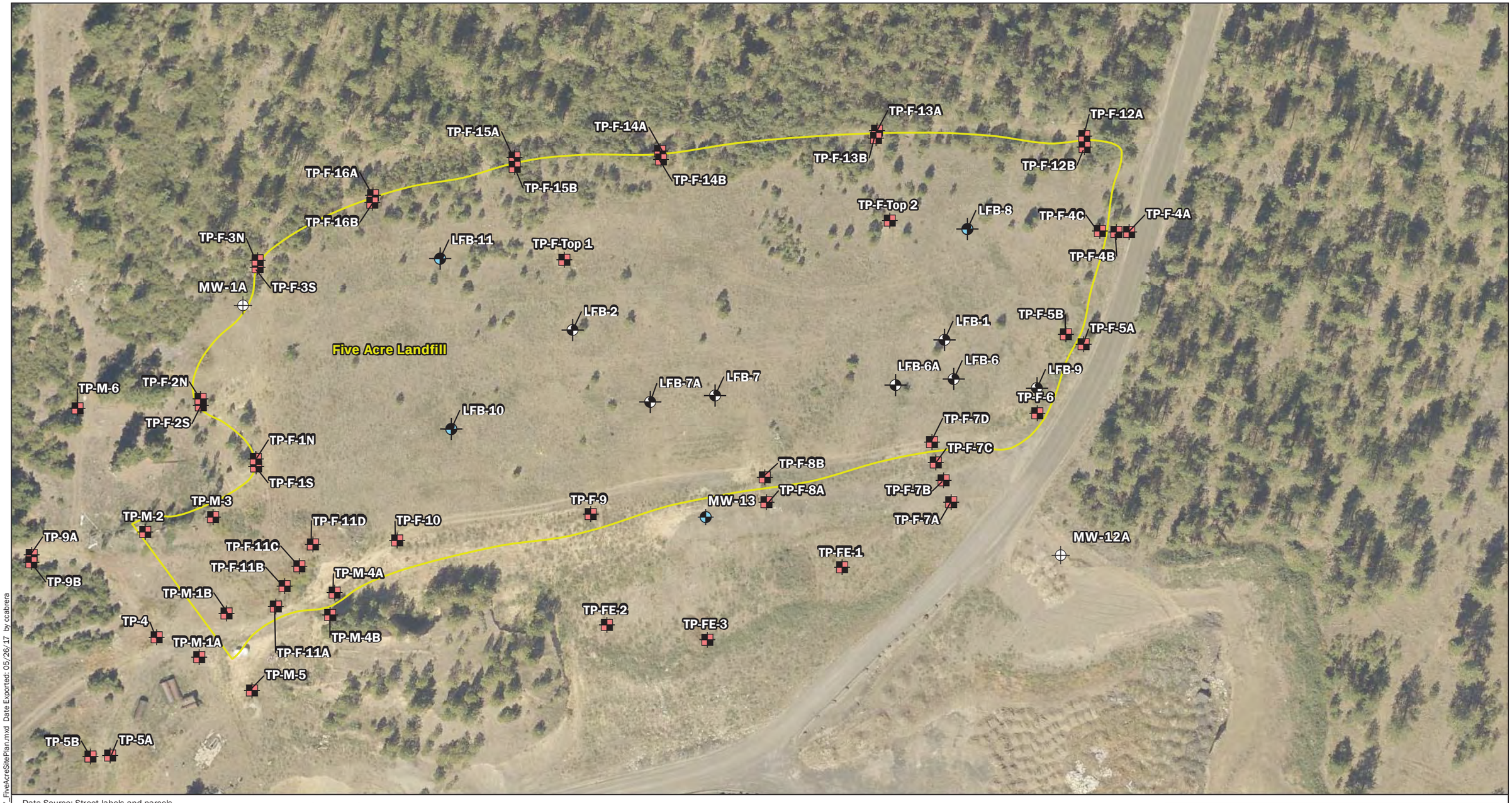
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Main Landfill Explorations

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 6



Data Source: Street labels and parcels from Spokane County GIS.
Boundary Lines from TD&H survey (May, 2015)

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
4. Landfill boundaries have been modified with respect to Fetrow Engineers (1991) based on Remedial Investigation explorations.

Projection: NAD 1983 UTM Zone 11N

Legend

- MW-1A — Groundwater Monitoring Well Designation and Approximate Location
- LFB-8 — Landfill Gas Monitoring Well Designation and Approximate Location
- LFB-1 — Soil Boring Designation and Approximate Location
- TP-4 — Test Pit Designation and Approximate Location
- Approximate Boundary of Five Acre Landfill[4]

W E S N

100 0 100
Feet

Five Acre Landfill Explorations

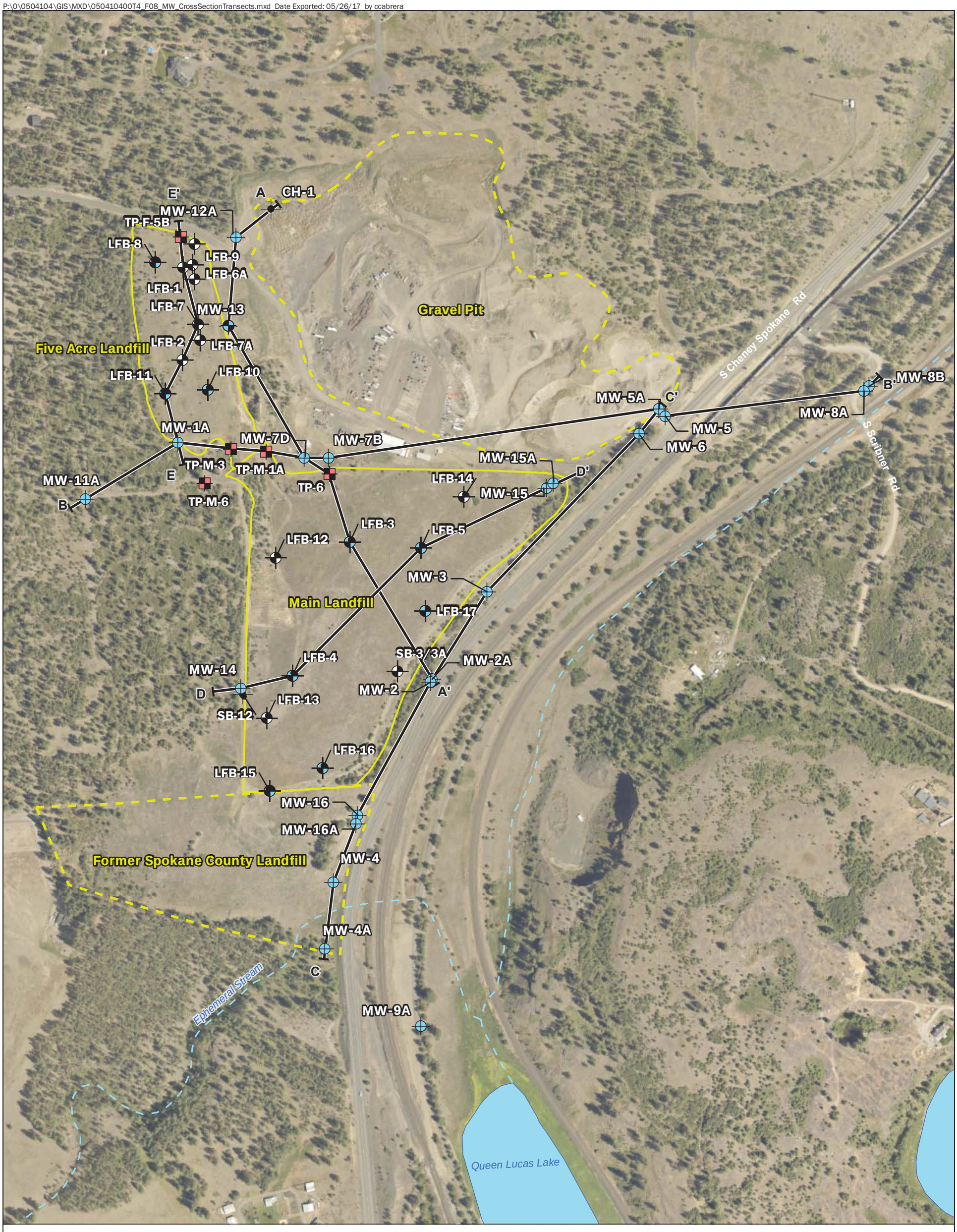
Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 7

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Legend

- MW-7D — Monitoring Well (installed by GeoEngineers) Designation and Approximate Location
- LFB-3 — Landfill Gas Monitoring Well Designation and Approximate Location
- A — A' — Cross Section Transect
- CH-1 — Abandoned Exploratory Boring and Approximate Location (Fetrow Engineering, 1991)
- LFB-1 — Soil Boring Designation and Approximate Location
- TP-M-1A — Test Pit Designation and Approximate Location
- Approximate Landfill Boundaries[3]
- Approximate Limits of Adjacent Landfill or Mining Land Use[3]
- Ephemeral Stream

N W E S

400 0 400
Feet

Data Source: Aerial from ESRI Data Online. Water features from PNW Hydrography.
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).

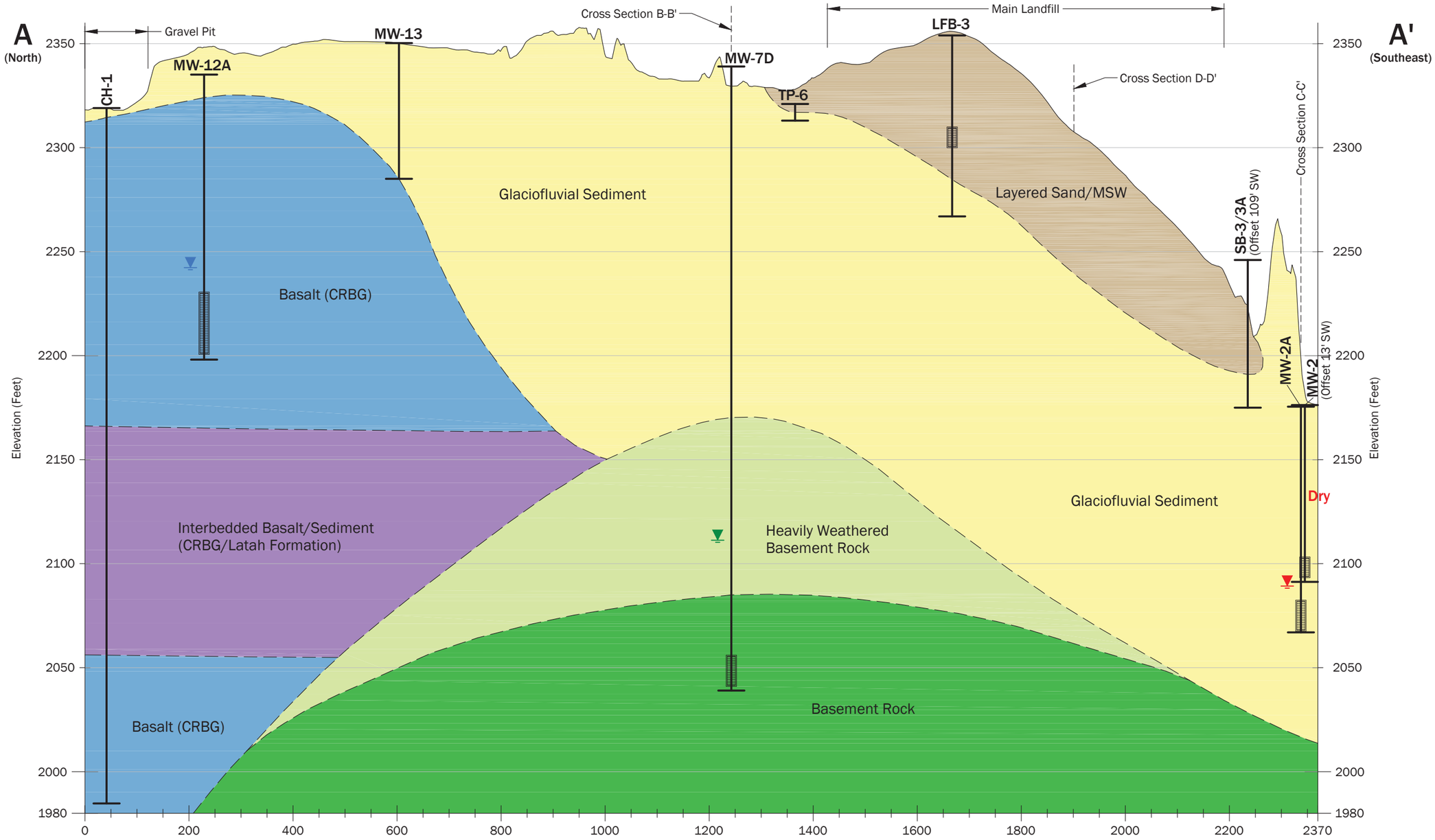
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Cross Section Transects

Marshall Landfill
Spokane County, Washington

GeoEngineers

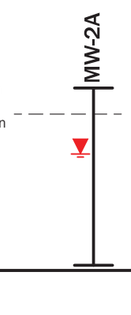
Figure 8



Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. CRBG = Columbia River Basalt Group; MSW = Municipal Solid Waste.
4. The ground surface elevation profile shown in this cross section was adapted from a LiDAR survey conducted by Hayes and James during December 2014. Irregularities in the profile primarily were caused by trees and other vegetation.

Datum: NAVD 88, unless otherwise noted.



Legend

- Monitoring Well
- Inferred Soil Contact
- Groundwater Level (2/20/17)
  - Glaciofluvial Unit
  - CRBG Unit
  - Basement Rock Unit
- Layered Sand/MSW
- Glaciofluvial Sediment
- Basalt (CRBG)
- Interbedded Basalt/Sediment (CRBG/Latah Formation)
- Heavily Weathered Basement Rock
- Basement Rock
- Well Screen

200 0 200
Horizontal Scale in Feet

50 0 50
Vertical Scale in Feet
Vertical Exaggeration: 4X

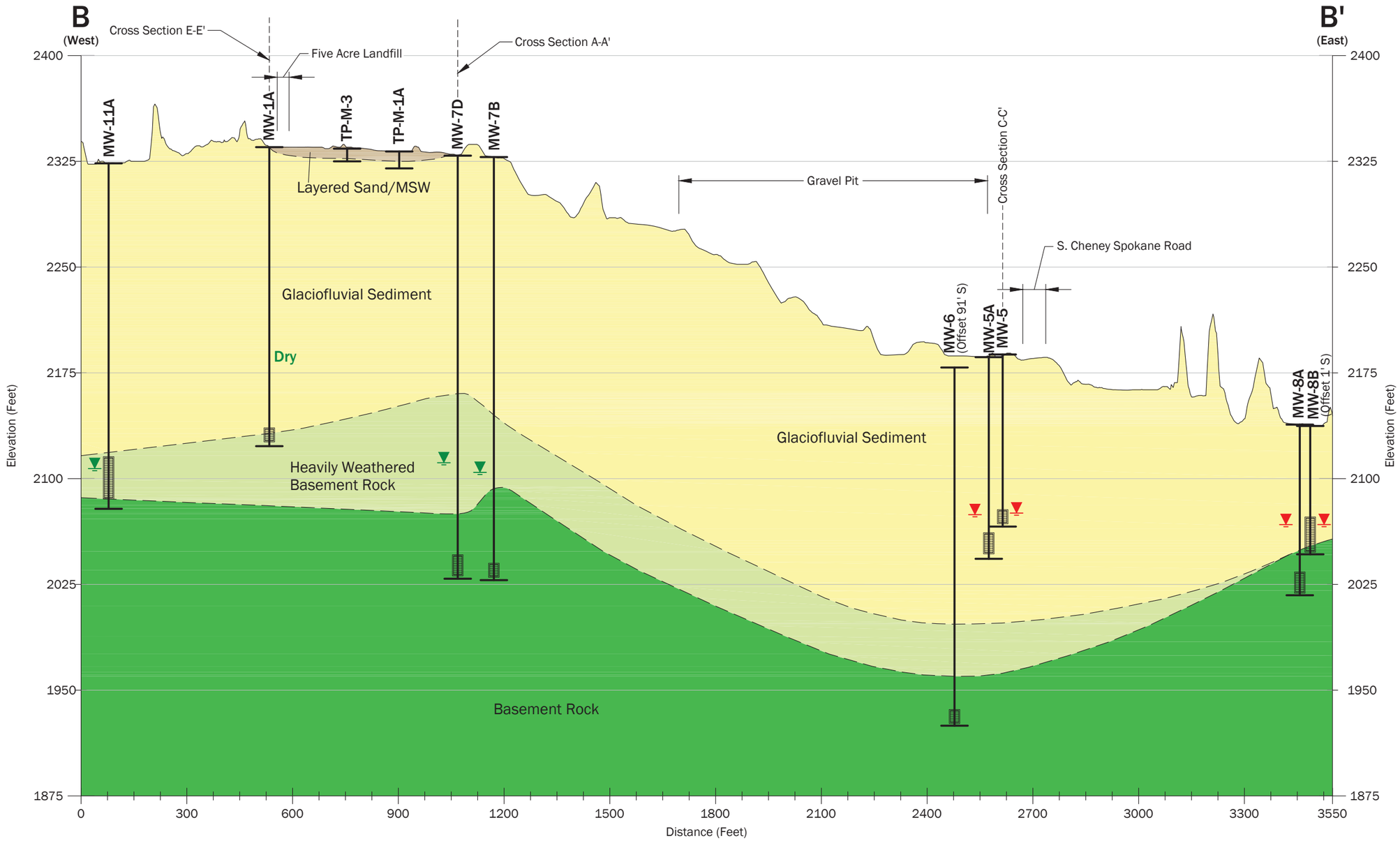
Cross Section A - A'

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 9

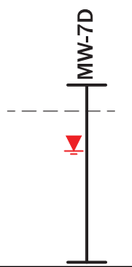
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Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. MSW = Municipal Solid Waste.
4. The ground surface elevation profile shown in this cross section was adapted from a LiDAR survey conducted by Hayes and James during December 2014. Irregularities in the profile primarily were caused by trees and other vegetation.

Datum: NAVD 88, unless otherwise noted.



Legend

- Monitoring Well
- Inferred Soil Contact
- Groundwater Level (2/20/17)
  - Glaciofluvial Unit
  - Basement Rock Unit
- Layered Sand/MSW
- Glaciofluvial Sediment
- Heavily Weathered Basement Rock
- Basement Rock
- Well Screen

300 0 300
Horizontal Scale in Feet

75 0 75
Vertical Scale in Feet
Vertical Exaggeration: 4X

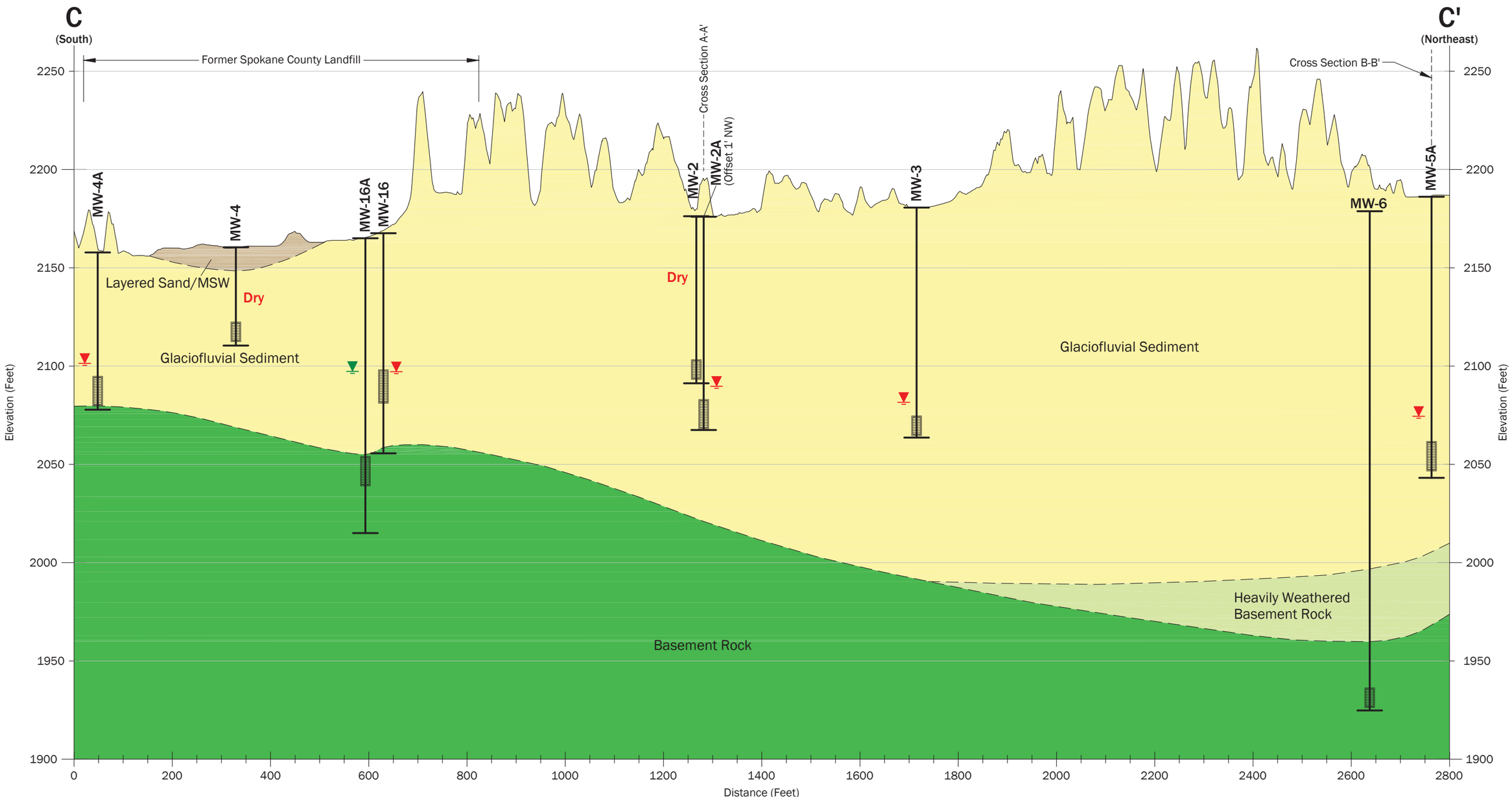
Cross Section B - B'

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 10

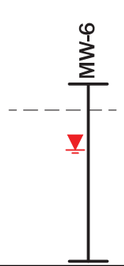
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Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. MSW = Municipal Solid Waste.
4. The ground surface elevation profile shown in this cross section was adapted from a LiDAR survey conducted by Hayes and James during December 2014. Irregularities in the profile primarily were caused by trees and other vegetation.

Datum: NAVD 88, unless otherwise noted.



Legend

- Monitoring Well
- Inferred Soil Contact
- Groundwater Level (2/20/17)
  - Glaciofluvial Unit
  - Basement Rock Unit
- Layered Sand/MSW
- Glaciofluvial Sediment
- Heavily Weathered Basement Rock
- Basement Rock
- Well Screen

200 0 200
Horizontal Scale in Feet

50 0 50
Vertical Scale in Feet
Vertical Exaggeration: 4X

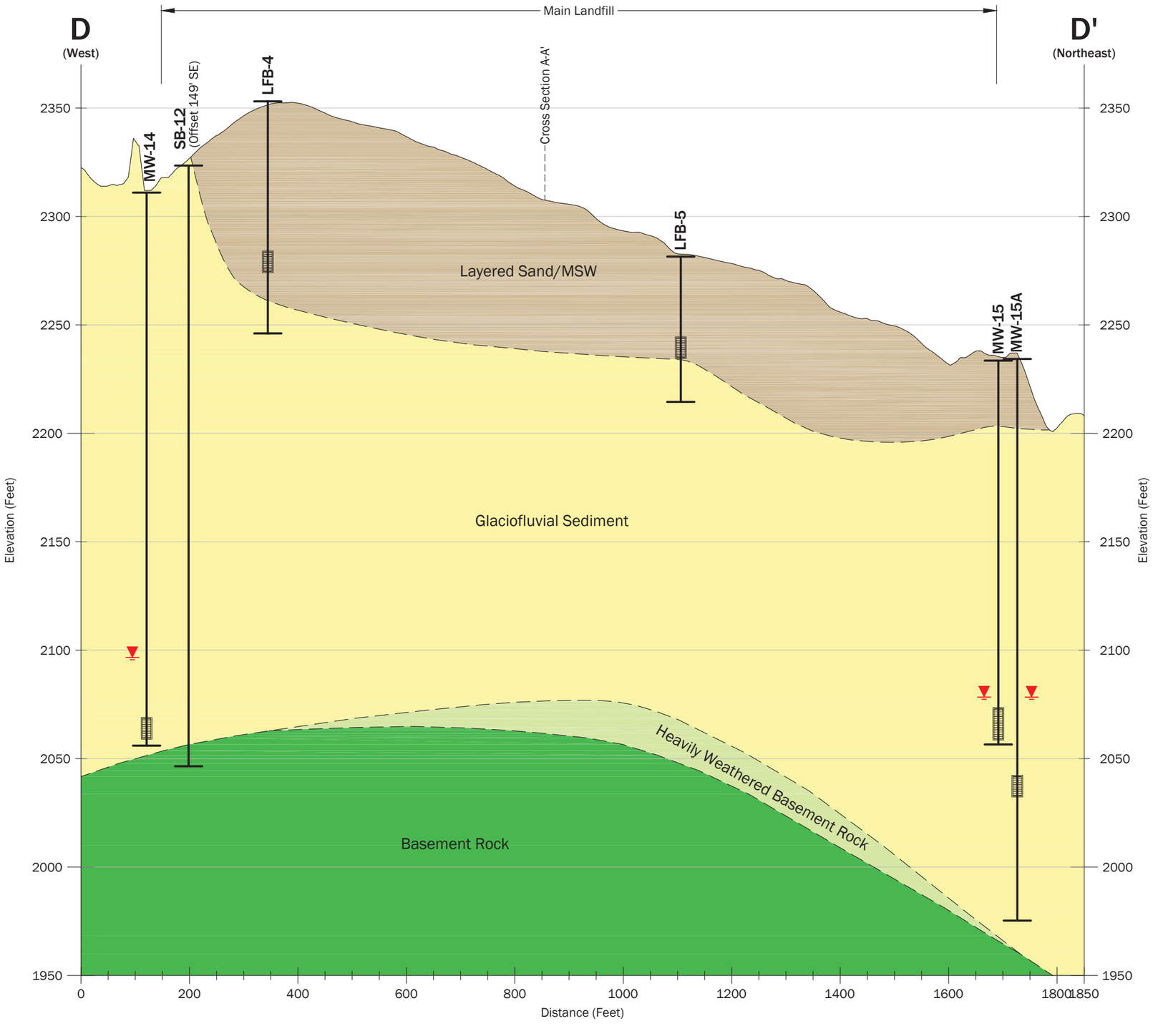
Cross Section C - C'

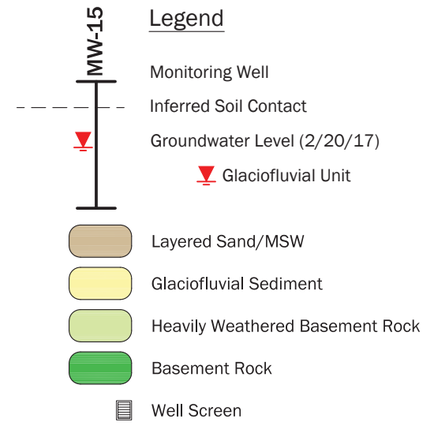
Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 11

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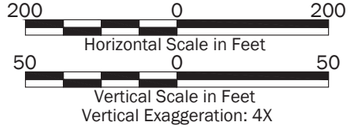




Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. CRBG = Columbia River Basalt Group; MSW = Municipal Solid Waste.
4. The ground surface elevation profile shown in this cross section was adapted from a LiDAR survey conducted by Hayes and James during December 2014. Irregularities in the profile primarily were caused by trees and other vegetation.

Datum: NAVD 88, unless otherwise noted.



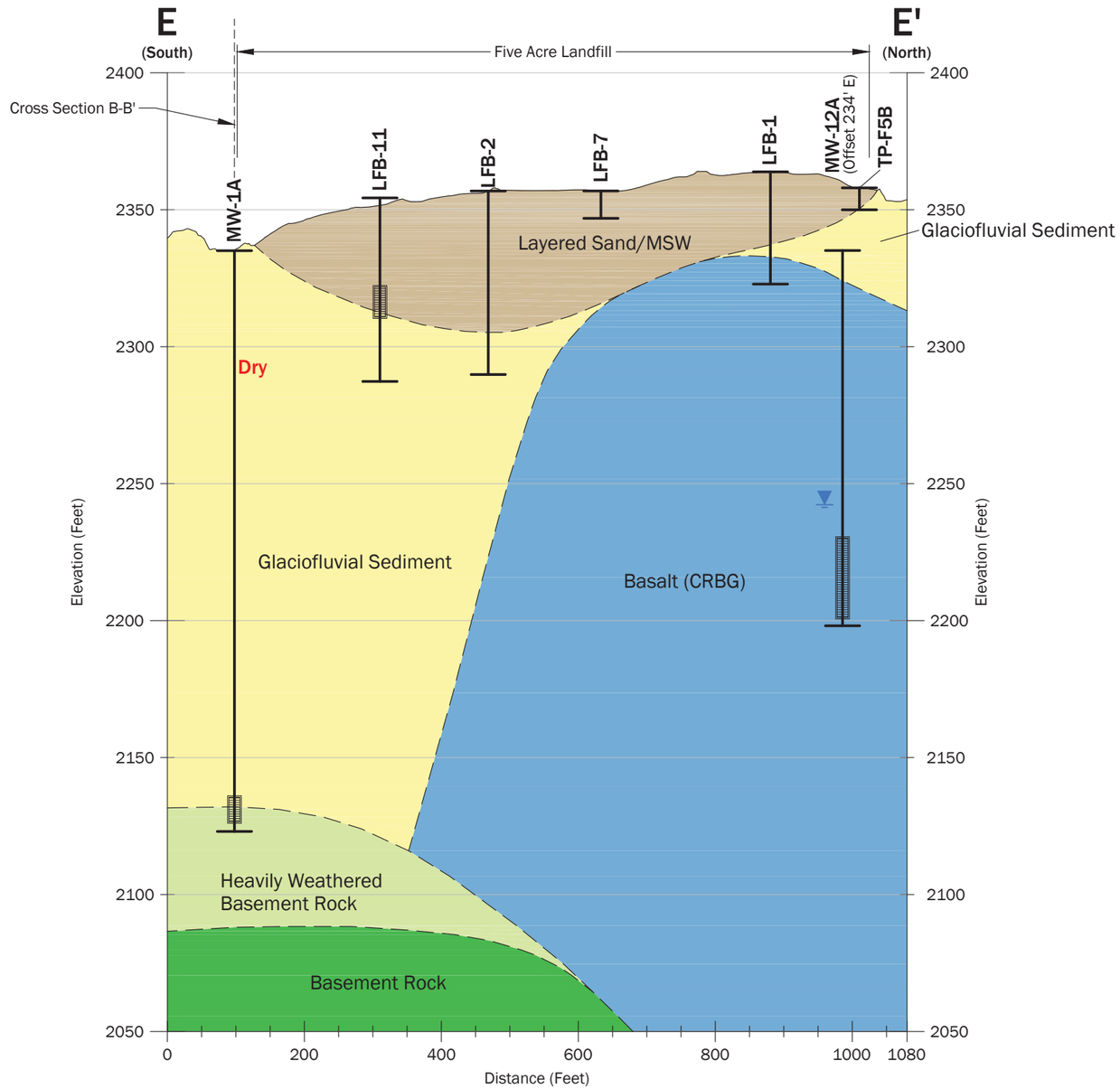
Cross Section D - D'

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 12

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Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. CRBG = Columbia River Basalt Group; MSW = Municipal Solid Waste.
4. The ground surface elevation profile shown in this cross section was adapted from a LiDAR survey conducted by Hayes and James during December 2014. Irregularities in the profile primarily were caused by trees and other vegetation.

Datum: NAVD 88, unless otherwise noted.

LFB-11

Legend

- Monitoring Well
- Inferred Soil Contact
- Groundwater Level (2/20/17)
  - Glaciofluvial Unit
  - CRBG Unit

- Layered Sand/MSW
- Glaciofluvial Sediment
- Basalt (CRBG)
- Heavily Weathered Basement Rock
- Basement Rock
- Well Screen

200 0 200
Horizontal Scale in Feet

50 0 50
Vertical Scale in Feet
Vertical Exaggeration: 4X

Cross Section E - E'

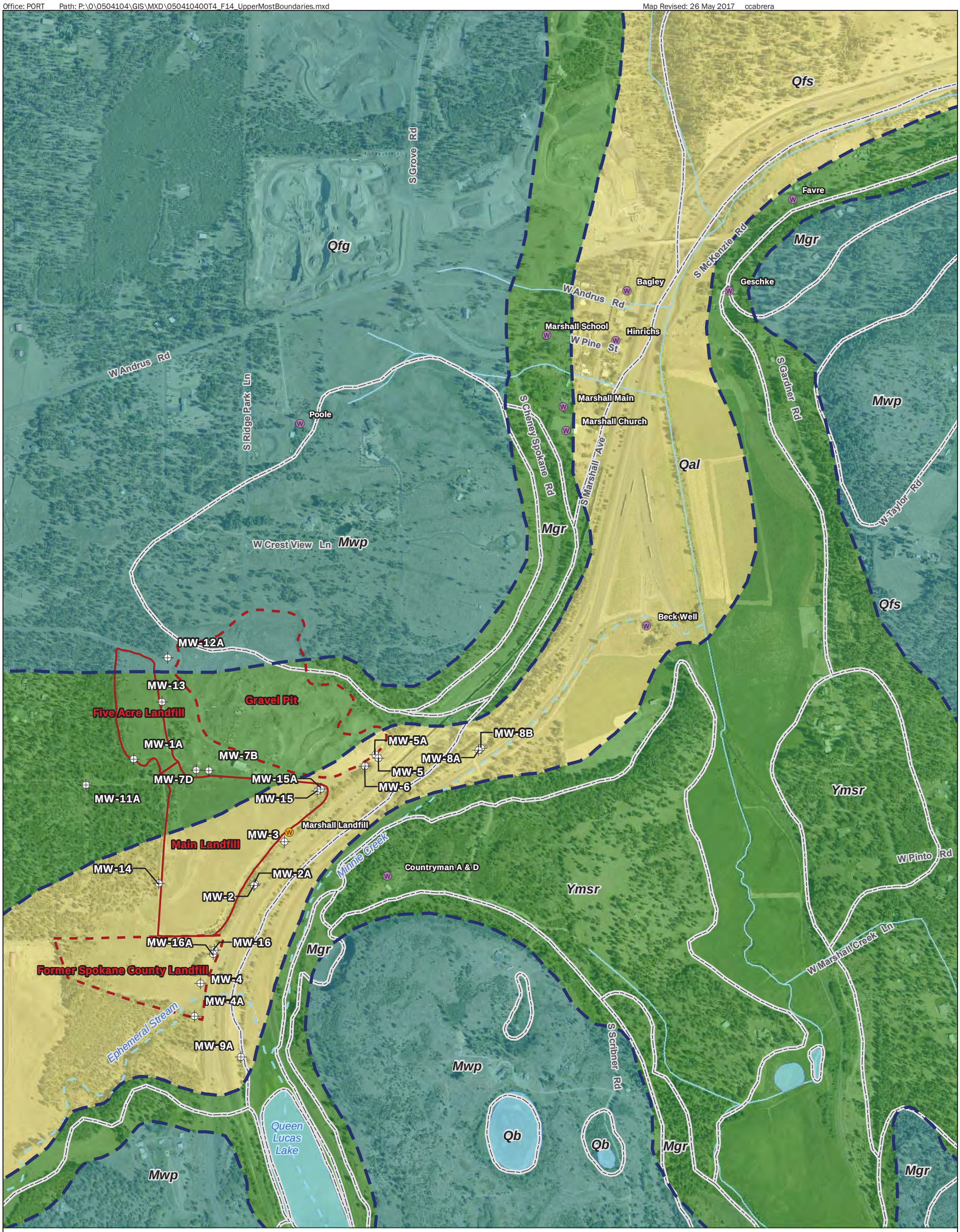
Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 13

P:\0\0504104\CAD\00\RI-FS Report\050410400_F09-F13_Sections AA-EE.dwg TAB:F13 Date Exported: 05/11/17 - 15:04 by syi

Office: PORT Path: P:\0\0504104\GIS\MXD\050410400T4_F14_UpperMostBoundaries.mxd Map Revised: 26 May 2017 ccabrera



Legend

MW-1A — Monitoring Well Number and Approximate Location

Marshall Landfill — Groundwater Supply Well Approximate Location

Countryman A & D — Private and Community Wells Approximate Location (Fetrow Engineering, 1991)

Uppermost Aquifer Units

- Glaciofluvial Unit
- Columbia River Basalt Group (CRBG) Unit
- Basement Rock Unit
- Approximate Uppermost Aquifer Boundary

Geologic Units Boundary (DNR 24k)

Approximate Landfill Boundaries[4]

Approximate Limits of Adjacent Landfill or Mining Land Use[4]

Geologic Unit Classification

Qal: Quaternary alluvium
Qb: Quaternary bog, marsh, swamp, or lake deposits
Qfg: Pleistocene outburst flood deposits
Qfs: Pleistocene outburst flood deposits
Mwp: Miocene Grande Ronde Basalt, CRBG
Mgr: Miocene Wanapum Basalt, CRBG
Ymsr: Precambrian metasedimentary rocks

N W E S

800 0 800
Feet

Data Source: Hillshade from 10 meter DEM. Geology from Washington State DNR, dated November 2016. Hydrology from PNW Hydrography.

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Boundaries of uppermost aquifer adapted from "Approximate Extent of Sand Aquifer", Sheet 10/13, Fetrow Engineering, Inc., June 1991, modified based on Remedial Investigation drilling observations. Boundaries are based on widely spaced water well information and should be considered approximate.
4. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).

Projection: NAD 1983 UTM Zone 11N

Uppermost Aquifer Boundaries

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 14

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MW-12A
(2,235.43)
Gravel Pit
Five Acre Landfill
MW-1A
(2,127.72)
MW-7D
(2,110.45)
MW-7B
(2,101.54)
MW-11A
(2,096.54)
MW-15A
(2,063.75)
MW-15
(2,063.42)
2,060
S Cheney Spokane Rd
MW-5A
(2,061.28)
MW-5
(<2,069.01)
(2,054.71)B
MW-8A
(2,055.00)
S Scribner Rd
2,130
2,070
Main Landfill
MW-3
(2,066.10)
2,080
MW-14
(2,081.65)
MW-2A
(2,072.23)
MW-2
(<2,093.26)
(<2,081.11)
MW-16
MW-16A
(2,077.63)
Former Spokane County Landfill
MW-4
(<2,112.44)
2,140
MW-4A
(2,079.82)
Ephemeral Stream
MW-9A
(<2,086.78)
Queen Lucas Lake

Legend

MW-1A — Monitoring Well Designation and Groundwater Elevation
2,127.72
Aquifer Unit
- Glaciofluvial Unit
- CRBG Unit
- Basement Rock Unit

Glaciofluvial Unit Groundwater Elevation Contours (20-foot Interval)
Glaciofluvial Unit Boundary
Basement Rock Unit Approximate Groundwater Flow Direction
Glaciofluvial Unit Approximate Groundwater Flow Direction

2,130 — Approximate Minnie Creek Streambed Elevation
Ephemeral Stream

Approximate Landfill Boundaries[5]
Approximate Limits of Adjacent Landfill or Mining Land Use[5]

400 0 400
Feet

N W E S

Data Source: Aerial from Spokane County. Water features from PNW Hydrography.
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Elevations are presented relative to the North American Datum of 1988 (NAVD 88)
4. Basement rock unit groundwater flow direction was estimated based on examination of groundwater levels at wells MW-8A, MW-11A, and MW-16A.
5. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1941) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

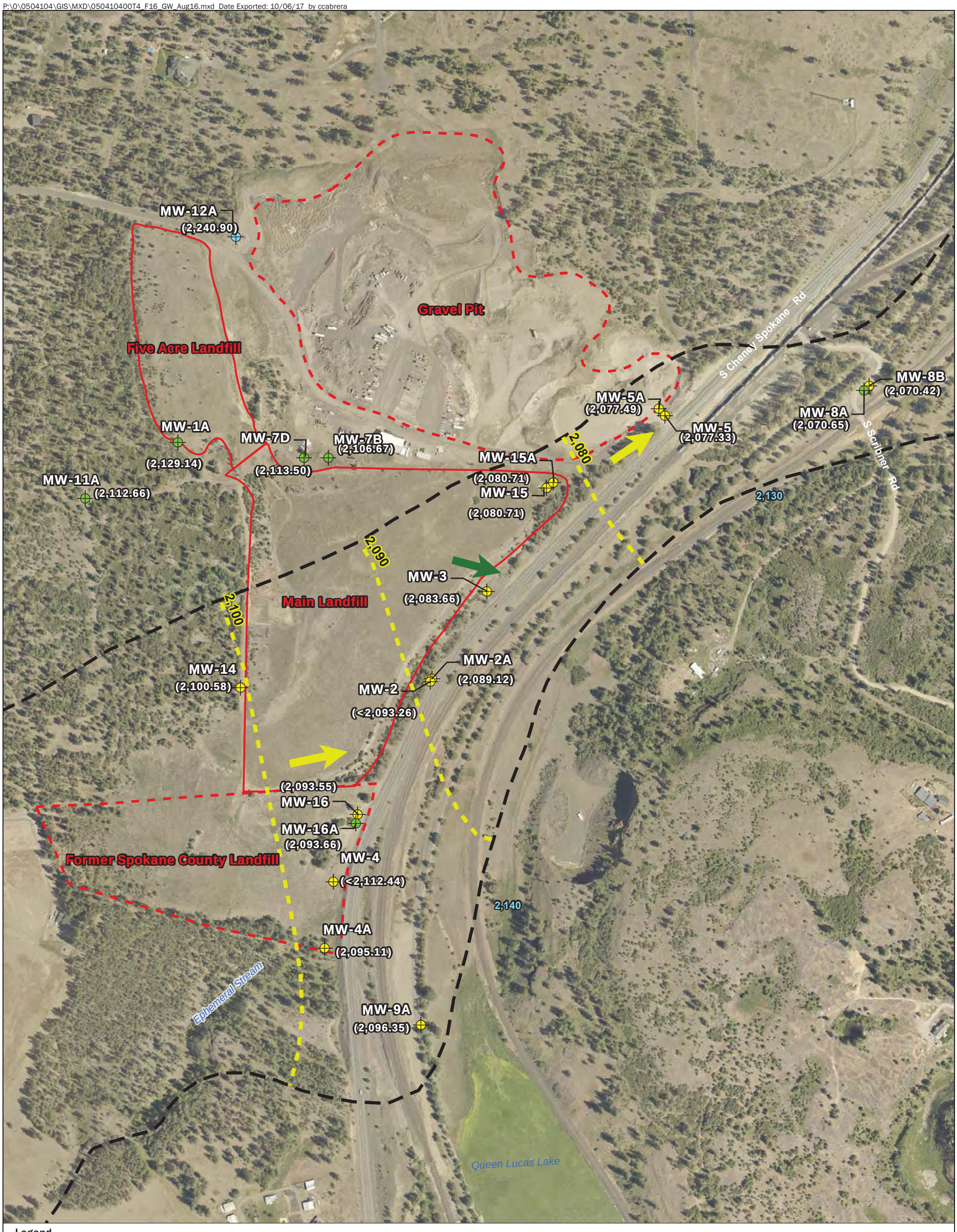
Groundwater Elevations - November 18, 2015

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 15

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Legend

MW-1A
2,129.14
Monitoring Well Designation and Groundwater Elevation

Aquifer Unit

- Glaciofluvial Unit
- CRBG Unit
- Basement Rock Unit

Glaciofluvial Unit Groundwater Elevation Contours (10-foot Interval)

Glaciofluvial Unit Boundary

Basement Rock Unit Approximate Groundwater Flow Direction

Glaciofluvial Unit Approximate Groundwater Flow Direction

2,130 Approximate Minnie Creek Streambed Elevation

Ephemeral Stream

N
W E
S

400 0 400
Feet

Data Source: Aerial from Spokane County. Water features from PNW Hydrography.

Notes:
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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Elevations are presented relative to the North American Datum of 1988 (NAVD 88)
4. Basement rock unit groundwater flow direction was estimated based on examination of groundwater levels at wells MW-8A, MW-11A, and MW-16A.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Groundwater Elevations - August 21, 2016

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 16

P:\0\0504104\GIS\MXD\050410400T4_F17_GW_Nov16.mxd Date Exported: 10/06/17 by ccabrera

MW-12A
(2,239.53)
Gravel Pit
Five Acre Landfill
MW-1A
(<2,126.04)
MW-7D
(2,111.27)
MW-7B
(2,103.46)
MW-11A
(2,103.49)
MW-15A
(2,073.40)
MW-15
(2,073.34)
2,070
MW-5A
(2,070.06)
MW-5
(<2,069.01)
(2,062.82)B
MW-8A
(2,062.72)
S Cheney Spokane Rd
S Scribner Rd
2,130
2,080
MW-3
(2,076.63)
Main Landfill
2,090
MW-14
(2,092.40)
MW-2A
(2,084.60)
MW-2
(<2,093.26)
(2,092.06)
MW-16
MW-16A
(2,092.19)
Former Spokane County Landfill
MW-4
(<2,112.44)
2,140
MW-4A
(2,095.61)
Ephemeral Stream
MW-9A
(2,099.01)
Queen Lucas Lake

Legend

MW-1A
<2,126.04
Monitoring Well Designation and Groundwater Elevation

Aquifer Unit
- Glaciofluvial Unit
- CRBG Unit
- Basement Rock Unit

Glaciofluvial Unit Groundwater Elevation Contours (10-foot Interval)

Glaciofluvial Unit Boundary

Basement Rock Unit Approximate Groundwater Flow Direction

Glaciofluvial Unit Approximate Groundwater Flow Direction

2,130 Approximate Minnie Creek Streambed Elevation

Ephemeral Stream

N W E S

400 0 400
Feet

Data Source: Aerial from Spokane County. Water features from PNW Hydrography.

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Elevations are presented relative to the North American Datum of 1988 (NAVD 88)
4. Basement rock unit groundwater flow direction was estimated based on examination of groundwater levels at wells MW-8A, MW-11A, and MW-16A.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Groundwater Elevations - November 28, 2016

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 17

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MW-12A
(2,242.31)
Gravel Pit
Five Acre Landfill
MW-1A
(<2,126.04)
MW-7D
(2,111.28)
MW-7B
(2,104.43)
MW-11A
(2,107.13)
MW-15A
(2,078.36)
MW-15
(2,078.37)
MW-5A
(2,074.47)
MW-5
(2,075.58)
MW-8B
(2,067.44)
MW-8A
(2,067.39)
S Cheney Spokane Rd
S Scribner Rd
2,070
2,080
2,130
2,090
2,100
2,140
MW-3
(2,081.57)
Main Landfill
MW-14
(2,096.58)
MW-2A
(2,089.23)
MW-2
(<2,093.26)
(2,097.15)
MW-16
MW-16A
(2,097.31)
Former Spokane County Landfill
MW-4
(<2,112.44)
MW-4A
(2,101.38)
Ephemeral Stream
MW-9A
(2,109.46)
Queen Lucas Lake

Legend

MW-1A
<2,126.04
Monitoring Well Designation and Groundwater Elevation

Aquifer Unit
- Glaciofluvial Unit
- CRBG Unit
- Basement Rock Unit

Glaciofluvial Unit Groundwater Elevation Contours (10-foot Interval)

Glaciofluvial Unit Boundary

Basement Rock Unit Approximate Groundwater Flow Direction

Glaciofluvial Unit Approximate Groundwater Flow Direction

2,130 Approximate Minnie Creek Streambed Elevation

Ephemeral Stream

N W E S

400 0 400
Feet

Data Source: Aerial from Spokane County. Water features from PNW Hydrography.
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Elevations are presented relative to the North American Datum of 1988 (NAVD 88)
4. Basement rock unit groundwater flow direction was estimated based on examination of groundwater levels at wells MW-8A, MW-11A, and MW-16A.
5. The groundwater elevation in MW-9A was measured on February 21, 2017.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

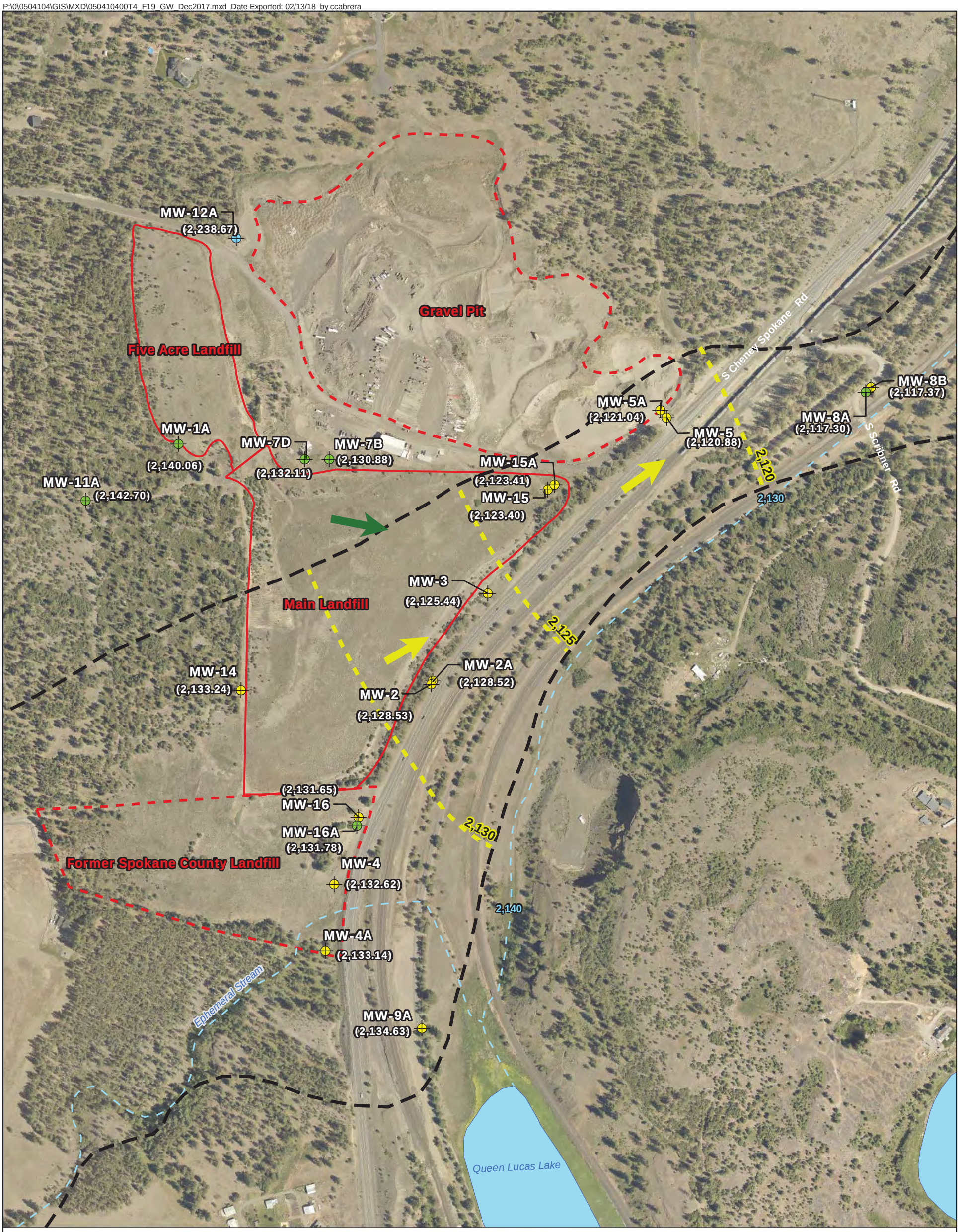
Groundwater Elevations - February 20, 2017

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 18

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Legend

MW-1A
2,140.06
Monitoring Well Designation and Groundwater Elevation

Aquifer Unit

- Glaciofluvial Unit
- CRBG Unit
- Basement Rock Unit

Glaciofluvial Unit Groundwater Elevation Contours (5-foot Interval)

Glaciofluvial Unit Boundary

Basement Rock Unit Approximate Groundwater Flow Direction

Glaciofluvial Unit Approximate Groundwater Flow Direction

2,120 Approximate Minnie Creek Streambed Elevation

Ephemeral Stream

N W E S

400 0 400
Feet

Data Source: Aerial from Spokane County. Water features from PNW Hydrography.
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Elevations are presented relative to the North American Datum of 1988 (NAVD 88)
4. Basement rock unit groundwater flow direction was estimated based on examination of groundwater levels at wells MW-8A, MW-11A, and MW-16A.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

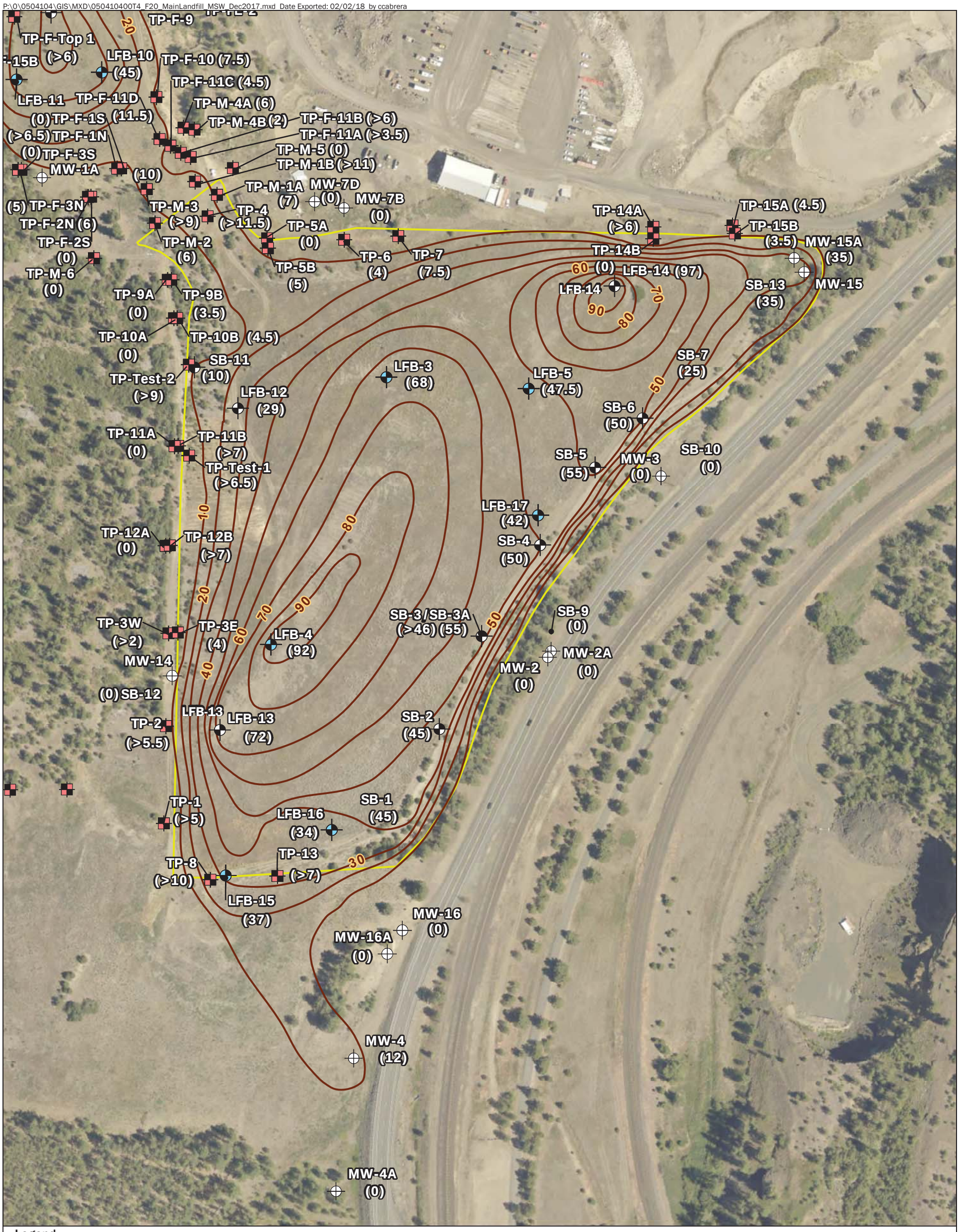
Groundwater Elevations - December 6, 2017

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 19

P:\0\0504104\GIS\MXD\05041040OT4_F20_MainLandfill_MSW_Dec2017.mxd Date Exported: 02/02/18 by ccabrera



Legend

- MW-1 — Groundwater Monitoring Well Designation and MSW Thickness[3](feet)
- LFB-13 — Land Fill Gas Monitoring Well Designation and MSW Thickness[3](feet)
- SB-4 — Soil Boring Designation and MSW Thickness[3](feet)
- TP-1 — Test Pit Designation and MSW Thickness[3](feet)
- Approximate Boundary of Main Landfill[4]
- MSW Thickness Contour (10-foot Interval)
- Ephemeral Stream

N / W / E / S

200 0 200

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Municipal Solid Waste (MSW) thicknesses are estimated based on exploration observations and, in most cases, are interbedded with layers of sand fill.
4. Landfill boundaries have been modified with respect to Fetrow Engineers (1991) based on Remedial Investigation explorations.

Data Source: Street labels from Spokane County GIS.

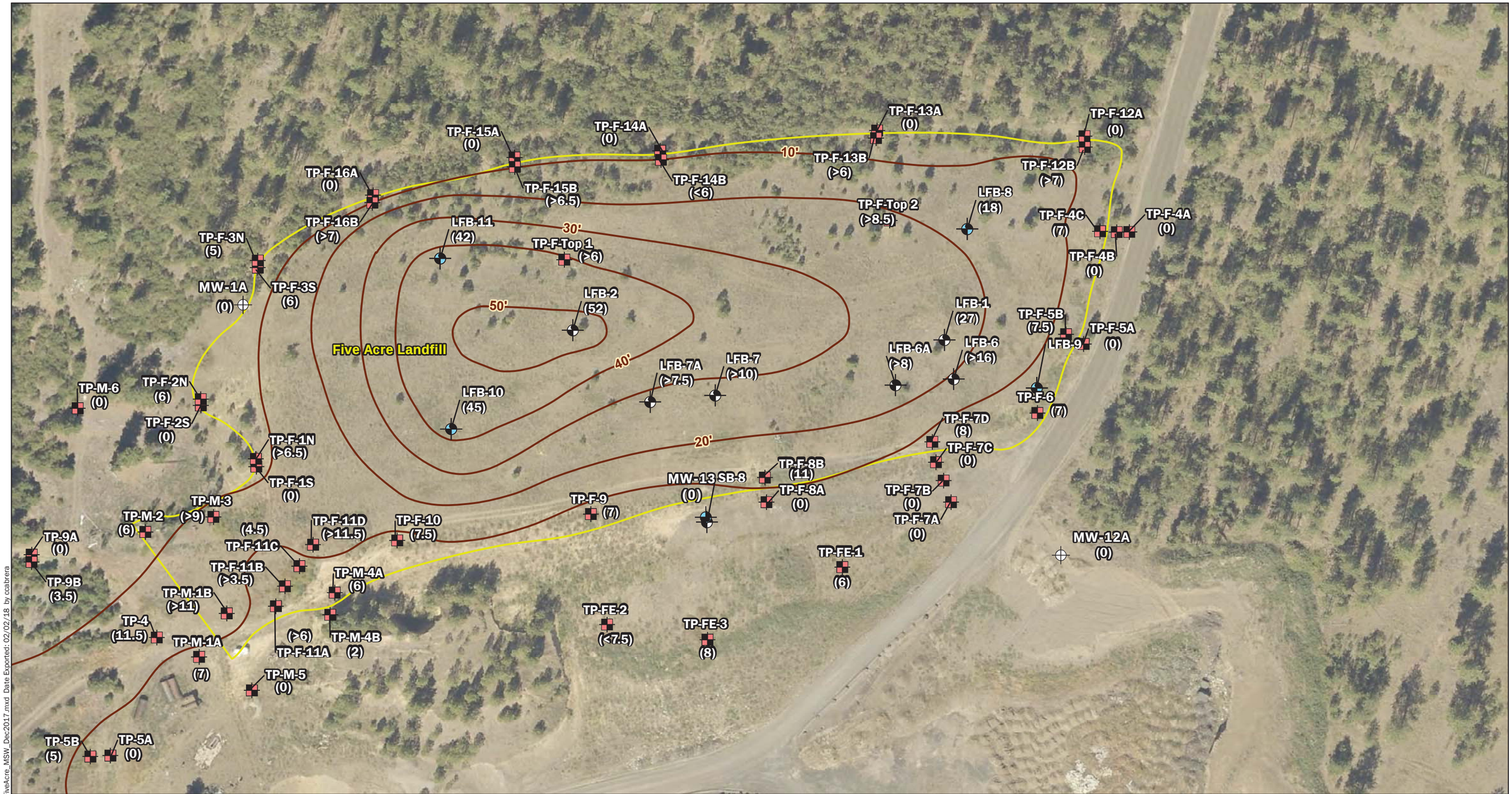
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Thickness of Municipal Solid Waste
Main Landfill

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 20



Data Source: Street labels from Spokane County GIS.
Boundary Lines from TD&H survey (May, 2015)

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Municipal Solid Waste (MSW) thicknesses are estimated based on exploration observations and, in most cases, are interbedded with layers of sand fill.
4. Landfill boundaries have been modified with respect to Fetrow Engineers (1991) based on Remedial Investigation explorations.

Projection: NAD 1983 UTM Zone 11N

Legend

- MW-1A — Groundwater Monitoring Well Designation and MSW Thickness[3] (feet)
- LFB-10 — Land Fill Gas Monitoring Well Designation and MSW Thickness[3](feet)
- LFB-1 — Soil Boring Designation and MSW Thickness[3](feet)
- TP-FE-1 — Test Pit Designation and MSW Thickness[3] (feet)
- Approximate Boundary of Five Acre Landfill[4]
- MSW Thickness Contour (10-foot Interval)

N W E S

100 0 100
Feet

Thickness of Municipal Solid Waste
Five Acre Landfill

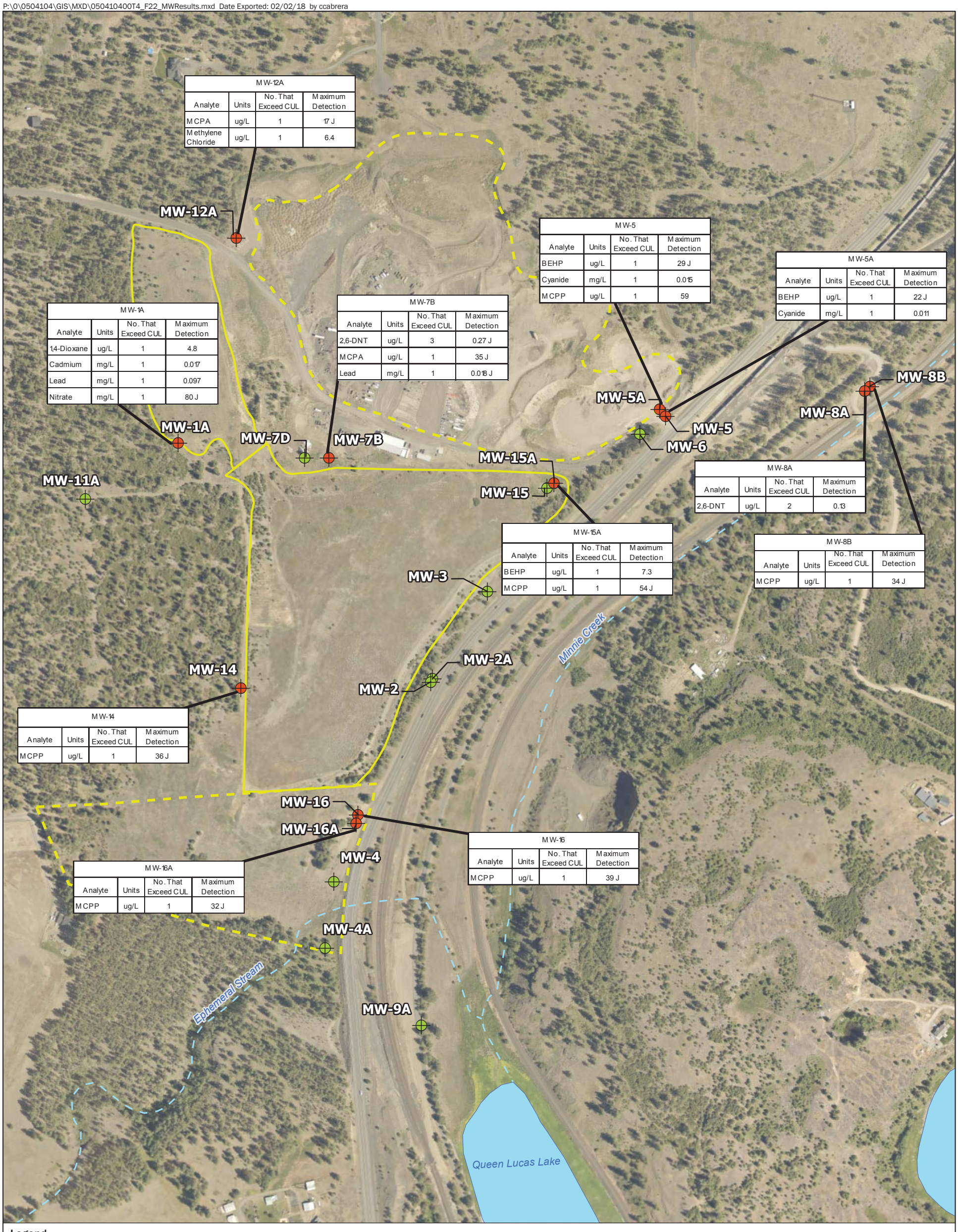
Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 21

P:\0\0504104\GIS\MXD\0504104001T4_F21_FiveAcre_MSW_Dec2017.mxd Date Exported: 02/02/18 by ccabrera

P:\0\0504104\GIS\MXD\050410400T4_F22_MWResults.mxd Date Exported: 02/02/18 by ccabrera



MW-12A

Analyte	Units	No. That Exceed CUL	Maximum Detection
MCPA	ug/L	1	17 J
Methylene Chloride	ug/L	1	6.4

MW-1A

Analyte	Units	No. That Exceed CUL	Maximum Detection
14-Dioxane	ug/L	1	4.8
Cadmium	mg/L	1	0.017
Lead	mg/L	1	0.097
Nitrate	mg/L	1	80 J

MW-7B

Analyte	Units	No. That Exceed CUL	Maximum Detection
2,6-DNT	ug/L	3	0.27 J
MCPA	ug/L	1	35 J
Lead	mg/L	1	0.018 J

MW-5

Analyte	Units	No. That Exceed CUL	Maximum Detection
BEHP	ug/L	1	29 J
Cyanide	mg/L	1	0.015
MCPP	ug/L	1	59

MW-5A

Analyte	Units	No. That Exceed CUL	Maximum Detection
BEHP	ug/L	1	22 J
Cyanide	mg/L	1	0.011

MW-8A

Analyte	Units	No. That Exceed CUL	Maximum Detection
2,6-DNT	ug/L	2	0.13

MW-8B

Analyte	Units	No. That Exceed CUL	Maximum Detection
MCPP	ug/L	1	34 J

MW-15A

Analyte	Units	No. That Exceed CUL	Maximum Detection
BEHP	ug/L	1	7.3
MCPP	ug/L	1	54 J

MW-14

Analyte	Units	No. That Exceed CUL	Maximum Detection
MCPP	ug/L	1	36 J

MW-16

Analyte	Units	No. That Exceed CUL	Maximum Detection
MCPP	ug/L	1	39 J

MW-16A

Analyte	Units	No. That Exceed CUL	Maximum Detection
MCPP	ug/L	1	32 J

Legend

MW-7D — Groundwater Monitoring Well Did Not Exceed Applicable CUL During 2016-2017 Groundwater Monitoring Events

MW-1A — Groundwater Monitoring Well Exceeded Applicable CUL During 1 or more of the 2016-2017 Groundwater Monitoring Events

Approximate Landfill Boundaries[3]

Approximate Limits of Adjacent Landfill or Mining Land Use[3]

N W E S

400 0 400
Feet

Notes:
1. Please refer to Tables 6 - 10 for the full dataset and applicable cleanup levels.
2. The locations of all features shown are approximate.
3. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).
4. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

J = estimated result
ug/L - micrograms per liter
BEHP = Bis(2-Ethylhexyl) Phthalate
CUL = Cleanup Level
MCPA = 2-methyl-4-chlorophenoxyacetic acid
MCPP = Mecoprop
2,6-DNT = 2,6-Dinitrotoluene

Data Source: Aerial from ESRI Data Online. Water features from PNW Hydrography.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

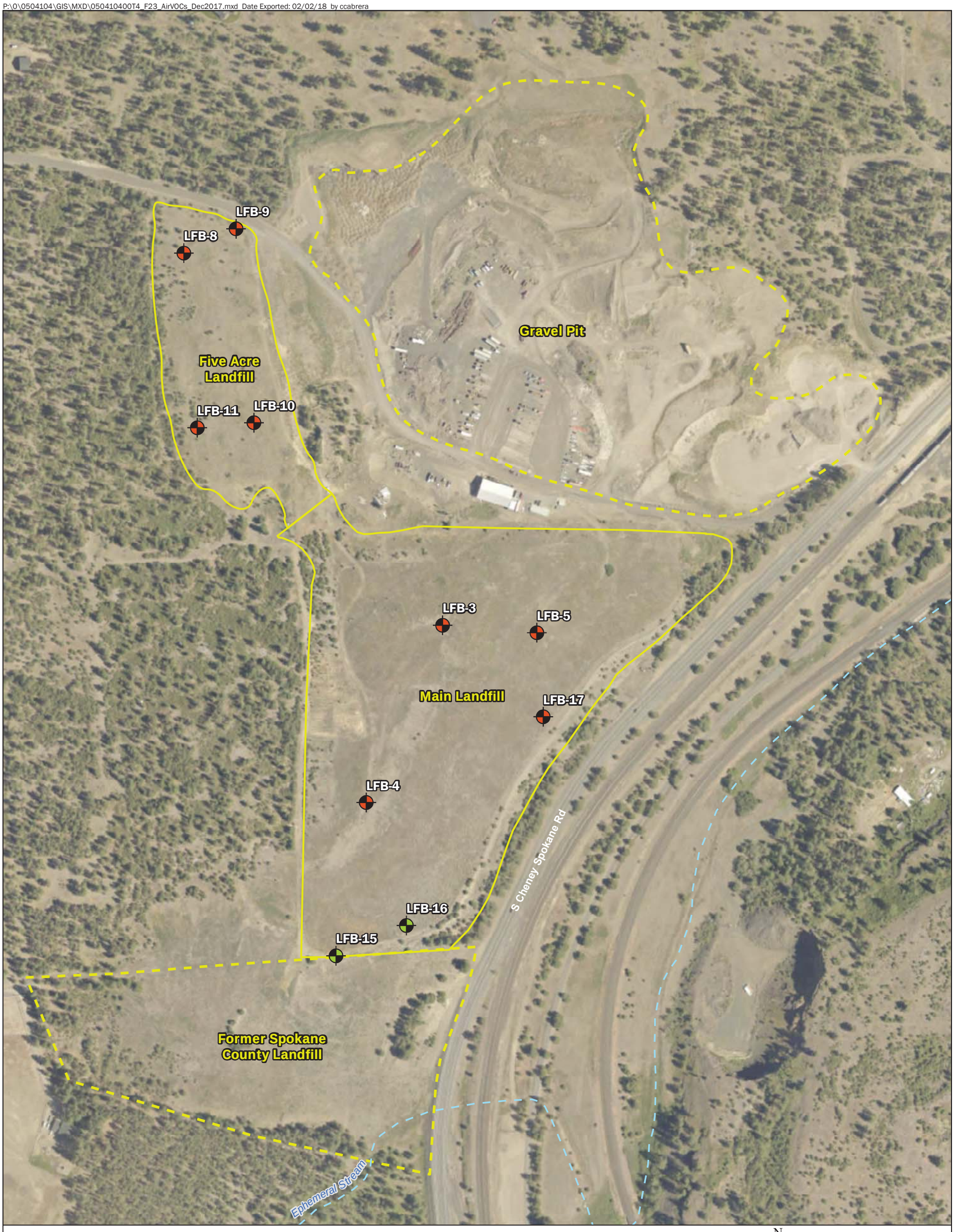
Chemical Concentrations - Groundwater

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 22

P:\0\0504104\GIS\MXD\05041040OT4_F23_AirVOCs_Dec2017.mxd Date Exported: 02/02/18 by ccabrera



Legend

- VOC Concentrations in Landfill Gas Monitoring Well were Greater than MTCA Method B CULs During One or More Monitoring Events
- VOC Concentrations in Landfill Gas Monitoring Well were Less than MTCA Method B CULs for All Monitoring Events
- Approximate Limits of Adjacent Landfill or Mining Land Use [3]
- Approximate Landfill Boundaries [3]

N W E S

300 0 300

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).
   VOC = volatile organic compound; MTCA = Model Toxics Control Act; CUL = Cleanup level.

Data Source: Aerial from ESRI Data Online.
Water features from PNW Hydrography.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

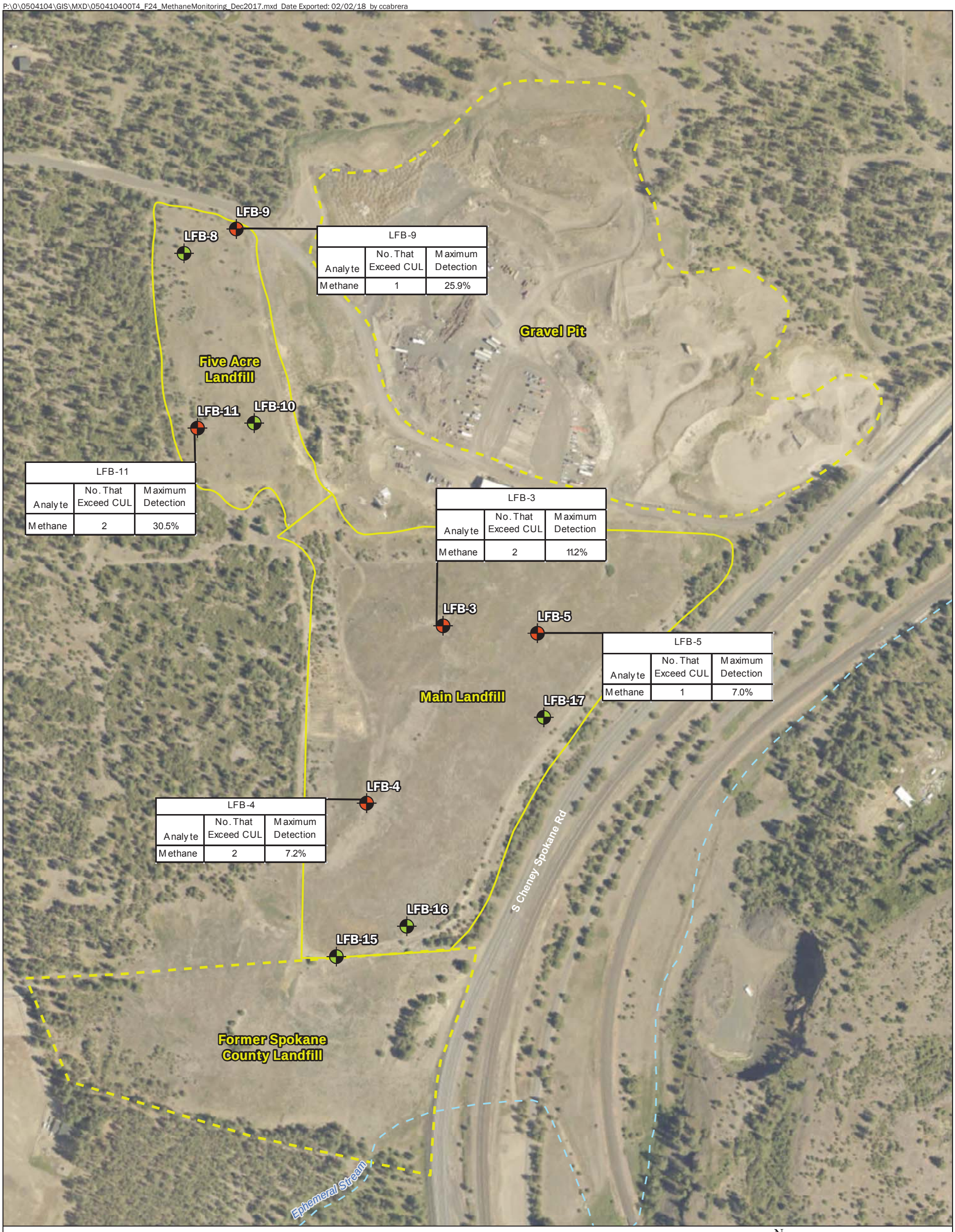
Soil Gas VOC Summary

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 23

P:\0\0504104\GIS\MXD\05041040OT4_F24_MethaneMonitoring_Dec2017.mxd Date Exported: 02/02/18 by ccabrera



Legend

- Methane Concentrations in Landfill Gas Monitoring Well were Greater Than 5% During One or More of the 2016-2017 Monitoring Events
- Methane Concentrations in Landfill Gas Monitoring Well were Less Than 5% During the 2016-2017 Monitoring Events
- Approximate Limits of Adjacent Landfill or Mining Land Use [4]
- Approximate Landfill Boundaries [4]

N W E S

300 0 300

Feet

Notes:

1. Please refer to Table 17 for the full dataset and applicable cleanup levels.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
4. Boundaries of landfill and mining land use were adapted from Fetrow Engineering (1991) based on Remedial Investigation explorations and aerial photography. The Former Spokane County landfill boundaries have not been modified from Fetrow Engineering (1991).

Data Source: Aerial from ESRI Data Online.
Water features from PNW Hydrography.

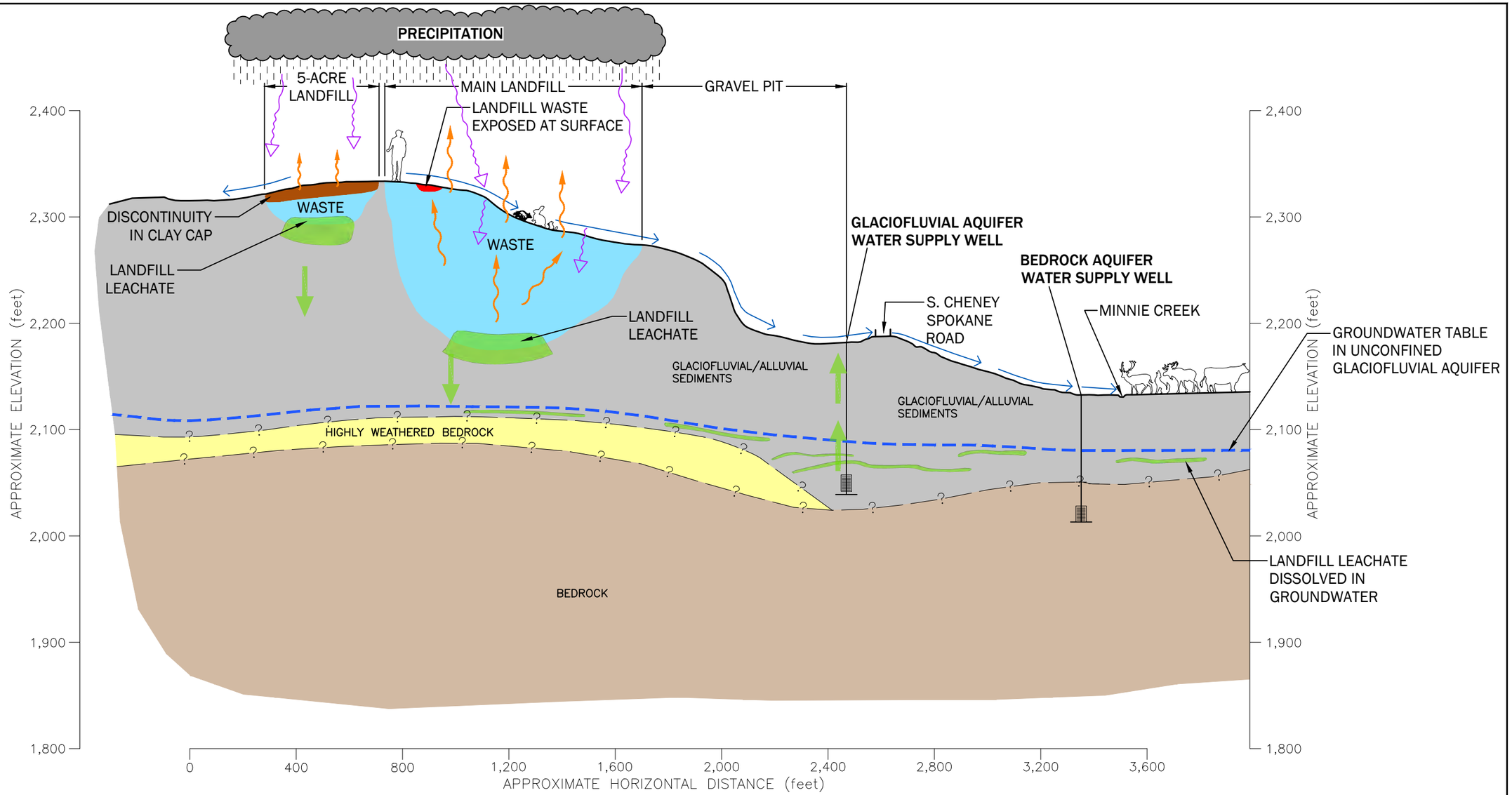
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Methane Monitoring Results 2016-2017

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure 24



Notes:
1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. This is a diagrammatic representation of subsurface conditions and potential exposure pathways for conceptual purposes. All elevations, locations, and dimensions shown are approximate.
4. Elevations refer to the North American Vertical Datum of 1988.

EXPLANATION:

- WELL CASING
- WELL SCREENS
- BOTTOM OF BORING / WELL
- SURFACE WATER RUNOFF RELEASE MECHANISM
- LANDFILL LEACHATE EXPOSURE MECHANISM
- LANDFILL GASES MIGRATION MECHANISM
- PRECIPITATION/INFILTRATION MIGRATION MECHANISM

400 0 400
Horizontal Scale in Feet
100 0 100
Vertical Scale in Feet
Vertical Exaggeration: 4X

Conceptual Site Model

Marshall Landfill
Spokane County, Washington

GeoEngineers

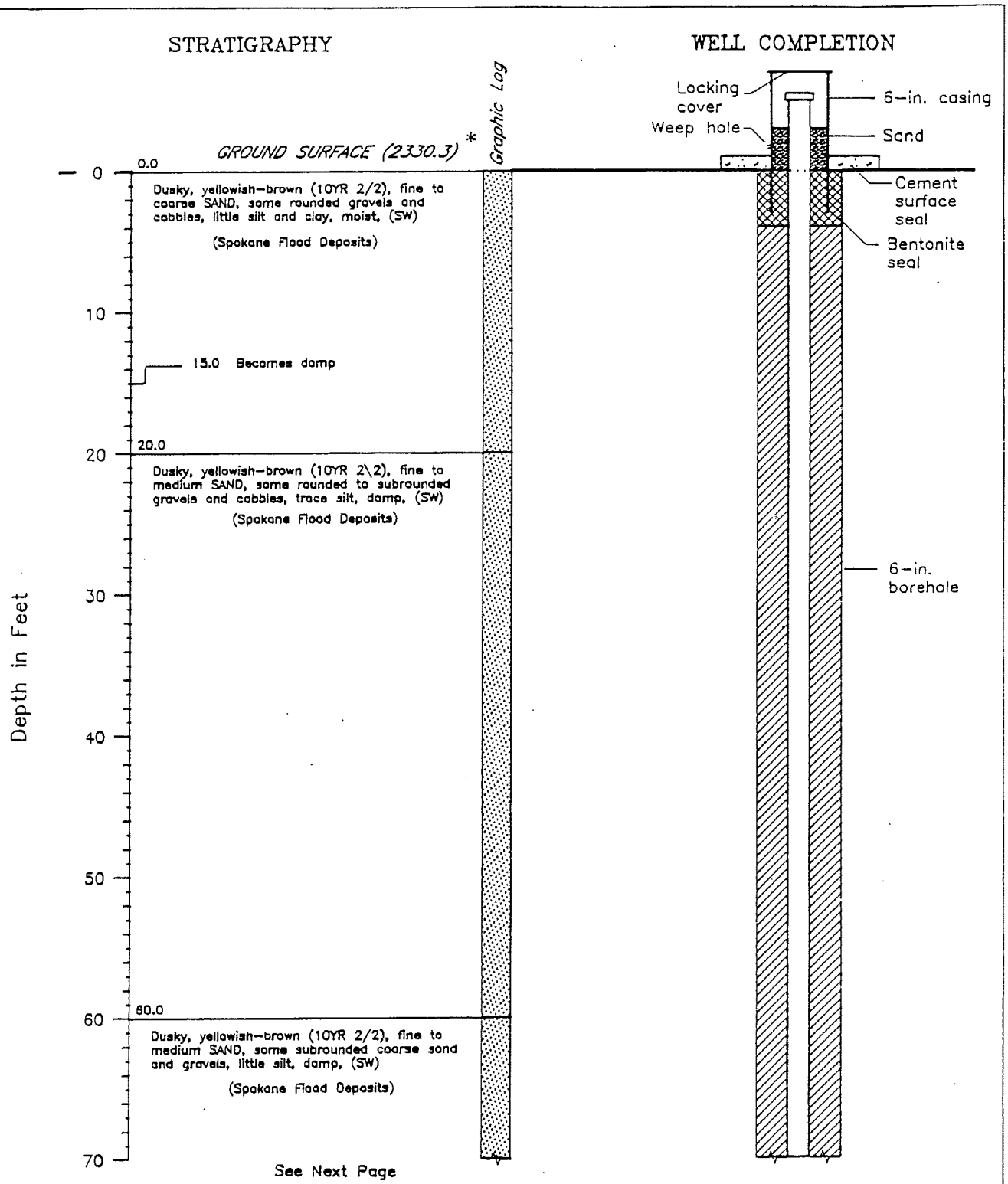
Figure 25

P:\0\0504104\CAD\00\GeoTech\050410400_T700_CSM_F25.dwg\TAB:F25 modified by syi on Feb 02, 2018 - 2:23pm

APPENDICES

GeoEngineers

APPENDIX A
Previous Exploration Logs



WELL COMPLETION LEGEND:

- Cement
- Grout – Bentonite
- Bentonite Chips (0.75-in.)
- Sandpack (#10-20)
- Water Level
- 2.0-in. Sch. 40 PVC Well Casing, Flush-Threaded
- 2.0-in. Sch. PVC Well Screen, 2.0-in. slot, Flush Threaded

NOT TO SCALE

Date: 3/15/89
Ground Elevation: 2330.3
T.O.C. (PVC) Elevation: 2332.8
Drill Rig: CP 650 W.S.
Drill Method: Air Rotery
Sampling Method:
1)Cyclone grab sample

FIGURE A-18A
BORING M-1A
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

* Elevations above mean sea level.

PROJECT NO 893-1033.008 DWG NO 7704 DATE 7/7/89 DRAWN RLM APPROVED DPF

Golder Associates

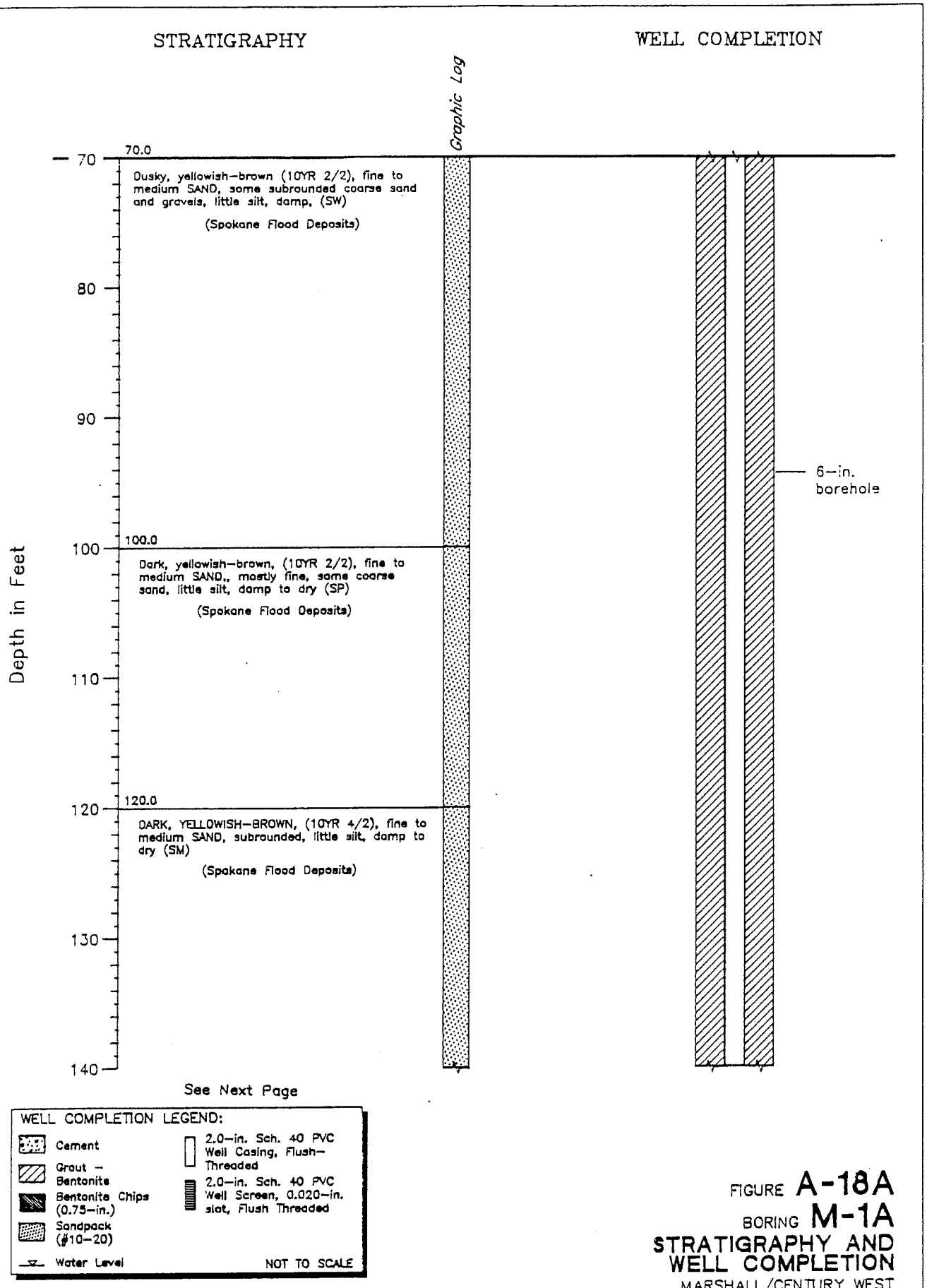


FIGURE **A-18A**
BORING **M-1A**
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

PROJECT NO 893-1033.008 DWG NO 7705 DATE 7/7/89 DRAWN RLM APPROVED DPF

Golder Associates

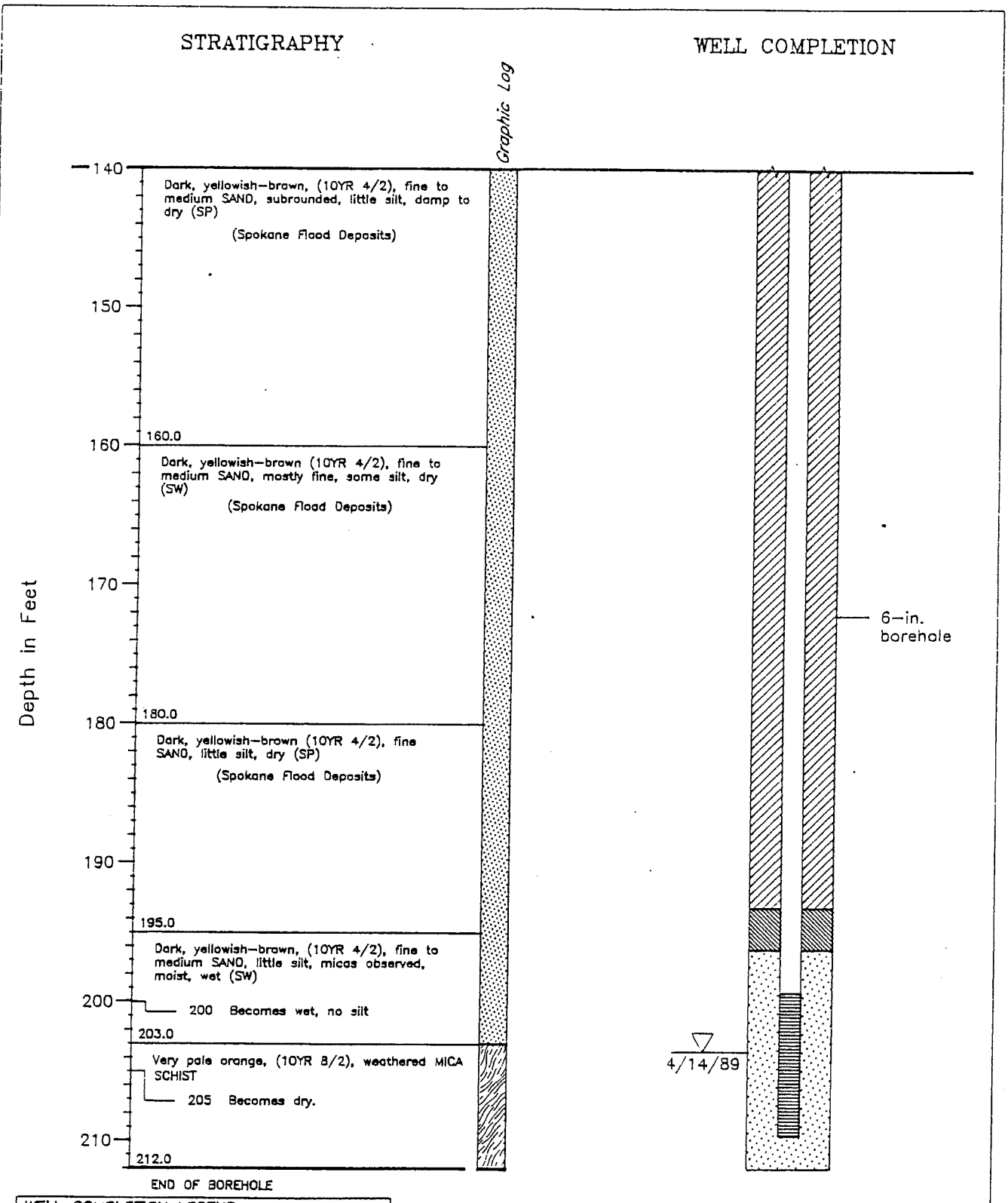
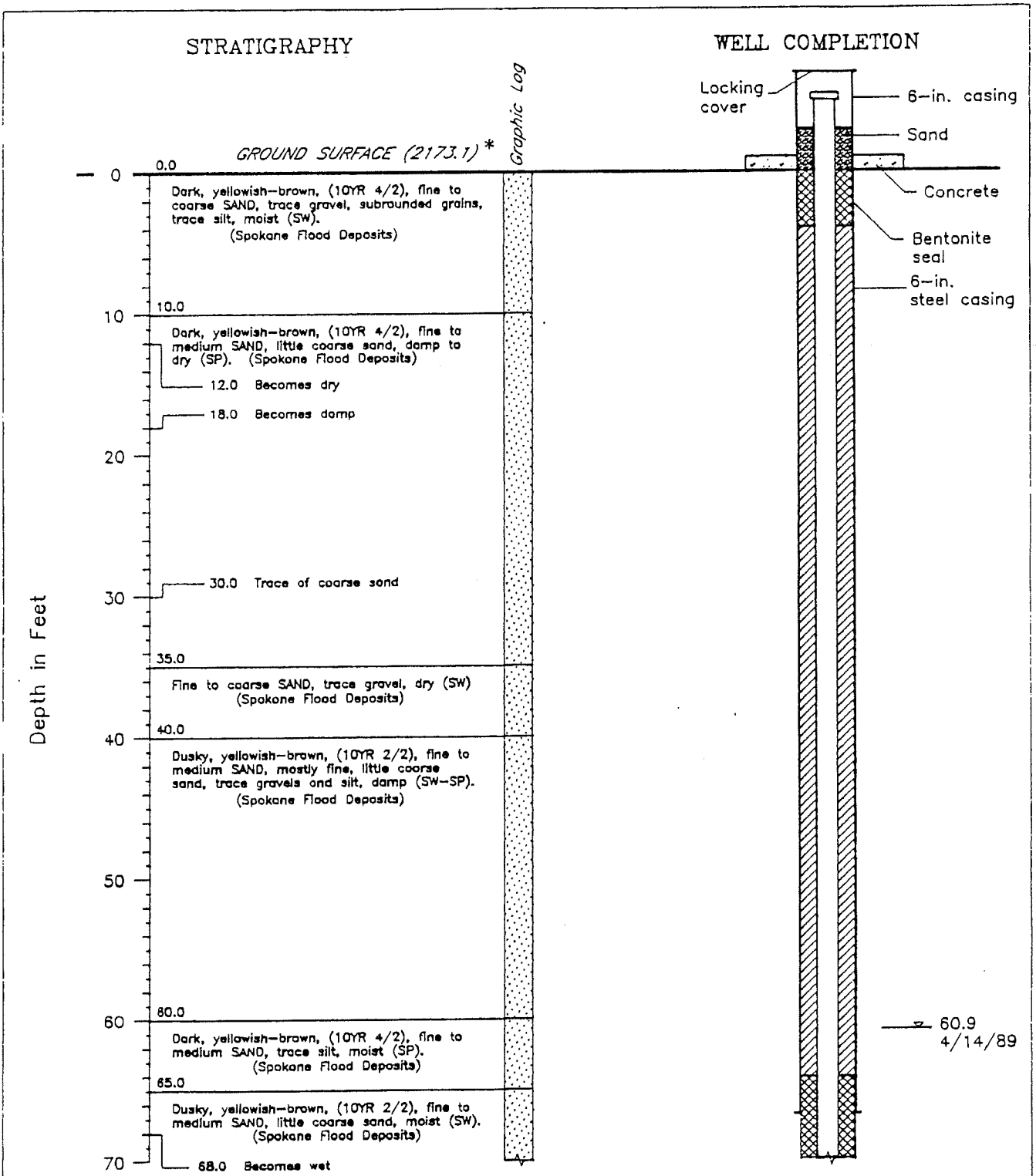


FIGURE A-18A
BORING M-1A
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

PROJECT NO 893-1033.008 DWG NO 7706 DATE 7/7/89 DRAWN RLM APPROVED DPF

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See Next Page

WELL COMPLETION LEGEND:

- Concrete Grout
- Grout - Bentonite
- Bentonite Pellets (0.5-in.)
- Sandpack (#10-20)
- Water Level
- 2.0-in. Sch. 40 PVC Well Casing, Flush-Threaded
- 2.0-in. Sch. 40 PVC Well Screen, 0.020-in. Flush Threaded
- 3/8" Volclay tablets

NOT TO SCALE

Date: 3/27/89
Ground Elevation: 2173.1
T.O.C. (PVC) Elevation: 2175.6
Drill Rig: CP 850 W.S.
Drill Method: Air Rotary
Sampling Method:
1) Cyclone grab sample

* Elevations above mean sea level.

FIGURE A-19
BORING M-2
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

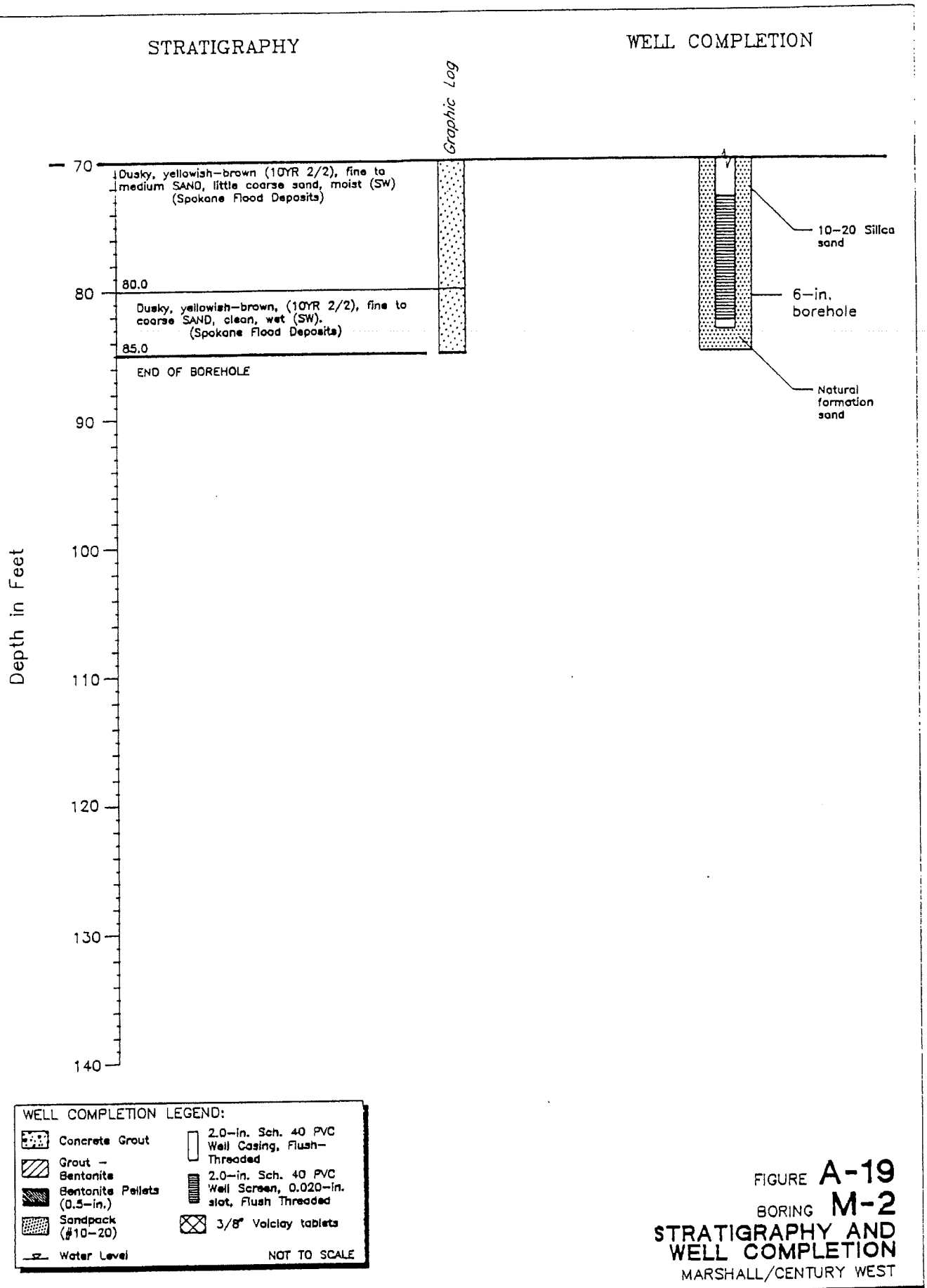


FIGURE **A-19**

BORING **M-2**

STRATIGRAPHY AND WELL COMPLETION

MARSHALL/CENTURY WEST

PROJECT NO 893-1033.008 DWG NO 7714 DATE 7/7/89 DRAWN RLM APPROVED DPF

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SESE SW S21 T20V R4E

BORING LOG

PAGE 1 OF 4
BORING NO.: MW-2A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : 2200' SOUTH OF SCRIBNER ROAD ALONG CHENEY-SPOKANE ROAD

DATE COMPLETED : 10/23/90
TOTAL DEPTH : 116.8'
SURFACE ELEVATION : 2173'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

AS BUILTS

RECEIVED
DEC 19 1990
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION
			0.0	
0'				Sand and gravel at surface.
5'	#1			(5.0-6.0)Sample #1: Dusky yellow brown, poorly sorted, subangular sandy gravel. Mostly medium to coarse sand with trace of fine sand. Fine to coarse gravel. Dry.
10'	#2			(10.0-11.0)Sample #2: Dusky yellow brown, modrately sorted, medium to mostly coarse sand with scattered granules and fine basalt gravel. Sand and gravel are subangular. Dry.
15'	#3			(15.0-16.0) Sample #3: Dusky yellow brown, moderately sorted fine to coarse sand with trace of fine gravel. Dry. Sand is composed of basalt (80%), quartz and feldspar (20%), and trace of mica. Dry.
20'	#4			(20.0-21.0) Sample #4: Dusky yellow brown, moderately well sorted, subangular coarse sand. 20% medium sand. Composition - 70% basalt, 30% quartz and feldspar, no gravel. Dry.
25'	#5			(25.0-26.0) Sample #5: Dusky yellow brown, angular, poorly sorted, fine to mostly coarse sand with scattered granules. Dry
30'				

NOTES

Boring is located approximately 25' northeast of existing monitoring well MW-2. Boring advanced using 8" steel conductor casing. Soil samples collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

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BORING LOG

PAGE 2 OF 4
BORING NO.: MW -2A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : 2200' SOUTH OF SCRIBNER ROAD ALONG CHENEY-SPOKANE ROAD

DATE COMPLETED : 10/23/90
TOTAL DEPTH : 116.8'
SURFACE ELEVATION : 2173'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	AS BUILTS
30'	#6			(30.0-31.0) Sample #6: Dusky yellow brown, poor to moderately sorted, subangular, medium to mostly coarse sand with adundant basalt gravel. 5-10% fine sand. Dry.	
35'	#7			(35.0-36.0)Sample #7: Continue same as above. However, gravel is larger (1.5") and more abundant. Dry..	
40'	#8			(40.0-41.0)Sample #8: Dusky yellow brown, poorly sorted sandy gravel. Sand is fine to coarse, angular. Gravel is uniformly fine (1/2"), subround to subangular. One small granitic rock fragment. Dry.	
45'	#9			(45.0-46.0) Sample #9: Dusky yellow brown, poorly sorted, angular medium to coarse sand with abundant granules and fine gravel of basalt. Dry. 5% fine sand.	
50'	#10			(50.0-51.0) Sample #10: Continue same as above with greater percentage of gravel. Dry.	
55'	#11			(55.0-56.0) Sample #11: Dusky yellow brown, moderately well sorted, subangular, coarse to very coarse sand with 10% medium sand. Scattered granules and fine basalt gravel. Dry.	
60'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

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BORING LOG

PAGE 3 OF 4
BORING NO.: MW-2A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : 2200' SOUTH OF SCRIBNER ROAD ALONG CHENEY-SPOKANE ROAD

DATE COMPLETED : 10/23/90
TOTAL DEPTH : 116.8'
SURFACE ELEVATION : 2173'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	AS BUILTS
60'	#12			(60.0-61.0) Sample #12: Continue same as above, however, slightly coarser overall. Sample consists of 70-80% basalt, 20-30% quartz and feldspar. Dry.	
65'	#13			(65.0-66.0)Sample #13: Continue same as above.	
70'	#14			(70.0-71.0)Sample #14: Dusky yellow brown, poorly sorted fine to very coarse sand with abundant fine gravel. Gravel is subangular and up to 3/4" in diameter, composed mostly of basalt fragments.	
75'	#15			(75.0-76.0) Sample #15: Dusky yellow brown, moderately sorted, medium to very coarse sand with granules and scattered fine gravel. Composition of gravel and sand is mainly basalt.	
80'	#16			(80.0-81.0) Sample #16: Dusky yellow brown, poor to moderately sorted, angular, medium to very coarse sand with scattered basalt gravel up to 1" diameter.	
85'	#17			(85.0-86.0) Sample #17: Continue same as above.	
90'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

BORING LOG

PAGE 4 OF 4
BORING NO.: MW-2A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : 2200' SOUTH OF SCRIBNER ROAD ALONG CHENEY-SPOKANE ROAD

DATE COMPLETED : 10/23/90
TOTAL DEPTH : 116.8'
SURFACE ELEVATION : 2173'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	AS BUILTS
90'	#18			(90.0-91.0) Sample #18: Dusky yellow brown, poorly sorted; fine to very coarse sand with fine gravel and trace silt. Damp	
95'	#19			(95.0-96.0)Sample #19: Dusky yellow brown, poor to moderately sorted, subangular, medium to very coarse sand. Abundant granules and fine basalt gravel. Slightly silty. Damp.	
100'	#20			(100.0-101.0)Sample #20: Dusky yellow brown, moderately sorted medium to very coarse, angular sand. Trace of fine sand. No gravel. Damp.	
105'	#21			(105.0-106.0) Sample #21: Continue same as above, however, slightly less well sorted. Trace of fine sand and silt. No gravel. Wet.	
110'	#22			(110.0-111.0) Sample #22: Dusky yellow brown, moderately sorted, subangular, coarse to very coarse sand. Slightly silty. Scattered granules. Wet.	
115'	#23		116.8'	(115.0-116.0) Sample #23: Duskey yellow brown, poorly sorted, fine to coarse basalt gravel with 10% coarse sand. Wet. 116.8'	
				Bottom of hole.	

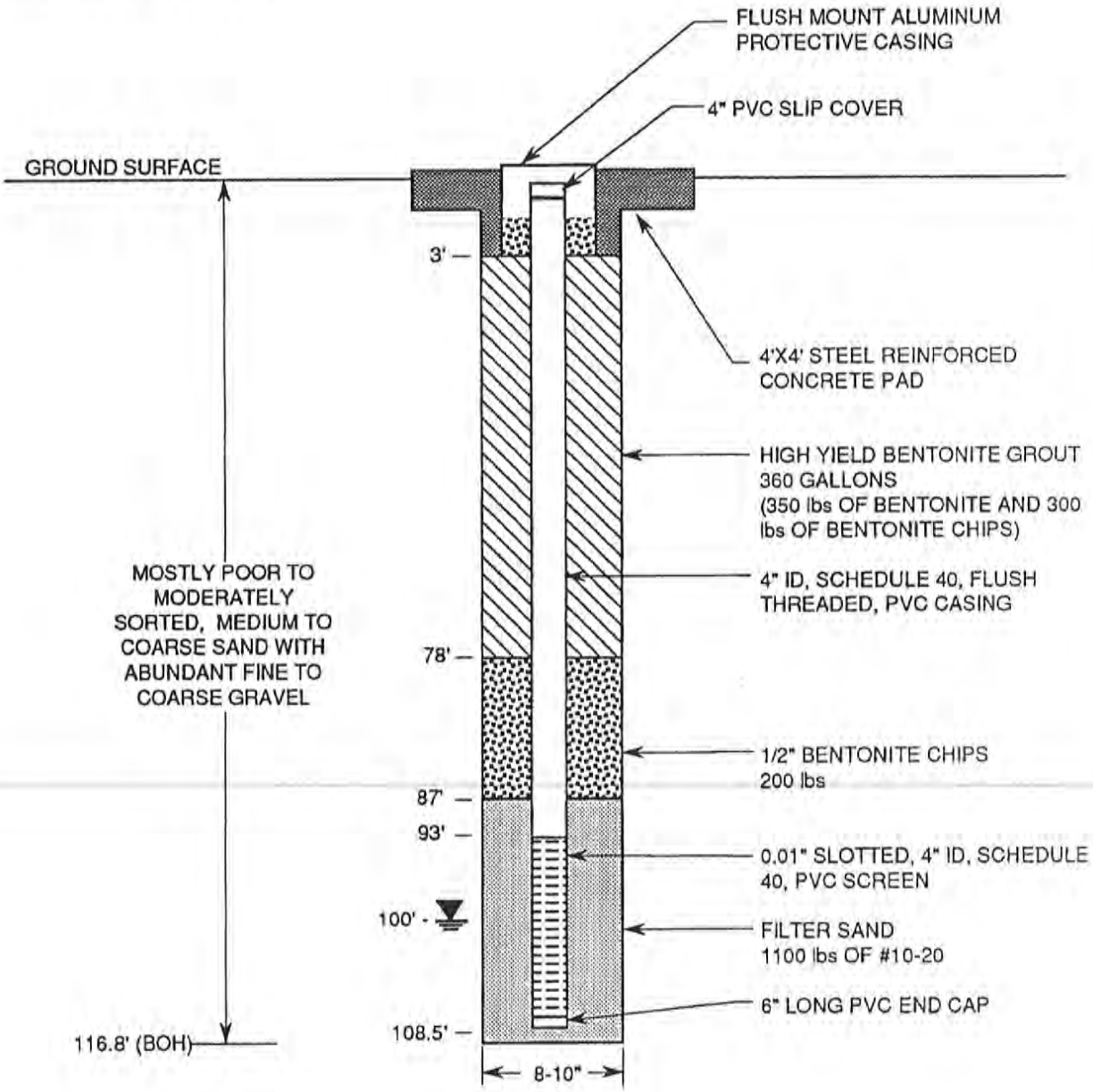
RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Depth to water measured on 10/23/90 - 100' below ground surface. Driller reports that 7 gpm (sustained production) indicated by compressed air test. Pulled 8" conductor casing on 10/23/90 and installed 4" PVC monitoring well. Well is located approximately 25' north of existing monitoring well MW-2

GROUND WATER MONITORING WELL MW-2A
FINAL CONSTRUCTION

(Installed October 23, 1990)



ELEVATIONS:

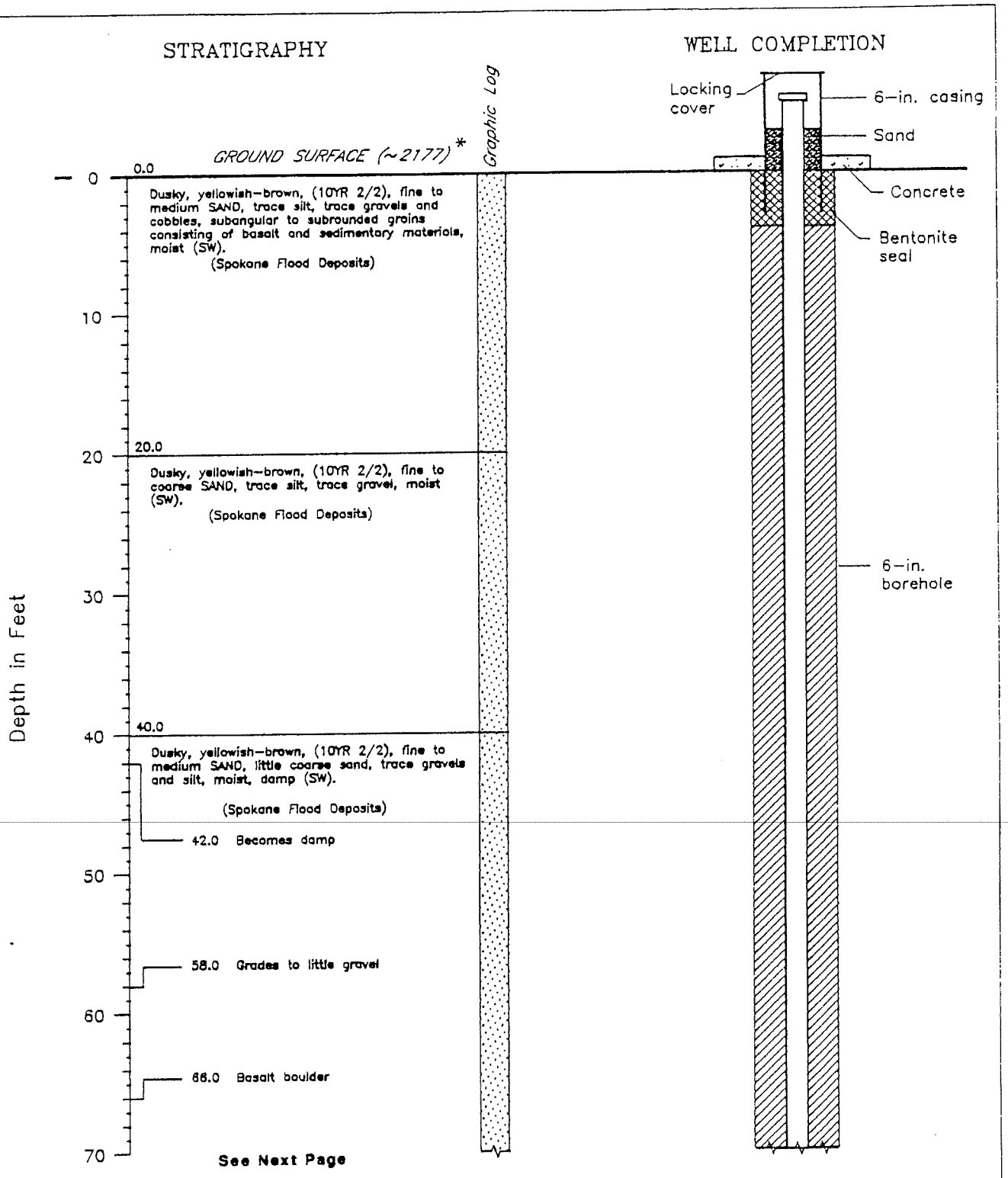
GROUND SURFACE = 2172'
TOP OF PVC CASING = 2172.01'
WATER SURFACE = 2072.16' (10/23/90)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.

2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)



WELL COMPLETION LEGEND:

- Concrete Grout
- Grout - Bentonite
- Bentonite Pellets (0.5-in.)
- Sandpack (#10-20)
- Water Level
- 2.0-in. Sch.40 PVC Well Casing, Flush-Threaded
- 2.0-in. Sch. 40 PVC Well Screen, 0.020-in. slot, Flush Threaded
- 3/8" volclay tablets

NOT TO SCALE

Date: 3/20/89
Ground Elevation: ~2177
T.O.C. (PVC) Elevation: 2179.5
Drill Rig: CP 650 W.S.
Drill Method: Air Rotary
Sampling Method:
1)Cyclone grab sample

*Elevations above mean sea level.

FIGURE A-20
BORING M-3
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

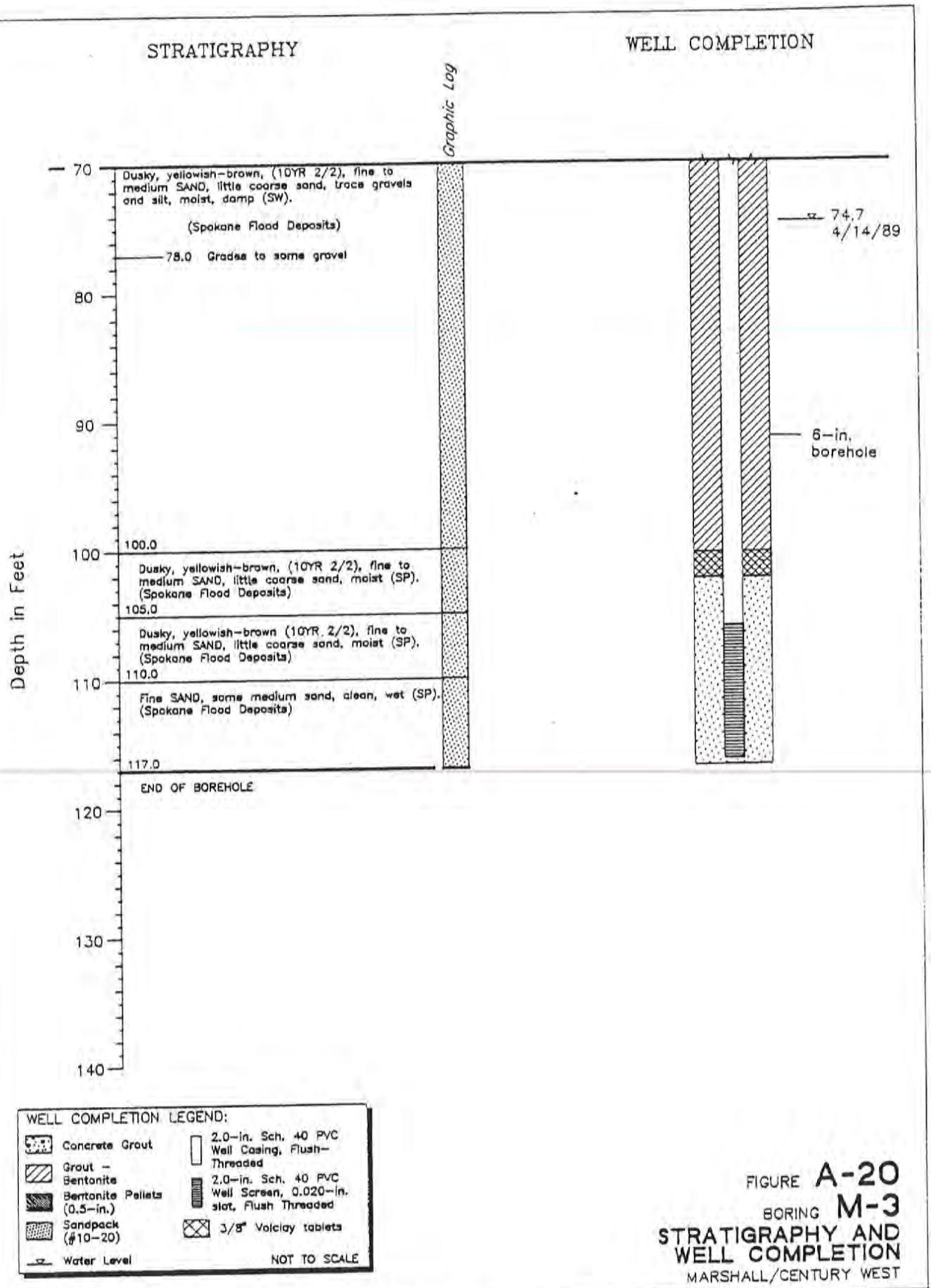


FIGURE A-20
BORING M-3
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

PROJECT NO 893-1033.008 DWG NO 7716 DATE 7/7/89 DRAWN RLM APPROVED DPF

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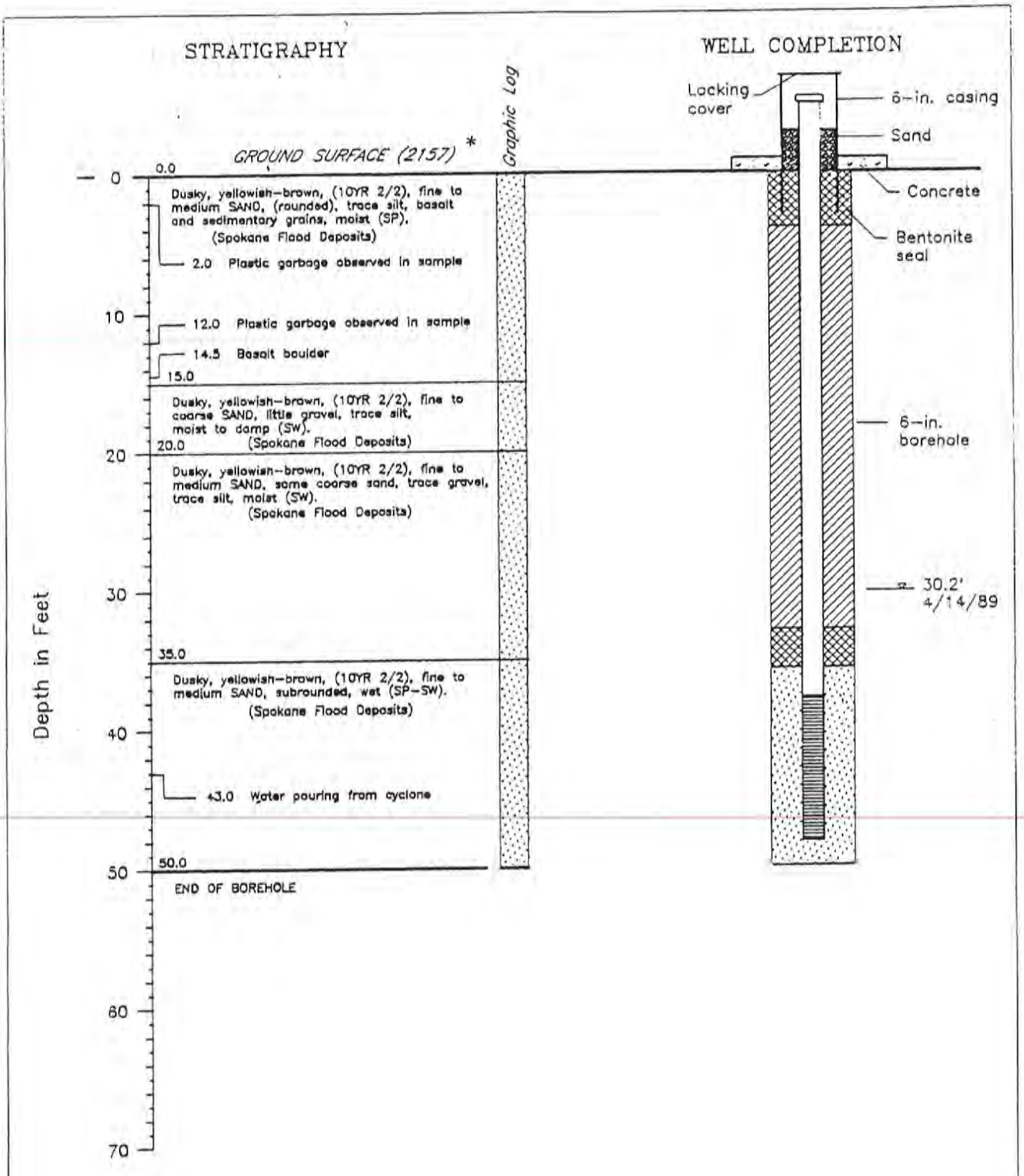


FIGURE A-21

BORING M-4

STRATIGRAPHY AND WELL COMPLETION

MARSHALL/CENTURY WEST

*Elevations above mean sea level.

PROJECT NO 893-1033.008 DWG NO 7717 DATE 7/7/89 DRAWN RLM APPROVED DPF

Golder Associates

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NE NEW S28 T24 R4J

BORING LOG

PAGE 1 OF 3
BORING NO.: MW-4A
PROJECT: MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION: 150' WEST OF CHENEY SPOKANE ROAD AND APPROXIMATELY 600' SOUTH OF MAIN LANDFILL

DATE COMPLETED: 10/4/90
TOTAL DEPTH: 80'
SURFACE ELEVATION: 2150'
DRILLING METHOD: 7 7/8" AIR ROTARY
DRILLED BY: BARTHOLOMEW BROTHERS DRILLING
LOGGED BY: PETE ZAGAR / CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	AS BUILTS
0'			0.0	Sand and gravel at surface.	
5'	#1			(5.0-6.0)Sample #1: Sandy coarse gravel containing angular fragments of basalt and metamorphic rock.	
10'	#2			(10.0-11.0)Sample #2: Dark yellow brown, poorly sorted coarse sand with abundant fine gravel. Dry. Sample consists mainly of basalt fragments with minor amounts of quartz, mica, and feldspar. Minor amounts of fine to medium sand.	
15'	#3			(15.0-16.0) Sample #3: Continue same as previous. Dry.	
20'	#4			(20.0-21.0) Sample #4: Dusky yellow brown, moderately sorted, coarse sand with granules and fine gravel. Trace of silt and fine to medium sand. Very moist.	
25'	#5			(25.0-26.0) Sample #5: Dusky yellow brown, angular, poorly sorted, silty coarse sand consisting predominantly of subangular quartz and basalt. Very moist.	
30'					

RECEIVED
DEC 19 1990
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Boring is located 200' south of existing monitoring well MW-4 and near the southeastern corner of the former County landfill. Boring advanced using 8" steel conductor casing. Soil samples collected from cyclone.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

BORING LOG

PAGE 2 OF 3
BORING NO.: MW -4A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : 150' WEST OF CHENEY SPOKANE ROAD AND APPROXIMATELY 600' SOUTH OF MAIN LANDFILL

DATE COMPLETED : 10/4/90
TOTAL DEPTH : 80'
SURFACE ELEVATION : 2150'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : PETE ZAGAR / CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	AS BUILTS
30'	#6			(30.0-31.0) Sample #6: Dusky yellow brown, well sorted, subangular very coarse sand. Scattered granules. Consists mainly of basalt with some feldspar. Moist.	
35'	#7			(35.0-36.0)Sample #7: Continue same as above. Slightly coarser with trace of fine basalt gravel. Trace of silt. Moist.	
40'	#8			(40.0-41.0)Sample #8: Dusky yellow brown, moderately sorted, very coarse sand with scattered fine gravel. 10-15% fine to medium sand. Damp.	
45'	#9			(45.0-46.0) Sample #9: Dusky yellow brown, well sorted, subangular, coarse sand with 10% medium sand. No gravel. Sand consists mostly of basalt and quartz. Moist.	
50'	#10			(50.0-51.0) Sample #10: Dusky yellow brown, moderately sorted, coarse to very coarse sand and granules with trace of silt and fine to medium sand. Compositionally, sand is 60% basalt, 30% quartz, and 10% feldspar. Moist.	
55'	#11			(55.0-56.0) Sample #11: Dusky yellow brown, well sorted, coarse to very coarse subangular sand. 50% basalt, 45% quartz, and 5% feldspar. Trace of fine sand and scattered granules. Moist.	
60'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

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BORING LOG

PAGE 3 OF 3
BORING NO.: MW -4A
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DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : PETE ZAGAR / CHARLES SCHWARZ

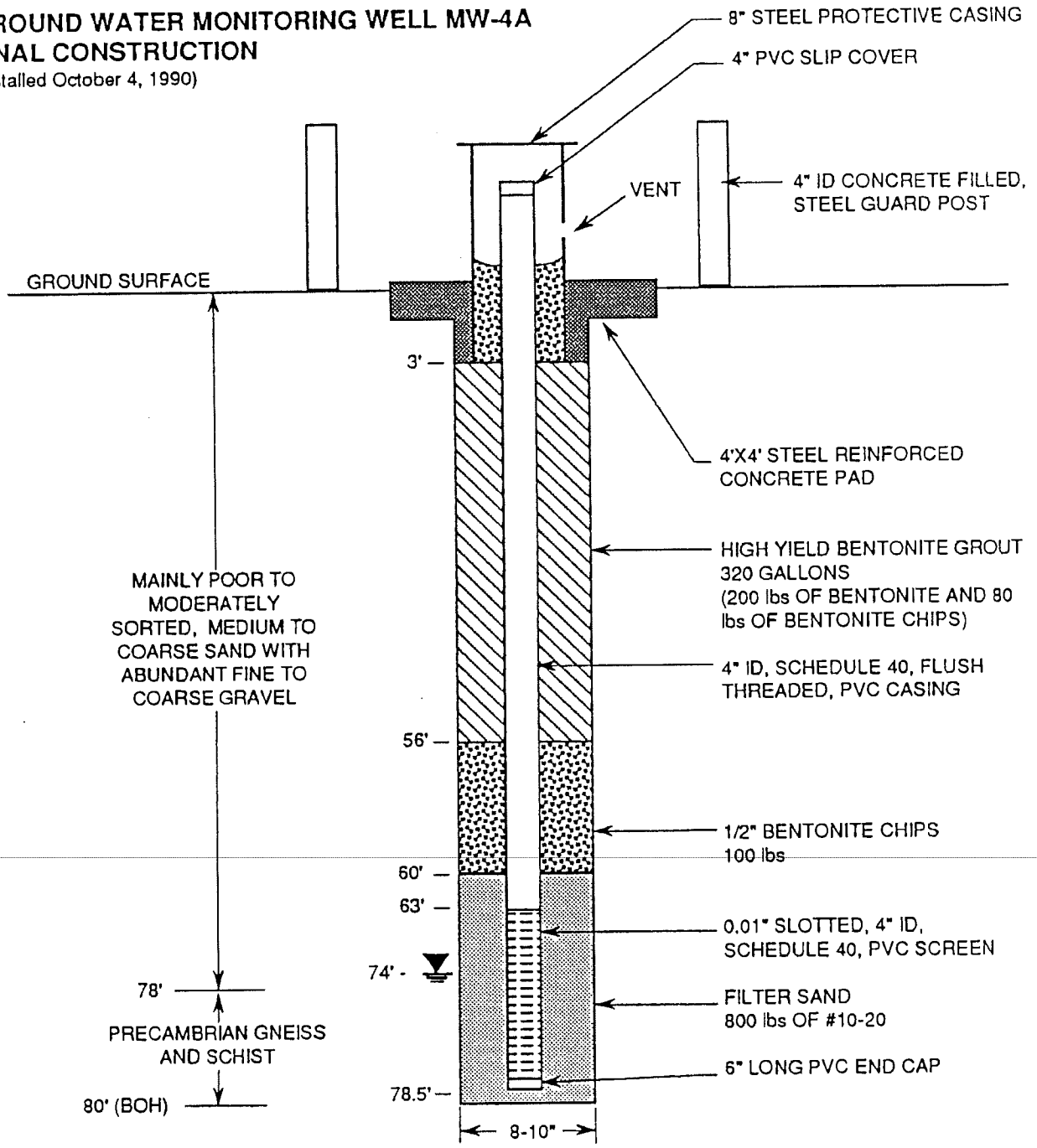
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	AS BUILTS
60'	#12			(60.0-61.0) Sample #12: Moderate to well sorted subangular sandy fine gravel. Contains 20-30% very coarse sand and granules. Gravel fragments are primarily basaltic in composition. Very moist.	
65'	#13			(65.0-66.0)Sample #13: Moderately sorted, subangular, coarse to very coarse sand with scattered granules and trace of fine sands. 60% basalt, 35% quartz, and 5% feldspar. Moist.	
70'	#14			(70.0-71.0)Sample #14: Moderately sorted, subangular, coarse to very coarse sand with abundant fine gravel. Gravel consists mostly of angular quartz and feldspar fragments.	
75'	#15			(75.0-76.0) Sample #15: Continue same as above.	
			78.0		
80'	#16		80.0	(79.0-80.0) Sample #16: Metamorphic bedrock, very hard . Cuttings consist of large (1cm), broken quartz and feldspar crystals and finely crystalline muscovite. 80.0	
85'				Bottom of hole.	
90'					

NOTES

Depth to water measured on 10/25/90 - 74.5' below ground surface. Pulled 8" conductor casing on 10/4/90 and installed 4" PVC monitoring well.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

GROUND WATER MONITORING WELL MW-4A
FINAL CONSTRUCTION
(Installed October 4, 1990)



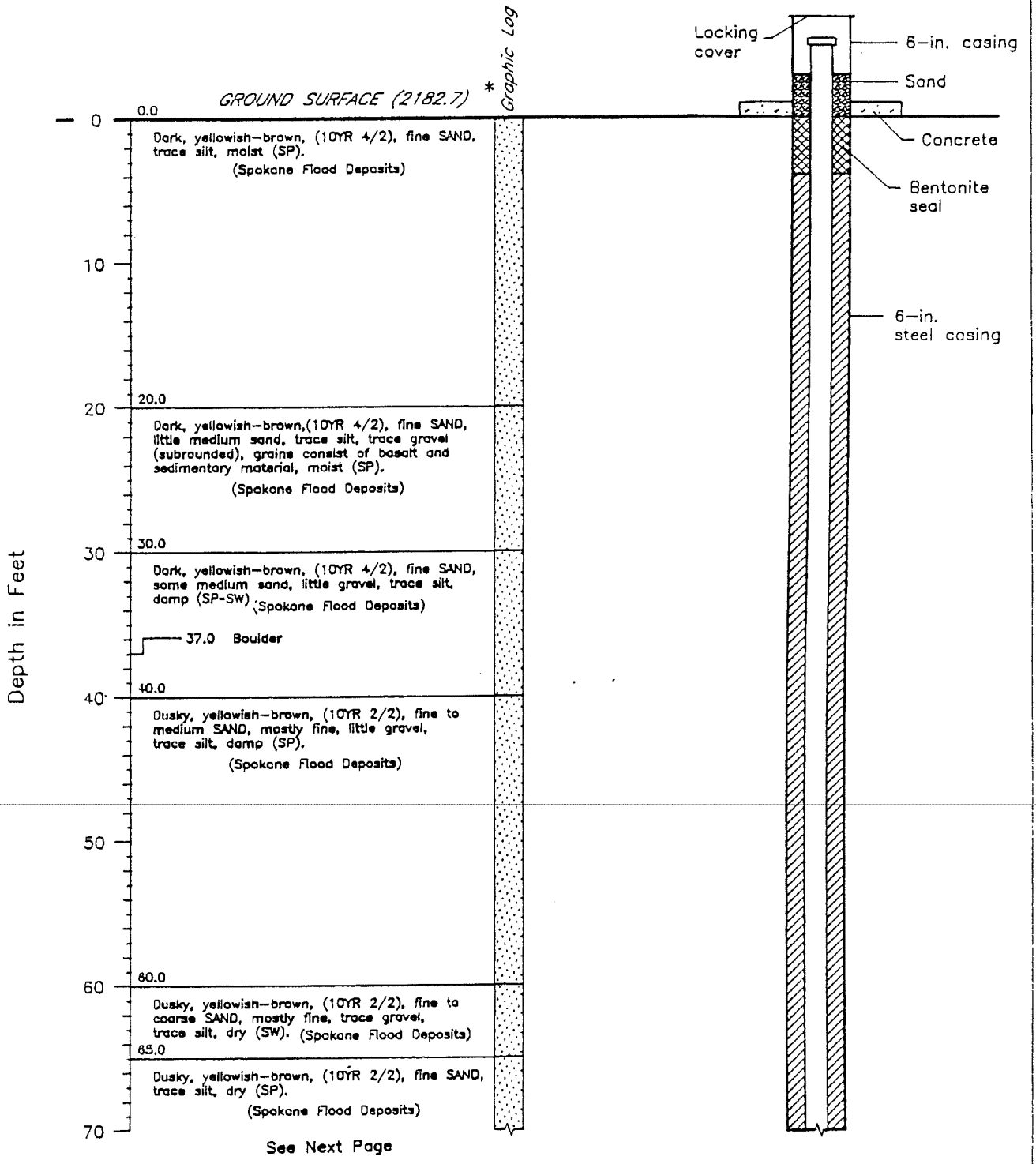
ELEVATIONS:

GROUND SURFACE = 2153.5'
TOP OF PVC CASING = 2155.75'
WATER SURFACE = 2079.17' (10/25/90)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)



See Next Page

WELL COMPLETION LEGEND:

- Concrete Grout
- Grout - Bentonite
- Bentonite Pellets (0.5-in.)
- Sandpack (#10-20)
- Water Level
- 2.0-in. Sch. 40 PVC Well Casing, Flush-Threaded
- 2.0-in. Sch. 40 PVC Well Screen, 0.020-in. slot, Flush Threaded
- 3/8" Volclay tablets

NOT TO SCALE

Date: 3/24/89
Ground Elevation: 2182.7
T.O.C. (PVC) Elevation: 2185.2
Drill Rig: CP 650 W.S.
Drill Method: Air Rotary
Sampling Method:
1)Cyclone grab sample

*Elevations above mean sea level.

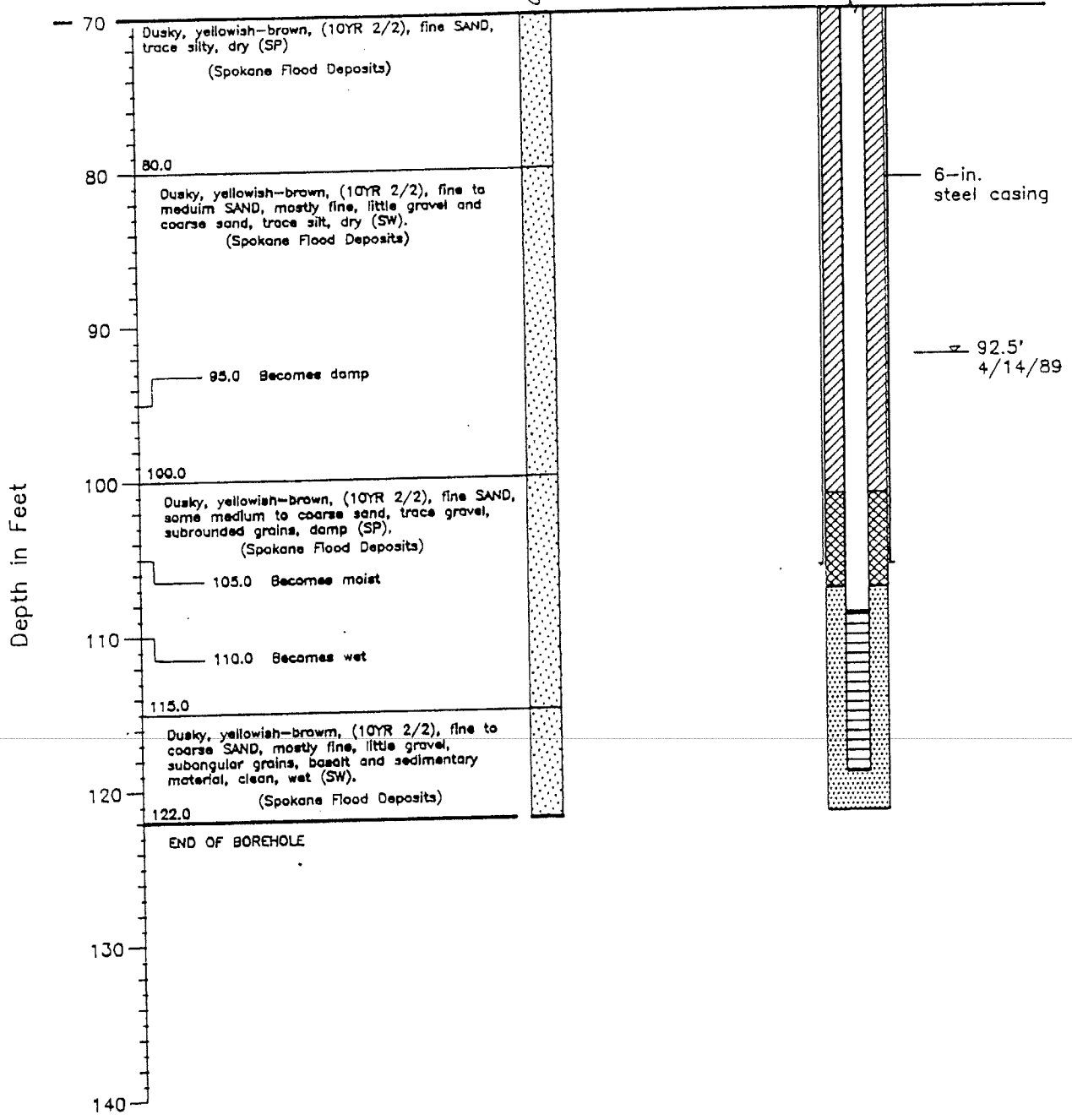
FIGURE A-22
BORING M-5
STRATIGRAPHY AND WELL COMPLETION
MARSHALL/CENTURY WEST

PROJECT NO 893-1033.008 DWG NO 7718 DATE 7/7/89 DRAWN RLM APPROVED DPF

Golder Associates

STRATIGRAPHY

WELL COMPLETION



WELL COMPLETION LEGEND:

- Concrete Grout
- Grout - Bentonite
- Bentonite Pellets (0.5-in.)
- Sandpack (#10-20)
- Water Level
- 2.0-in. Sch. 40 PVC Well Casing, Flush-Threaded
- 2.0-in. Sch. 40 PVC Well Screen, 0.020-in. slot, Flush Threaded
- 3/8" Volclay tablets

NOT TO SCALE

FIGURE A-22

BORING M-5

STRATIGRAPHY AND WELL COMPLETION

MARSHALL/CENTURY WEST

PROJECT NO 893-1033.008 DWG NO 7719 DATE 7/7/89 DRAWN RLM APPROVED DPF

Golder Associates

BORING LOG

PAGE 1 OF 5
BORING NO.: MW-5A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8799.55
EASTING 13752.21

DATE COMPLETED : 3/19/91
TOTAL DEPTH : 143'
SURFACE ELEVATION : 2181.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				Sand and gravel at surface.	
5'	#1			(5.0-6.0) Sample #1: Dark yellowish brown, subangular, damp, poorly sorted, medium to coarse sand with scattered small pebbles. Mostly basalt fragments with some quartz, feldspar and mica. 5% fine sand. 1/2" basalt fragment.	SW
10'	#2			(10.0-11.0) Sample #2: Continue same as previous.	SW
15'	#3			(15.0-16.0) Sample #3: Dark yellowish brown, angular, damp, poorly sorted, fine to coarse sand with abundant basalt pebbles. Composition of sand is mostly basalt with some quartz, feldspar and muscovite. Slightly silty.	SW
20'	#4			(20.0-21.0) Sample #4: Same as previous. Numerous pebbles but no gravel. Slightly silty.	SW
25'	#5			(25.0-26.0) Sample #5: Dark yellow brown, moderately sorted, medium to coarse sand. Slightly silty. Dry to damp. Composed mostly of basalt with some quartz, feldspar and mica. No pebbles or gravel.	SP
30'					

NOTES

Boring is located approximately 40' northwest of well MW-5. Hole advanced with 8" steel conductor casing. Samples collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 5
BORING NO.: MW-5A
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LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#6			(30.0-31.0) Sample #6: Dark yellow brown, poorly sorted, dry to damp, angular, medium to coarse sand. Silty with abundant fine to coarse, angular, basalt gravel.	SW
35'	#7			(35.0-36.0) Sample #7: Dark yellow brown, dry, angular, poorly sorted, coarse sand and gravel with coarse basalt gravel.	SW
40'	#8			(40.0-41.0) Sample #8: Dark yellow brown, poorly sorted, angular, dry, fine to coarse sand with scattered pebbles and fine basalt gravel.	SW
45'	#9			(45.0-46.0) Sample #9: Dark yellow brown, poorly sorted fine to coarse sand with fine, angular basalt gravel. Slightly silty and dry.	SW
50'	#10			(50.0-51.0) Sample #10: Same as previous with abundant basalt gravel and pebble size fragments of brown siltstone.	SW
55'	#11			(55.0-56.0) Sample #11: Dark yellow brown, damp, poorly sorted, fine to coarse, angular sand with abundant pebble size fragments of basalt.	SW
60'					

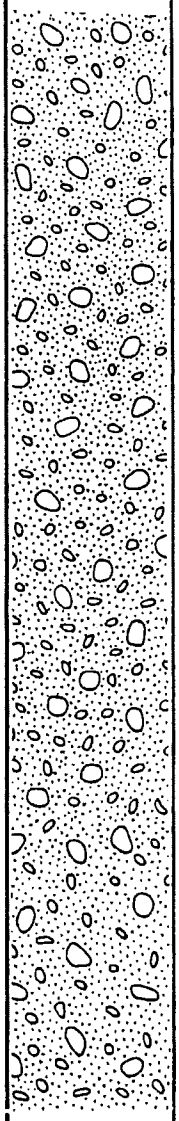
NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 5
BORING NO.: MW-5A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8799.55
EASTING 13752.21

DATE COMPLETED : 3/19/91
TOTAL DEPTH : 143'
SURFACE ELEVATION : 2181.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#12			(60.0-61.0) Sample #12: Continue dark yellow brown, poorly sorted, fine to coarse sand, same as previous, with abundant pebble size fragments of basalt.	SW
65'	#13			(65.0-66.0) Sample #13: Same as previous. Slightly silty.	SW
70'	#14			(70.0-71.0) Sample #14: Same as previous. Slightly coarser with fine to medium size basalt gravel.	SW
75'	#15			(75.0-76.0) Sample #15: Poorly sorted medium to coarse sand with abundant coarse basalt gravel up to 2". Sand consists mostly of basalt and quartz fragments. Trace of dark olive gray silt.	SW
80'	#16			(80.0-81.0) Sample #16: Same as previous. Dry.	SW
85'	#17			(85.0-86.0) Sample #17: Same as previous. Dry.	SW
90'					

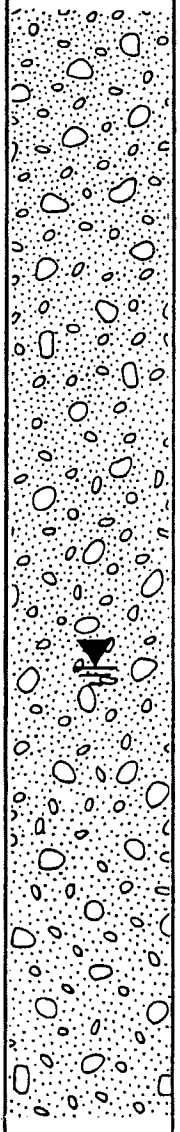
NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 4 OF 5
BORING NO.: MW-5A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8799.55
EASTING 13752.21

DATE COMPLETED : 3/19/91
TOTAL DEPTH : 143'
SURFACE ELEVATION : 2181.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#18			(90.0-91.0) Sample #18: Dark yellow brown, damp, poor to moderately sorted, subangular, mostly fine to medium sand with coarse sand and fine gravel. Sand and gravel are mostly of basaltic composition.	SW
95'	#19			(95.0-96.-) Sample #19: Dark yellow brown, dry, poorly sorted, fine to very coarse sand with abundant pebble size fagments of basalt. Subangular sand and gravel.	SW
100'	#20			(100.0-101.0) Sample #20: Same as previous. Slightly better sorted.	SW
105'	#21			(105.0-106.0) Sample #21: Dark yellow brown, dry, poorly sorted, slightly silty, angular, medium to very coarse sand with abundant pebble to fine gravel size fragments of basalt.	SW
110'	#22			(110.0-111.0) Sample #22: Dark yellow brown, dry, poorly sorted, medium to coarse sand with abundant, angular, 1/2" gravel size fragments of basalt. Sand is composed mainly of basalt fragments.	SW
115'	#23			(115.0-116.-) Sample #23: Dark yellow brown, dry, poorly sorted, subangular, silty, medium to coarse sand with abundant pebble size fragments of basalt.	SW
120'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 5 OF 5
BORING NO.: MW-5A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8799.55
EASTING 13752.21

DATE COMPLETED : 3/19/91
TOTAL DEPTH : 143'
SURFACE ELEVATION : 2181.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

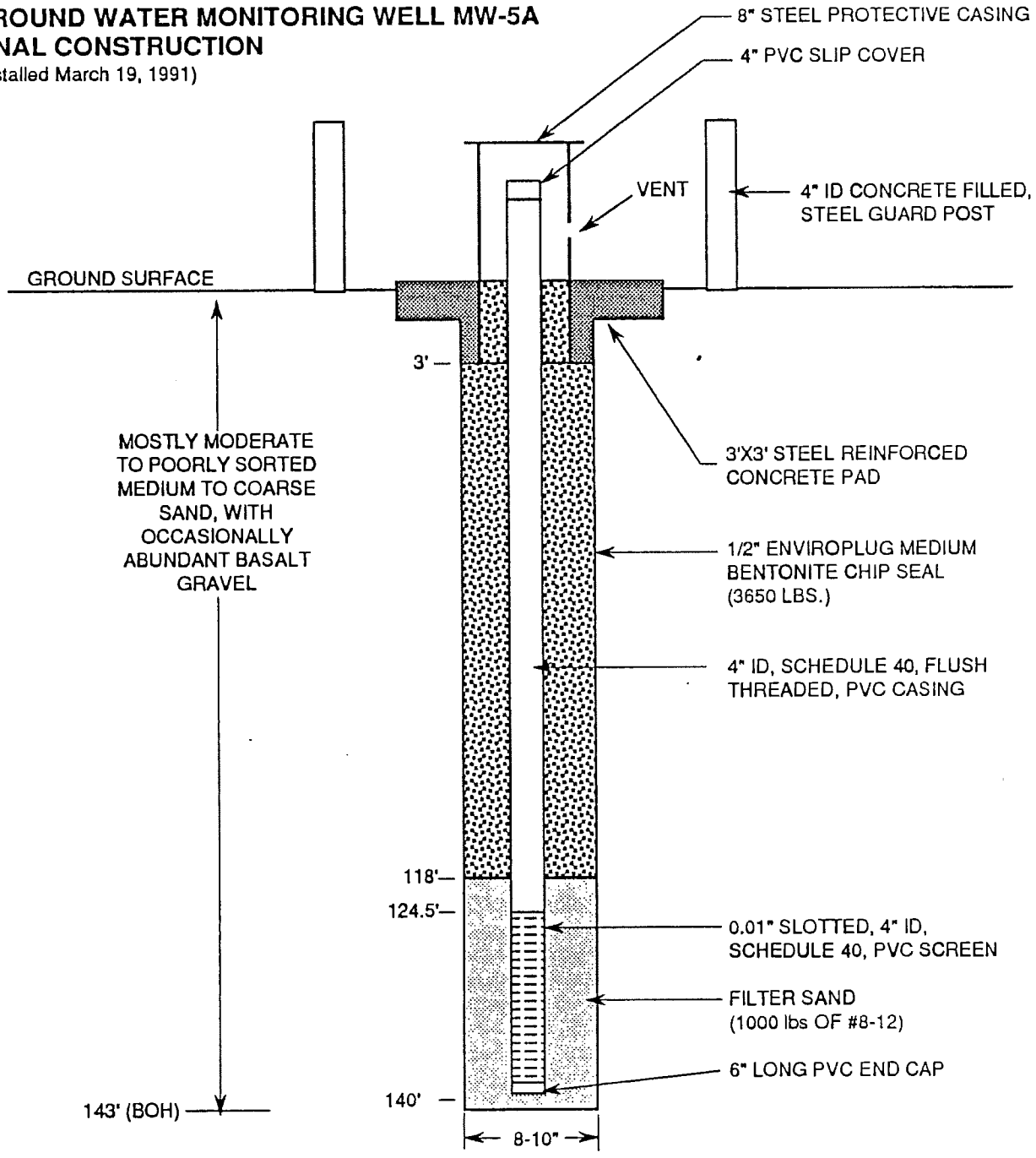
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	#24			(120.0-121.0) Sample #24: Dark yellow brown, wet, moderately sorted, silty, medium to coarse sand. No pebbles or gravel.	SP
125'	#25			(125.0-126.0) Sample #25: Dark yellow brown, wet poorly sorted, silty, medium to very coarse sand with abundant pebble to fine gravel size fragments of basalt.	SW
130'	#26			(130.0-131.0) Sample #26: Same as previous. Slightly more silty and wet.	SW
135'	#27			(135.0-136.0) Sample #27: Same as previous. Wet.	SW
140'	#28			(140.0-141.0) Sample #28: Same as previous. Wet.	SW
			143.0		143.0
145'				Bottom of hole.	
150					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Depth to water measured on 4/8/91- 108' below ground surface. Testing indicates that well is capable of producing at least 15gpm. Pulled 8" conductor casing on 3/19/91 and installed 4" PVC monitoring well.

GROUND WATER MONITORING WELL MW-5A
FINAL CONSTRUCTION
(Installed March 19, 1991)



ELEVATIONS:

GROUND SURFACE = 2181.5'
TOP OF PVC CASING = 2183.44'
WATER SURFACE = 2073.14' (4/8/91)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 9

BORING NO. : MW-6

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH 04

LOCATION : NORTHING 8710.30
EASTING 13675.40

DATE COMPLETED : 6/6/90

TOTAL DEPTH : 254.0'

SURFACE ELEVATION : 2174'

DRILLING METHOD : 8" CABLE TOOL

DRILLED BY : CARL PITTS DRILLING

LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				(0-4.0) SAND FILL,BROWN	
				(4.0-4.5) ORGANIC MATERIAL AND SILT	
5'				(4.5-29.0) SAND WITH VERY SCATTERED GRAVELS AND COBBLES,SORTED,BROWNISH GRAY,GRAVEL AND COBBLES SUBANGULAR	
	#1	9 9 10		SAMPLE#1 : 7.5-9.0,SAND,BROWN,SORTED	
10'					
	#2	9 15 30		SAMPLE#2 : 12.5-14.0,SAND WITH PIECE OF COBBLE IN SHOE.SAND SLIGHTLY COARSER THAN ABOVE,WELL SORTED,GRAY -BROWN	
15'					
	#3	11 15 16		(16.0-16.5),GRAVELLY LENSE SAMPLE#3 : 17.5-19.0 ,SAND;BROWNISH-GRAY	
20'	#4	12 13 19		SAMPLE#4 :20.0-21.5, AS ABOVE	
	#5	5 13 21		SAMPLE #5 : 22.5-24.0, COARSE SAND, SCATTERED GRAVEL	
25'	#6	13 21 40 FOR 2"		SAMPLE #6 : 25.0-26.1, AS ABOVE,REFUSAL ON ROCK	
	#7	21 28 27		SAMPLE #7 :27.5-29.0, CONTAINED TWO LARGE ROCK FRAGS (COBBLES)	
30'				(29.0-32.0) SAND WITH SOME GRAVEL, POORLY GRADED, SORTED SAND AND COARSE GRAVEL,GRAVEL GENERALLY SUBANGULAR	

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 9

BORING NO. : MW-6

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH 04

LOCATION : NORTHING 8710.30
EASTING 13675.40

DATE COMPLETED : 6/6/90

TOTAL DEPTH : 254.0'

SURFACE ELEVATION : 2174'

DRILLING METHOD : 8" CABLE TOOL

DRILLED BY : CARL PITTS DRILLING

LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#8	13 19 50		(29.0-32.0) SAND WITH SOME GRAVEL, POORLY GRADED, SAND SORTED, GRAVEL COARSE AND SUBANGULAR. SAMPLE #8: 30.0-31.5, SAND WITH SOME GRAVEL, SAND ANGULAR, GRAVEL SUBANGULAR.	
	#9	21 28 28		SAMPLE #9: 32.5-34.0, SAND WITH LESS THAN TRACE GRAVEL.	
35'	#10	REFUSAL		(32.0-37.0) SAND WITH TRACE GRAVEL BROWNISH-GRAY, SORTED, SUBANGUALR. SAMPLE #10: 35.0, REFUSAL ON BASALT, ROCK FRAGMENT IN SHOE.	
	#11	11 21 31		SAMPLE #11: 37.5-39.0, SAND WITH TRACE OF GRAVEL.	
40'	#12	11 28 30		(37.0-46.5) GRAVELLY SAND, POORLY GRADED, BROWNISH GRAY. SAMPLE #12: 40.0-41.5, GRAVELLY SAND.	
	#13	REFUSAL		SAMPLE #13: 42.5, REFUSAL, RECOVERED- 4" COARSE GRAVEL.	
45'	#14	12 25 37		SAMPLE #14: 45.0-46.5, GRAVELLY SAND WITH DARK REDDISH-BROWN SILT IN THE SHOE. DRY. (46.5), THIN SILT LENSE.	
	#15	12 25 25		SAMPLE #15: 47.5-49.0, WELL SORTED SAND. (46.5-54.5), SAND, BROWNISH- GRAY, WELL SORTED.	
50'	#16	10 15 22		SAMPLE #16: 50.0-51.5, SAND, WELL SORTED.	
	#17	12 19 28		SAMPLE #17: 52.5-54.0, AS ABOVE.	
55'	#18	22 50 REFUSAL		SAMPLE #18: 55.5-56.0, SAND, WITH SOME GRAVEL.	
	#19	58 REFUSAL		SAMPLE #19: 57.5-58.0, NO RECOVERY, DROVE COBBLE.	
60'				(54.5-70.1), INTERBEDDED GRAVELLY SAND AND SAND WITH SOME GRAVEL, BOTH WITH SCATTERED COBBLES, POORLY GRADED, SORTED SAND AND COARSE GRAVEL.	

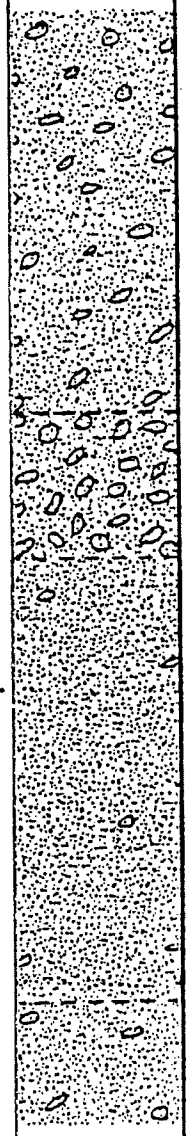
NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 9
BORING NO. : MW-6
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.30
EASTING 13675.40

DATE COMPLETED : 6/6/90
TOTAL DEPTH : 254.0'
SURFACE ELEVATION : 2174'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#20	21 54		SAMPLE #20: 60.0-61.0. GRAVELLY SAND, COARSE GRAVEL.	
				(54.5-71.0), INTERBEDDED SAND WITH SOME GRAVEL AND GRAVELLY SAND, BOTH WITH SCATTERED COBBLES, POORLY GRADED, SORTED SAND AND COARSE GRAVEL.	
	#21	27 56		SAMPLE #21: 62.5-65.0, GRAVELLY SAND.	
65'				(65.0), COLLECTED BAILINGS O ppm (OVM PID) O ppm TCE.	
	#22	13 24 51		SAMPLE #22: SAND WITH SOME GRAVEL.	
	#23	32 41 53		SAMPLE #23: GRAVELLY SAND.	
70'	#24	27 52		SAMPLE #24: 70.0-71.0, GRAVELLY SAND.	
				(71.0-75.0) GRAVEL WITH SOME SAND, BROWNISH- GRAY.	
	#25	52 FOR 4"		SAMPLE #25: 72.5-72.8, GRAVEL WITH SOME SAND IN SHOE.	
75'	#26	13 28 36		SAMPLE #26: 75.0-76.5, SAND, WELL SORTED.	
				(75.0-97.0) SAND WITH SCATTERED GRAVEL, BROWNISH-GRAY, WELL SORTED, SLIGHTLY MOIST.	
	#27	12 24 50 FOR 5"		SAMPLE #27: 77.5-78.7, SAND WITH SCATTERED GRAVEL.	
80'	#28	16 31 37		SAMPLE #28: 80.0-81.5, AS ABOVE.	
	#29	10 25 60		SAMPLE #29: 82.5-84.0, AS ABOVE.	
85'	#30	12 27 50		SAMPLE #30: 85.0-86.5, AS ABOVE.	
	#31	37 60 42		SAMPLE #31: 87.5-89.0, WELL SORTED SAND WITH SOME COARSE GRAVEL.	
90'				(87.0-98.5), SAND WITH SOME GRAVEL, BROWNISH- GRAY, WELL SORTED SAND, COARSE GRAVEL.	

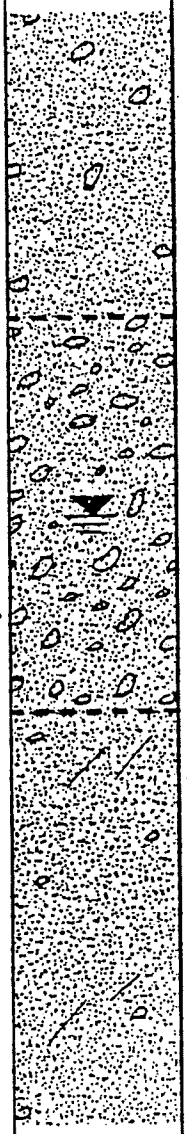
NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 4 OF 9
BORING NO. : MW-6
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.30
EASTING 13675.40

DATE COMPLETED : 6/6/90
TOTAL DEPTH : 254.0'
SURFACE ELEVATION : 2174'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#32	21 31 40		SAMPLE #32: SAND WITH SOME GRAVEL, SLIGHTLY MOIST. (87.0-98.5), SAND WITH SOME GRAVEL, BROWNISH- GRAY, WELL SORTED SAND, COARSE, SUBANGULAR GRAVEL. SAMPLE #33: 92.5-93.3, AS ABOVE, GRAVEL IN SHOE, REFUSAL. SAMPLE #34: 95.0-96.5, AS ABOVE, ONE 3" SS LINER @ 96.0'. SAMPLE #35: 97.0-98.5, ONE 3" SS LINER @ 98.0'. SAMPLE #36: 99.0-99.7, ROCK IN SHOE, NO SAMPLE. (98.5-109.0), GRAVELLY SAND, BROWNISH- GRAY, POORLY GRADED, SORTED SAND, COARSE GRAVEL. SAMPLE #37: 101.0-102.5, AS ABOVE, ONE 3" SS LINER @ 106.5'. SAMPLE #38: REFUSAL, NO SAMPLE. (103.8), WATER TABLE W.D. SAMPLE #39: 105.5-106.7, ONE 3" SS LINER @ 106.5'. SAMPLE #40: 108.0, REFUSAL. (109.0-132.0), SAND WITH SOME GRAVEL, WELL SORTED SAND WITH COARSE GRAVEL, CLEAN. SAMPLE #41: 110.0-111.5, ONE 3" SS LINER @ 111.0'. (112.5), WATER, SAND, FLOWING, NO SAMPLE. SAMPLE #42: 115.0-116.0, AS ABOVE, ONE 3" SS LINER @ 115.5'. SAMPLE #43: 117.5-119.0, AS ABOVE WITH LESS THAN TRACE SILT, BROWNISH, SLIGHTLY DIRTY.	
95'	#34	24 34 X 42			
	#35	24 50+ X 50+			
100'	#36	100+			
	#37	19 49 X 46			
	#38	50 FOR 2"			
105'	#39	24 X 44 50 FOR 2"			
	#40	100+			
110'	#41	8 10 X 32			
115'	#42	50+ X 43			
	#43	10 21 50			
120'					

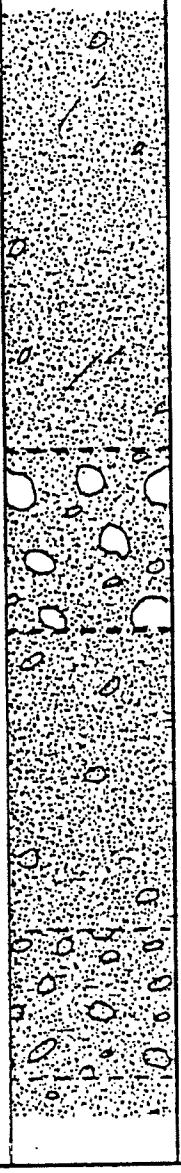
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RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 5 OF 9
BORING NO. : MW-6
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PROJECT CODE: MARSH-04
LOCATION : NORTHING 8710.30
EASTING 13675.40

DATE COMPLETED : 6/6/90
TOTAL DEPTH : 254.0'
SURFACE ELEVATION : 2174'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120	#44	12 24 24		SAMPLE#44 : 120.5-122.0, SAND WITH SOME GRAVEL, DIRTY,LESS THAN TRACE SILT (109.0-132.0), SAND WITH SOME GRAVEL, BROWNISH-GRAY TO BROWN, WELL SORTED SAND, COARSE GRAVEL	
125	#45	17 29 50		SAMPLE #45 : AS ABOVE	
130	#46	18 21 X 24		SAMPLE#46 : 135.0-136.5, ONE3" SS LINER @ 131.0' (132.0-137.0), GRAVEL WITH SAND, COBBLES AND BOULDERS, GRAYISH-BROWN, VESICULAR BASALT BOULDERS,SORTED SAND, LESS THAN TRACE SILT	
135	#47	27 50 FOR 3"		(132.0-133.5), BOULDERS SAMPLE#47 : 135.0-135.8 (137.0-145.0), SAND WITH SOME GRAVEL, BROWN SORTED SAND, COARSE GRAVEL, LESS THAN TRACE SILT, GRAVEL IS BASALT AND VESICULAR BASALT	
140	#48	34 51 X 50+		SAMPLE #48 : 140.0-141.5, ONE SS LINER @ 141.0' (143.0-149.0) GRAVELLY SAND, BROWN, GRADED, GENERALLY ANGULAR	
145	#49	14 17 54		SAMPLE #49 : 145.0-148.5 (149.0-168.0) SAND WITH SOME GRAVEL	
150					

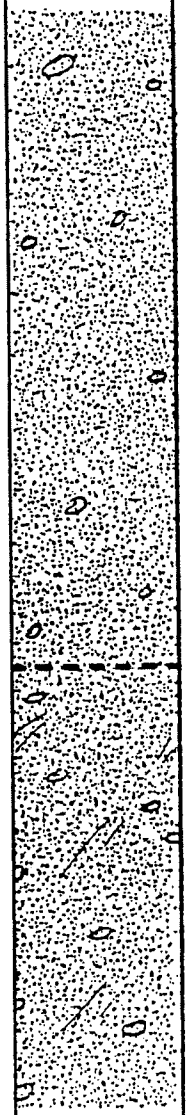
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2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

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DRILLED BY : CARL PITTS DRILLING
LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
150'	#50	17 24 X 29		SAMPLE#50 : 150.0-151.5,ONE SS LINER @ 151.0' (149.0-168.0), SAND WITH SOME GRAVEL, BROWNISH, LESS THAN TRACE SILT, GRADED, ANGULAR TO SUBANGULAR	
155'	#51	10 10 14		SAMPLE#51 : 155.0-156.5, SAND WITH SOME GRAVEL	
160'	#52	32 33 X 44		SAMLPE #52 : 160.0-161.5, ONE SS LINER @ 161.0', SAND WITH SOME GRAVEL, GRADED	
165'	#53	12 18 33		SAMPLE#53 : 165.0-166.5, AS ABOVE (168.0),THIN CLAY LENSE	
170'	#54	27 44 X 51		SAMPLE #54 : 170.0-171.5, ONE SS LINER @ 171.0', AS ABOVE TRACE SILT (168.0-182.5), SAND WITH SOME GRAVEL, TRACE SILT, BROWN GRADED, ANGULAR TO SUBANGULAR	
175'	#55	34 48		SAMPLE #55 : 175.0-176.0	
180'					

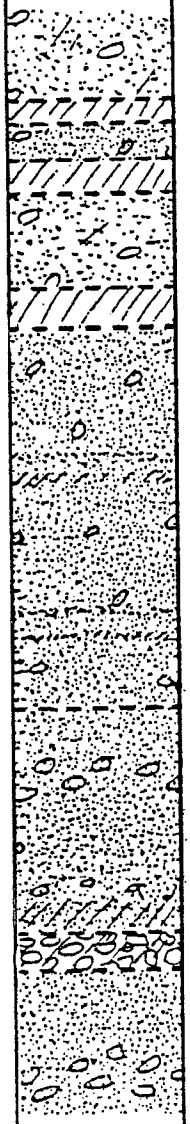
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2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

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SURFACE ELEVATION : 2174'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : AL LILES

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
180	#56	20 34 X 50		(SAMPLE#56) : 180.0-181.5, ONE SS LINER @ 181.0' (182.5-183.0), SILT WITH TRACE SAND AND GRAVEL, YELLOW WITH GREEN AND LIGHT BROWN SAND AND FINE GRAVEL (184.0-185.0), SILT, BROWN, MICACEOUS	
185	#57	40 45 55		SAMPLE#57 : 185.0-186.5, SAND WITH TRACE GRAVEL AND SILT (187.5-188.5), SILT, BROWN, MICACEOUS	
190	#58	40 52 X 60+		SAMPLE #58 : 190.0-191.5,ONE SS LINER @ 191.0' – PIPE ADVANCES IN .5' TO 1.0' SOFT/HARD INTERVALS (182.5-190.0), INTERLAYERED SAND WITH SOME GRAVEL, TRACE SILT, CLEAN SAND AND SILT LAYERS FROM 1" TO 3"	
195	#59	40 45 60+		SAMPLE#59 : 195.0-196.5, SAND WITH SOME GRAVEL AND SOME SILT, GRADED, GRAVEL ANGULAR TO ROUNDED, GRAVEL GENERALLY BASALT. SAMPLE CONTAINED 2" FINE SAND LENSE AND 1" SILT LENSE	
200	#60			SAMPLE #60 : REFUSAL NO RECOVERY (199.0-219.0), INTERLAYERED COARSE GRAVEL AND SAND, CLEAN, INTERLAYERS 6" TO 2' (202.5), CUTTINGS AND DRILLING CHARACTERISTICS SUGGEST COARSE POORLY CEMENTED GRAVEL	
205	#61			(205.0), FINE WATER SANDS AND INTERLAYERED SILTY SANDS SAMPLE #61 : REFUSAL, 1" PENETRATION, GRANITIC ROCK FRAGMENTS AND GNEISS IN SHOE CUTTINGS ARE MIXED, GENERALLY BASALT, SOME ROUNDED PEBBLES. DRILLING INDICATES COARSE GRAVELS	
210					

NOTES

RUSS FETROW ENGINEERING, INC.
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EUGENE, OREGON 97402

BORING LOG

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BORING NO. : MW-6

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 8710.30
EASTING 13675.40

DATE COMPLETED : 6/6/90

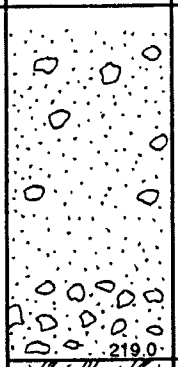
TOTAL DEPTH : 254.0'

SURFACE ELEVATION : 2174'

DRILLING METHOD : 8" CABLE TOOL

DRILLED BY : CARL PITTS DRILLING

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
210'		20 34 X 50		(199.0-219.0), INTERLAYED COARSE GRAVEL AND SAND, CLEAN, SUBANGULAR, INTERLAYERS 6" TO 12".	
215'		40 45 55		(215.0), NO SAMPLE ATTEMPT, DRILL PIPE ADVANCING VERY SLOWLY. NOTE: PULL CABLE TOOL RIG OFF LOCATION AT 219' AMD CONTINUE BORING WITH WIRELINE CORE RUG.	219.0
220'	# 1	40 52 X 80+		(219.0), TOP OF PRECAMBRIAN BEDROCK. (219.8-223.6), GNEISS, GRAY WITH GRAINS GENERALLY 2-3 MM, ~30° ORIENTATION, MINOR BANDING JOINING AT ~ 30° AND 65°, TIGHT WITH CLAY FILLING. RUN #1: 219.8-225.0	
225'	# 2	40 45 80+		(223.6-225.7), GNEISS, COARSE GRAINED MUSCOVITE AND BIOTITE TO 1.5CM, LINEATION DOES NOT CORRESPOND WITH GNEISS ABOVE OR BELOW. RUN #2: 225.0-230.0 (225.7-227.7), GNEISS, GENERALLY GRAY, 2-3 MM GRAINS AT 225.7 AND INCREASE TO AS LARGE AS 3 CM AT 235.0, LINEATION GENERALLY CONSISTENT.	
230'	# 3			(227.2-227.7), FRACTURE FILLED WITH HIGHLY WEATHERED GNEISS AND CLAY.0 RUN #3: 230.0-235.3 (227.0-235.0), HIGH ANGLE, TIGHT, CLAY FILLED FRACTURES.	
235'	# 4			RUN #4: 232.0-235.3 RUN #5: 235.3-240.3 (235.0-239.0), INTERLAYED MICA SCHIST AND QUARTZITE, MICA SCHIST IS DARK GREENISH- GRAY AND FINE GRAINED, QUARTZITE LIGHT AND FINE GRAINED, GENERALLY ORIENTED AT ~30°, JOINTS GENERALLY LESS THAN 70 AND MORE THAN 30, TIGHT AND POORLY WELDED WITH VERY FINE GREENISH CLAY (CHLORITE) SHALLOW. SHALLOW FRACTURE PLAIN IS PARALLEL TO FOLIATION.	
240'	# 5				

NOTES

BORING LOG

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PROJECT CODE: MARSH-04
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DATE COMPLETED : 6/6/90
TOTAL DEPTH : 254.0'
SURFACE ELEVATION : 2174'
DRILLING METHOD : NQ WIRE LINE & AIR ROTARY
DRILLED BY : JIM JOHNSON & LONGYEAR
LOGGED BY : AL LILES

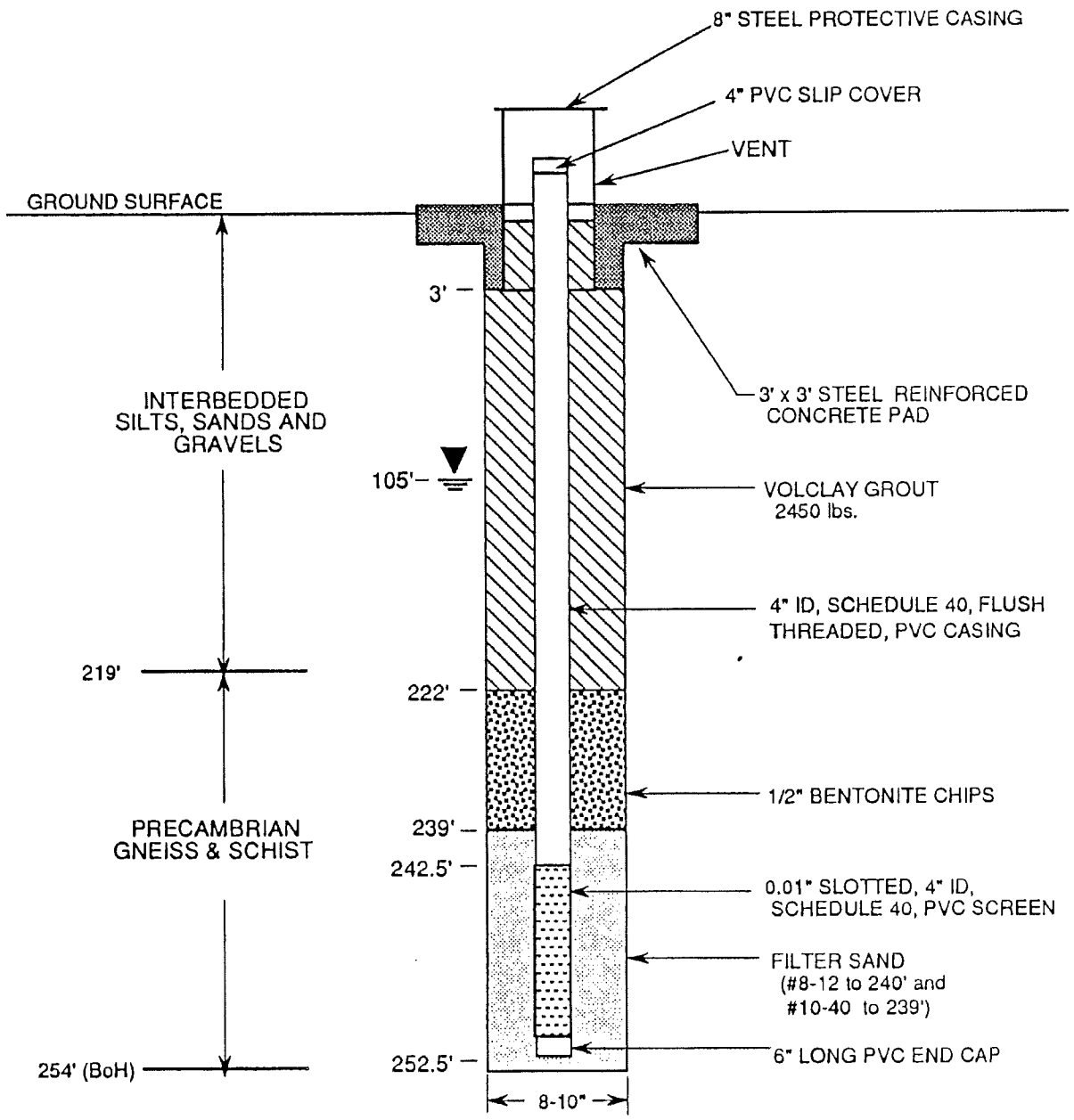
DEPTH	RUN NUMBER	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
240	# 6			RUN #6: 240.3-242.0 (241.5), THICK WELDED JOINT CONTAINING CALCIUM. RUN #7: 242.0-247.3 (239.0-248.3), GNEISS, GENERALLY GRAY, GRAIN SIZE GENERALLY FROM 2 MM TO 2 CM, MICAS DISTRIBUTED EVENLY THROUGH ROCK WHERE GRAIN SIZE 2 MM AND IN AGGRAGATES WHERE COARSE, MINOR BANDING WHERE FINE. LINEATION DOES NOT CORRESPOND IN COARSE GRAINED ZONES, FRACTURES GENERALLY TIGHT AND AT 5-15° OR 80-90°. GENERALLY CONTAIN THICK CLAY FILLINGS. RUN #8: 247.3-250.2 (248.3-250.2), QUARTZ MICA SCHIST, HIGHLY TO COMPLETELY WEATHERED, RECOVERY LOSS IN THIS ZONE MAY BE GOUGE, 60° FRACTURE AT 250.2 WITH SLICKENSIDES.	254.0
245	# 7				
250	# 8		250.2 254.0		
255					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

NOTE: AT 250.2 CORE RIG PULLED OFF LOCATION AND BORING CLEANED OUT AND OVER DRILLED FROM 220.0 TO 254.0. WITH AIR ROTARY RIG. 4" PVC MONITORING WELL INSTALLED. WELL SCREENED FROM 242.5 TO 252.2. PLEASE SEE ATTACHED DIAGRAM FOR CONSTRUCTION DETAILS.

GROUND WATER MONITORING WELL MW-6
FINAL CONSTRUCTION
(Installed June 5, 1990)



ELEVATIONS:

GROUND SURFACE = 2175'
TOP OF PVC CASING= 2176.92'
WATER SURFACE = 2069.94' (6/18/90)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 14
BORING NO.: MW-7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				Sand and gravel at surface.	
5'					
10'	#1			(10.0-11.0)Sample #1: Dusky yellow brown, poorly sorted coarse sand and fine to coarse gravel primarily of basalt composition. Dry.	SW
15'					
20'	#2			(20.0-21.0) Sample #2: Continue poorly sorted coarse sand and gravel, same as above. Dry.	SW
25'					
30'					

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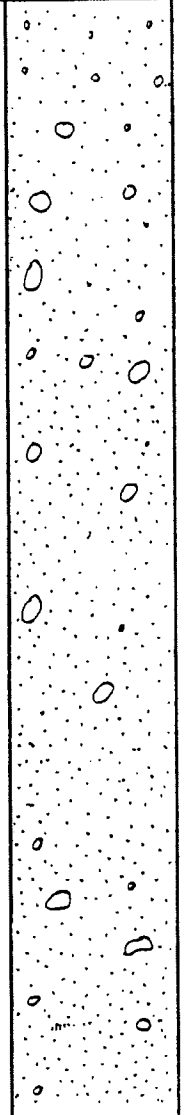
NOTES

Boring is located 75' east of landfill garage / shop.
Boring advanced using 8" steel conductor casing. Soil samples collected from cyclone.

BORING LOG

PAGE 2 OF 14
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DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#3			(30.0-31.0) Sample #3 : Dusky yellow brown, poorly sorted medium to coarse sand with abundant fine basalt gravel. Dry.	SW
35'					
40'	#4			(40.0-41.0)Sample #4: Dusky yellow brown, poorly sorted sand with fine to coarse basalt gravel. Dry.	SW
45'					
50'	#5			(50.0-51.0) Sample #5 : Dusky yellow brown, poorly sorted fine to coarse sand. No gravel. Dry.	SW
55'					
60'					

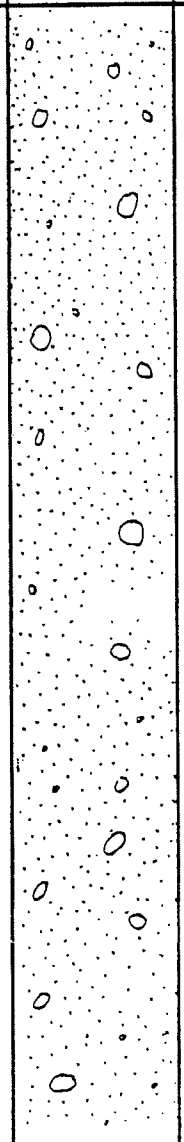
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LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#6			(60.0-61.0) Sample #6: Dusky yellow brown, moderately sorted medium to coarse sand with trace amounts of fine sand and fine gravel. Dry.	SP
65'					
70'	#7			(70.0-71.0)Sample #7: Dusky yellowish brown, poorly sorted, medium to coarse sand with scattered pebbles and fine gravel. Trace amounts of fine sand and silt. Dry.	SW
75'					
80'	#8			(80.0-81.0) Sample #8: Dusky yellow brown, poorly sorted medium to coarse sand with scattered granules and fine gravel. Dry.	SW
85'					
90'					

NOTES

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LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#9			(90.0-91.0) Sample #9: Dusky yellow brown, moderately sorted medium sand with coarse sand and scattered gravel. Dry.	SP
95'					
100'	#10			(100.0-101.0) Sample #10: Dusky yellowish brown, moderately sorted, medium to coarse sand with subangular basalt gravel up tp 1". Dry>	SP
105'					
110'	#11			(110.0-111.0) Sample #11: Light olive gray, moderately sorted medium to coarse sand with granules. Dry.	SP
115'					
120'					

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DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	#12			(120.0-121.0) Sample #12: Dusky yellowish brown, poorly sorted, medium to coarse sand with fine to coarse gravel. Trace of fine sand. Dry.	SW
125'					
130'	#13			(130.0-131.0)Sample #13: Dusky yellowish brown, poorly sorted, medium to coarse sand with granules and fine sand. Dry.	SW
135'					
140'	#14			(140.0-141.0) Sample #14: Pale yellowish brown, well sorted medium sand. Trace of fine sand. Dry.	SP
145'					
150'					

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LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
150'	#15			(150.0-151.0) Sample #15: Dark yellowish brown, moderately sorted, medium to coarse sand with scattered granules and fine basalt gravel. Dry.	SP
155'					
160'	#16			(160.0-161.0)Sample #16: Dark yellowish brown, moderately sorted, medium to coarse sand with granules and scattered fine gravel. Dry.	SP
165'			167.0'		167.0'
170'	#17			Well sorted fine to medium sand. (170.0-171.0) Sample #17: Dark yellowish brown, fairly well sorted, fine to medium sand. No granules or gravel. Dry.	SP
175'			175.0'		175.0'
180'				Encounter light brown silty clay at approximately 175'. Appears to be saprolite of highly weathered gneiss and schist.	

NOTES

Driller suspects that silty clay zone begins 175.0'. No returns between 175 and 180'. Water added to hole. No indication of saturated zone above silty clay.

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LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
180'	#18			(180.0-181.0) Sample #18: Light brown silty clay with medium to coarse sand. Silt consists of finely crystalline muscovite. Sand consists of quartz, feldspar, and muscovite. (Highly weathered metamophic rock - saprolite.)	
185'					
190'	#19			(190.0-191.0)Sample #19: Continue light brown silty clay with minor amount of coarse sand. Saprolite.	
195'					
200'	#20			(200.0-201.0) Sample #20: Continue same as above. Saprolite.	
205'					
210'					

NOTES

Stratigraphic interval between 180' and 300' is better described in nearby well MW-7B where split spoon samples were collected.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 8 OF 14
BORING NO.: MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
210'	#21			(210.0-211.0) Sample #21: Continue light brown silty clay. Same as above. Saprolite.	
215'					
220'	#22			(220.0-221.0) Sample #22: Same as above. Saprolite	
225'					
230'	#23			(230.0-231.0) Sample #23: Continue light brown silty clay with trace of sand and gravel size fragments of quartz, feldspar, muscovite, and gneiss. Saprolite.	
235'					
240'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 9 OF 14
BORING NO. MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
240'	#24			(240.0-241.0) Sample #24: Continue light brown silty clay. Same as above. Saturated.	
245'					
			250.0'	250.0'	
250'	#25			Pale orange to dark yellow sandy silt. Saprolite derived from gneiss and schist.	
255'				(250.0-251.0) Sample #25:Very pale orange sandy silt with abundant gravel size fragments of mica schist and gneiss. Sand consists of quartz, feldspar, and muscovite fragments. Saprolite.	
260'	#26			(260.0-261.0) Sample #26: Continue pale orange sandy silt. Same as above. Saprolite.	
265'					
270'					

NOTES

RUSS FETROW ENGINEERING, INC.
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EUGENE, OREGON 97402

BORING LOG

PAGE 10 OF 14
BORING NO. MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
270'	#27			(270.0-271.0) Sample #27: Continue pale orange sandy silt. Same as above.	
275'					
280'	#28			(280.0-281.0)Sample #28: Continue pale orange sandy silt. Same as above.	
285'					
290'	#29			(290.0-291.0) Sample #29: Dusky yellow sandy silt. Sand is generally coarse and consists of quartz, feldspar, and muscovite fragments.	
295'					
300'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 11 OF 14
BORING NO.: MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
300'	#30			(300.0-301.0) Sample #30: Dusky yellow sandy silt. 30-40% coarse sand size quartz, feldspar, and muscovite crystals. Highly weathered gneiss.	
305'					
310'	#31			(310.0-311.0)Sample #31: Continue same as above.	
315'					
			320.0'		320.0'
320'	#32			Top of firm gneiss and schist. (320.0-321.0) Sample #32: Firm but highly weathered gneiss. Cuttings consist of a sand and silt slurry containing coarse sand size fragments of quartz, feldspar, and muscovite.	
325'					
330'					

NOTES

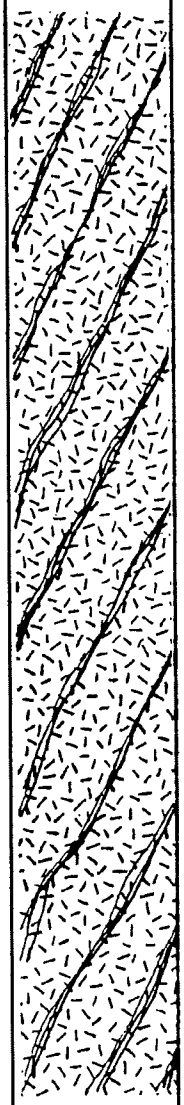
Top of firm bedrock encountered at 320'. Change over to 8" tricone bit and drill open hole starting at 320'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 12 OF 14
BORING NO. MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
330'	#33			(330.0-331.0) Sample #33: Cuttings consist of 85% muscovite and 15% plagioclase feldspar. Trace amounts of quartz and biotite.	
335'					
340'					
345'	#34			(345.0-345.0)Sample #34: Cuttings consist of broken weathered gneiss composed primarily of quartz, feldspar and muscovite.	
350'					
355'	#35			(3550.0-351.0) Sample #35: Cuttings consist of 20% quartz, 50% feldspar, 30% muscovite and trace of biotite.	
350'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 13 OF 14
BORING NO.: MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
360'					
365'					
370'					
375'	#36		375.0		375.0'
				Top of hard, firm gneiss and schist. (375.0-376.0)Sample #36: Cuttings consist of 50% feldspar, 30% quartz, and 20% muscovite and biotite. Very hard, firm rock at 375.0'	
380'					
385'	#37			(385.0-386.0) Sample #37: Cuttings consist of 40% muscovite, 40% plagioclase feldspar and 20% quartz. Trace amounts of hornblende ? and biotite.	
390'					

NOTES

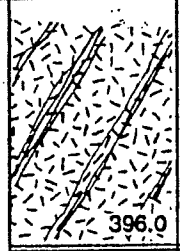
Hard bedrock encountered at 375'. 5000 psi applied to drill string.

RUSS FETROW ENGINEERING, INC.
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EUGENE, OREGON 97402

BORING LOG

PAGE 14 OF 14
BORING NO.: MW -7A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8768.69
EASTING 12327.07

DATE COMPLETED : 9/28/90
TOTAL DEPTH : 396'
SURFACE ELEVATION : 2316.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

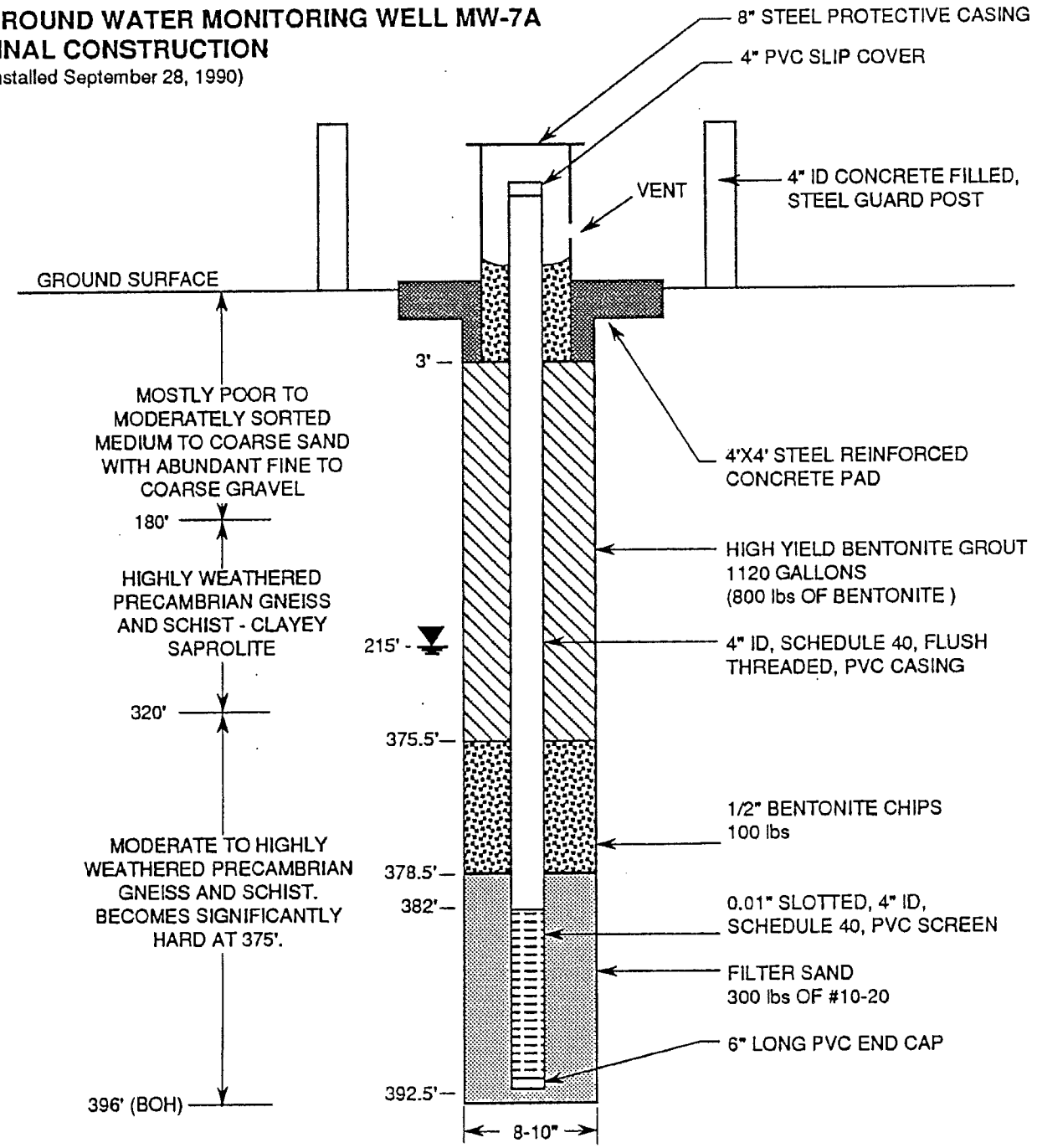
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
390'	#38			(390.0-391.0) Sample #38: Cuttings same as above. Crystal fragments have a rusty, weathered appearance.	
395'			396.0		396.0'
				Bottom of hole.	

NOTES

Drilling completed on 9/28/90. Pulled all conductor casing and installed 4" PVC monitoring well. Depth to water measured on 10/25/90- 215' below ground surface.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

GROUND WATER MONITORING WELL MW-7A
FINAL CONSTRUCTION
(Installed September 28, 1990)



ELEVATIONS:

GROUND SURFACE	= 2316.5'
TOP OF PVC CASING	= 2317.70'
WATER SURFACE	= 2101.31' (10/25/90)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 10
BORING NO.: MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
					0.0	0.0
0'					Sand and gravel at surface.	
5'	#1	10 19 24			(5.0-6.5)Sample #1: Dusky yellow brown, poorly sorted, sand and gravel. Slightly silty. Dense.	
10'	#2	5 5 19			(10.0-11.5)Sample #2: Continue poorly sorted sand and gravel, same as previous. Coarse basalt gravel up to 2". Very firm.	
15'	#3			6	(15.0-16.05 Sample #3: Continue poorly sorted coarse sand and gravel, same as previous. Gravel is generally coarse.	
20'	#4	11 16 25		12	(20.0-21.5) Sample #4: Continue poorly sorted coarse sand and gravel, same as previous. Gravel consists of basaltic and metamorphic rock fragments. Dense.	
25'	#5	12 16 19		11	(25.0-26.5) Sample #5: Continue poorly sorted coarse sand and fine gravel. Composition is mostly basalt. Subangular to angular sand and gravel. Dense.	
30'						

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Boring drilled with 8" cable tool and advanced using 8" conductor casing. Sample collected using 2" ID split spoon sampler. PID head space analysis obtained with a Microtip100 calibrated to isobutylene. Concentrations are listed in ppm isobutylene equivalent.

BORING LOG

PAGE 2 OF 10
BORING NO.: MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
30'	#6			20	(30.0-31.5) Sample # 6: Dusky yellow brown, moderately sorted, medium to coarse sand with fine gravel. 70-80% medium to coarse sand. Composition is mainly basaltic.	
35'	#7	5 11 16		6	(35.0-36.5)Sample #7: Dusky yellow brown, moderately sorted, coarse sand with fine gravel. Composition is mainly basaltic. Very firm.	
40'	#8		092590 MW7B40S	7	(40.0-41.5)Sample #8: Dusky yellow brown, moderately sorted, subangular coarse sand with fine gravel. Less than 2% fine sand.	
45'	#9	8 16 16		5	(45.0-46.5) Sample #9: Dusky yellow brown , moderately sorted, medium to coarse sand with scattered fine to coarse gravel. Dense.	
50'	#10	4 11 22		4	(50.0-51.5) Sample #10: Dusky yellow brown, moderately sorted, medium to coarse sand with scattered , fine, subangular, basalt gravel. Dense.	
55'	#11	7 17 29		3	(55.0-56.5) Sample #11: Dusky yellow brown, poorly sorted, angular, coarse sand with scattered coarse (2") basalt gravel. 2" gravel fragment lodged in drive shoe. Dense.	
60'						

NOTES

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EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 10
BORING NO. MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
60'	#12	6 17 27	092590 MW7B60S	6	(60.0-61.5) Sample #12: Dusky yellow brown, moderately sorted, medium to coarse sand with scattered basalt gravel up to 1". Dense	
65'	#13	12 17 25		31	(65.0-66.5)Sample #13: Dusky yellow brown, moderately sorted, medium to coarse sand with granules and scattered fine to coarse gravel. Composition is mainly basalt with some quartz and feldspar. Gravel up to 2". Dense	
70'	#14	12 22 50		71	(70.0-71.5)Sample #14: Dusky yellow brown, moderately sorted, medium to coarse sand with scattered granules and fine gravel. Very dense.	
75'	#15	50 for 6"		24	(75.0-76.5) Sample #15: No recovery. Drove 6" recovered 0".	
80'	#16	125 for 18"	092590 MW7B80S	20	(80.0-81.5) Sample #16: Dusky yellow brown, moderately sorted, coarse sand and gravel. Gravel up to 2". 1" nodule of light brown silty clay. Very dense.	
85'	#17	11 15 21		37	(85.0-86.5) Sample #17: Dusky yellow brown, moderately sorted, angular, medium to coarse sand with granules and basalt gravel up to 1".	
90'						

NOTES

RUSS FETROW ENGINEERING, INC.
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BORING LOG

PAGE 4 OF 10
BORING NO.: MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
90'	#18	40 60 for 6"			(90.0-91.5) Sample #18: Poor recovery. Large coarse gravel size fragment of basalt lodged in drive shoe. Very dense.	
95'	#19	12 16 16		38	(95.0-96.5)Sample #19: Dark yellow brown, moderately well sorted, medium to coarse sand. No granules or gravel. Dense.	
					97.0	97.0
100'	#20	11 17 50	092590 MW7B100S	35	(100.0-101.5)Sample #20: Dark yellow brown, moderately well sorted medium sand with trace of coarse sand. Very dense.	
					102'	102'
105'	#21	47 52 for 4"		4	(105.0-106.5) Sample #21: Dusky yellow brown , poorly sorted, medium to coarse sand with coarse gravel. Very dense.	
110'	#22	7 25 40		5	(110.0-111.5) Sample #22: Dusky yellow brown, poorly sorted, medium to coarse sand with granules and subangular basalt gravel. Very dense.	
115'	#23	7 17 38		3	(115.0-116.5) Sample #23: Continue same as previous. Very dense.	
120'						

NOTES

RUSS FETROW ENGINEERING, INC.
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EUGENE, OREGON 97402

BORING LOG

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BORING NO. MW-7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
120'	#24	11 25 50	092690 MW7B120S	26	(120.0-121.5) Sample #24: Dusky yellow brown, poorly sorted, medium to coarse sand and gravel. Very dense.	
125'	#25	13 22 25		30	(125.0-126.5)Sample #25: Dusky yellow brown, moderately sorted, medium to coarse sand. Scattered granules; no gravel. Composition of sand is mostly basalt with quartz and feldspar. Dense.	
130'	#26	25 57 85		9	(130.0-131.5)Sample #26: Dusky yellow brown, moderately sorted, medium to coarse sand with abundant basalt gravel. Very dense.	
135'	#27	28 60 57		6	(135.0-136.5) Sample #27: Continue same as prvious. Very dense.	
140'	#28	11 25 40	092790 MW7B140	3	(140.0-141.5) Sample #28: Dusky yellow brown, moderately sorted, medium to coarse sand with scattered granules and fine basalt gravel. Very dense.	
145'	#29	10 24 28		2	(145.0-146.5) Sample #29: Same as previous but with 1" thick layer of moderate yellow brown, well sorted, fine to medium sand at 145.5'. Very dense.	
150'						

NOTES

RUSS FETROW ENGINEERING, INC.
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EUGENE, OREGON 97402

BORING LOG

PAGE 6 OF 10
BORING NO. MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
150'	#30	15 25 35		38	(150.0-151.5) Sample #30: Dusky yellow brown, moderately sorted, medium to coarse sand with scattered granules and fine basalt gravel. Very dense.	
155'	#31	15 28 40		52	(155.0-156.5)Sample #31: Continue same as previous with large rounded gravel. Very dense.	
160'	#32	23 57 70	092890 MW7B160S	30	(160.0-161.5)Sample #32: Dusky yellow brown, poorly sorted, medium to coarse sand with weathered basalt gravel. Very dense.	
165'	#33	28 36 42		107	(165.0-166.5) Sample #33: Dusky yellow brown, moderately sorted, medium to coarse sand with trace of fine sand. No granules or gravel. Very dense.	
170'	#34	22 41 52		75	(170.0-171.5) Sample #34: Dusky yellow brown, moderately sorted, medium to coarse sand with trace of fine sand. Scattered granules. Trace of dark brown silty clay in tip of drive shoe. Very dense.	
175'	#35	20 32 49		9	(175.0-176.5) Sample #35: Dusky yellow brown, moderately sorted, medium to coarse sand with trace of basalt gravel. Sand consists mostly of basalt with lesser quartz and feldspar. Traces of fine sand and reddish brown silt. Very dense.	
180'						

NOTES

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BORING LOG

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BORING NO. MW-7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 1234.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
180'	#36	20 65	092890 MW7B180S	13	(180.0-181.5) Sample #36: Dusky yellow brown, poorly sorted, medium to coarse sand with large basalt gravel. Trace of fine sand; scattered nodules of gray silt. 183.0	
					Top of highly weathered metamorphic rock - saprolite.	
185'	#37	15 25 40			(185.0-186.5)Sample #37: Light brown and grayish yellow mottled clayey silt containing sand size particles of quartz and muscovite and scattered gravel size basalt and mica schist. Scattered black specks of highly weathered biotite or hornblende. Hard.	
190'	#38	10 23 40			(190.0-191.5)Sample #38: Light brown to grayish orange pink mottled clayey silt containing highly weathered coarse crystals of plagioclase? feldspar. Hard.	
195'	#39	6 14 43			(195.0-196.5) Sample #39: Light to dark brown and gray mottled clayey silt containing highly weathered coarse crystals of plagioclase? feldspar. Hard.	
200'	#40	6 14 15	100190 MW7B200S		(200.0-201.5) Sample #40: Continue dark brown and gray mottled clayey silt. Same as previous. Very stiff.	
205'	#41				(205.0-206.5) Sample #41: Dark brown clayey silt. Abruptly changes to pale yellow green silty clay at 205.5'. Weathered veins of feldspar? in pale yellow green silt. Subhorizontal layering also apparent.	
210'						

NOTES

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EUGENE, OREGON 97402

BORING LOG

PAGE 8 OF 10
BORING NO.: MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
210'	#42	5 14 30		2	(210.0-211.5) Sample #42: Pale yellow green silty clay. Abrupt change to thinly banded silty clay composed of dark brown and pale yellow green layers at 210.5'. Mottled with black specks. Hard.	
215'	#43	10 23 45 for 4"			(215.0-216.5)Sample #43: Continue thinly banded silty clay, same as previous, with scattered black specks. Hard.	
220'	#44	15 26 45	100190 MW7B220S		(220.0-221.5)Sample #44: Muscovite crystals set in light to dark brown clayey matrix. Scattered coarse sand size quartz crystals. Abrupt change to very pale orange clay with abundant muscovite crystals at 221.0'. Hard.	
225'	#45	15 30 52		40	(225.0-226.5) Sample #45: Yellowish gray silty clay with abundant fine muscovite crystals. Grades into medium to coarse sand size muscovite crystals set in clayey matrix. Hard.	
230'	#46	11 33 40		20	(230.0-231.5) Sample #46: Light brown and gray mottled silty clay containing abundant sand size muscovite crystals, scattered quartz and weathered feldspar. Hard.	
					235.0	235.0
235'	#47	15 90 for 3"			Top of weathered metamorphic rock. (235.0-236.5) Sample #47: Weathered metamorphic rock consisting of abundant weathered crystals of quartz, muscovite, and feldspar set in rust colored clayey matrix. Very dense.	
240'						

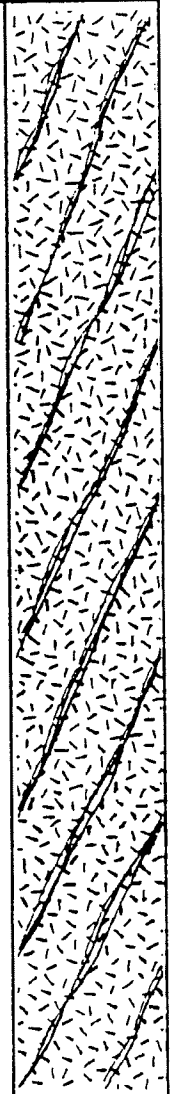
NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 9 OF 10
BORING NO.: MW-7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 1234.15

DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
240'	#48	75 for 6"			(240.0-240.5) Sample #48: Very dense, highly weathered rock of granitic composition. Composed of coarsely crystalline quartz, feldspar (plagioclase), and muscovite. Crumbles easily in hand. Trace of clayey matrix.	
245'						
250'	#49	15 80 for 6"			(250.0-251.0)Sample #49: Very dense, highly weathered metamorphic rock of granitic composition. Schistosity is apparent. Composed of quartz, feldspar and muscovite with minor hornblende and biotite. Feldspar and dark minerals are completely weathered. Numerous veins of weathered feldspar from 1/4" to 1/2". Most veins are parallel to schistosity. One vein is perpendicular to schistosity.	
255'						
260'	#50	60 43 for 3"			(260.0-261.0) Sample #50: Very dense, highly weathered gneiss. Same as previous. Feldspar is completely weathered. Minor amounts of muscovite and dark minerals. Pronounced schistosity which appears to be oriented subhorizontally.	
265'						
270'						

NOTES

Samples collected every 10' beginning at 240'. Driller removed 60 gallons of water from hole prior to drilling on 10/3/90; hole depth was 240'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 10 OF 10
BORING NO.: MW -7B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8710.24
EASTING 12347.14

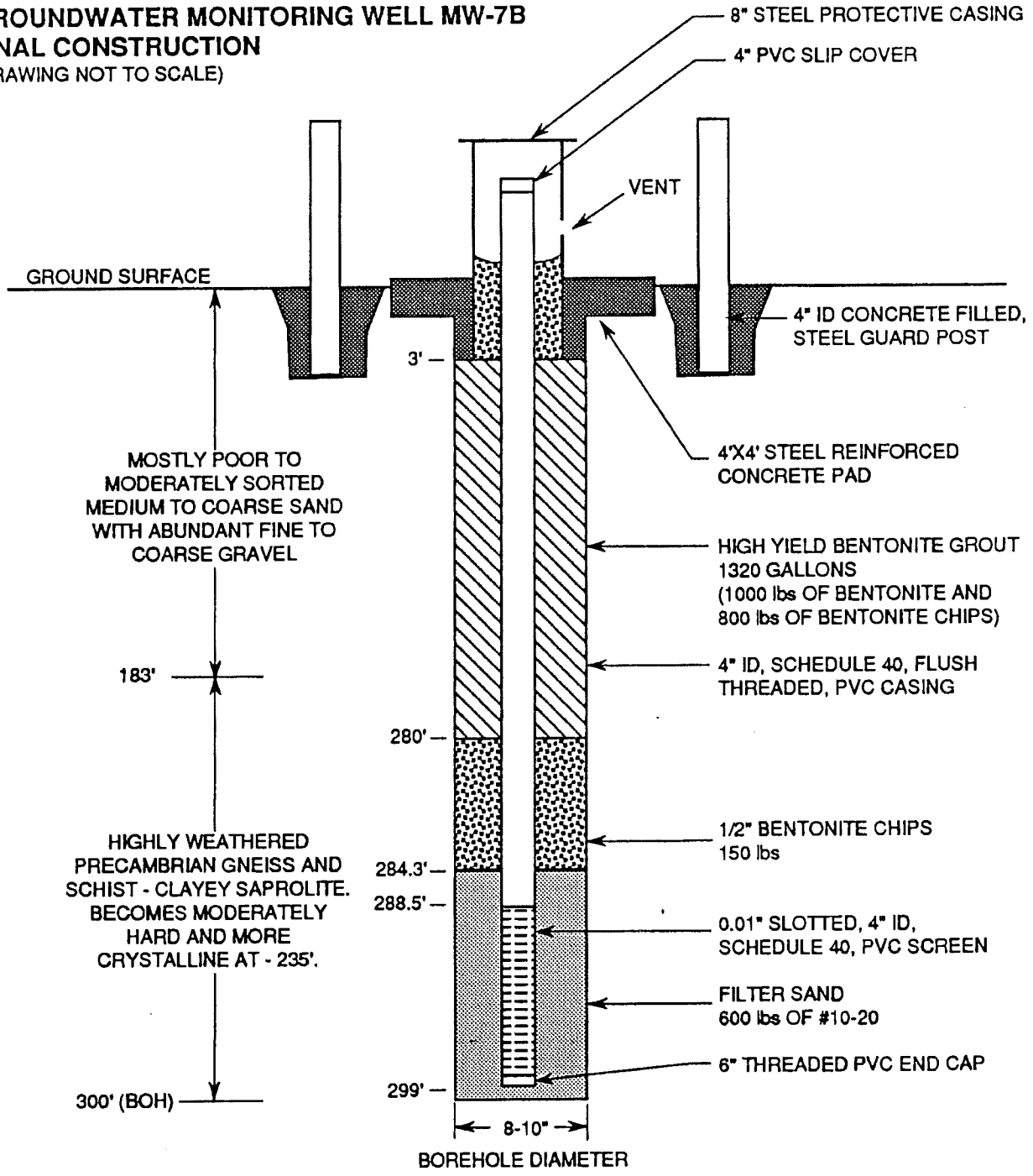
DATE COMPLETED : 10/8/90
TOTAL DEPTH : 300.0'
SURFACE ELEVATION : 2315'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LAB SAMPLE No.	PID HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	LITHOLOGY
270'	#51	25 60 for 3"			(270.0-271.0) Sample #51: Light yellow brown to dark brown banded silt containing fine muscovite crystals and gravel size fragments of gneiss.	
275'					Coarsely crystalline zone beteen 275' and 280'. Bailer retrieved large quartz and muscovite crystal (1") and firm (solid) feldspar crystals. Pegmatite?	
280'	#52	30 80 for 6"			(280.0-281.0)Sample #52: Highly weathered gneiss. Composed of quartz , feldspar, muscovite and hornblende. Feldspar is whitish and very soft. Subtle subhorizontal schistosity.	
285'						
290'	#53	36 60 for 2"			(290.0-291.0) Sample #53: Very dense, highly weathered gneiss. Composed of coarsely crystalline quartz, feldspar, muscovite and hornblende. Feldspar is entirely weathered and soft. Hornblende (?) is also weathered and soft. Rusty hue. Scattered (1/8") veins of feldspar.	
295'						
300'					300.0 Bottom of hole	300.0

NOTES Driller suspects softer formation between 270' and 280'. Driller cleaned out to 300', drove 8" conductor casing to 300'. Weld temporary cover onto well and pull cable tool rig. Install 4" PVC monitoring well and pull 8" conductor casing on 10/8/90 using air rotary rig. Depth to water surface measured on 10/25/90 - 179' below ground surface.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

GROUNDWATER MONITORING WELL MW-7B
FINAL CONSTRUCTION
(DRAWING NOT TO SCALE)



ELEVATIONS:

GROUND SURFACE =
TOP OF PVC CASING =
WATER SURFACE =

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY
OCTOBER 1990

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 1 OF 8
BORING NO.: MW-7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				Sand and gravel at surface.	
5'	#1			(5.0-6.0)Sample #1: Dark gray, moderate to well sorted coarse sand and fine gravel. Rock fragments are mainly basaltic. Dry	SP
10'	#2			(10.0-11.0)Sample #2: Dusky brown, moderately sorted, medium to coarse sand with granules. Mainly basaltic in composition. Dry.	SP
15'	#3			(15.0-16.0)Sample #3: Dusky yellow brown, poorly sorted, medium to coarse sand with fine gravel. Dry.	SW
20'	#4			(20.0-21.0) Sample #4: Dark brown, moderately sorted, medium to coarse sand with abundant fine to coarse gravel. Dry. Trace of fine sand.	SP
25'	#5			(25.0-26.0) Sample #5: Dark brown, well sorted, granules and fine gravel. Trace of sand. Dry.	GP
30'					

NOTES

Boring advanced using 8" steel conductor casing. Soil samples collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 8
BORING NO. MW -7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#6			(30.0-31.0) Sample #6 : Dusky yellow brown, poorly sorted medium to coarse sand with abundant fine gravel. Trace of fine sand. Dry.	SW
35'	#7			(35.0-36.0) Sample #7 : Dusky yellow brown, poorly sorted fine to coarse sand with scattered granules. Dry.	SW
40'	#8			(40.0-41.0)Sample #8: Dusky yellow brown, well sorted, coarse sand with granules and fine basalt gravel. Trace of medium sand. Dry.	SP
45'	#9			(45.0-46.0) Sample #9 : Dusky yellow brown, moderately sorted medium to coarse sand with granules. Sand is mainly of basaltic composition. Dry.	SP
50'	#10			(50.0-51.0) Sample #10: Moderate yellow brown, poorly sorted fine to coarse sand with granules. Trace of fine to medium sand. Dry.	SW
55'	#11			(55.0-56.0) Sample #11: Dusky yellow brown, well sorted coarse sand and fine gravel. Trace of fine to medium sand. Dry.	SP
60'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 8
BORING NO. MW -7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#12			(60.0-61.0) Sample #12: Dusky yellow brown, well sorted, coarse sand and fine gravel. Trace of fine sand. Dry	SP
65'	#13			(65.0-66.0) Sample #13: Dusky yellow brown, subangular, well sorted, medium to mostly coarse basaltic sand. Trace of fine sand. Dry	SP
70'	#14			(70.0-71.0)Sample #14: Moderate yellow brown, subangular, moderately sorted, fine to coarse sand. Mostly basalt with minor quartz. No gravel. Dry.	SP
75'	#15			(75.0-76.0)Sample #15: Moderate yellow brown, subangular, poorly sorted, medium to coarse sand with granules and fine basalt gravel. Dry.	SW
80'	#16			(80.0-81.0) Sample #16: Moderate yellow brown, poorly sorted, subangular, fine to coarse sand with granules. Dry	SW
85'	#17			(85.0-86.0) Sample #17: Dusky yellow brown, moderately sorted, subangular, medium to coarse sand with some fine sand and scattered granules. Dry.	SP
90'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 4 OF 8
BORING NO.: MW-7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#18			(90.0-91.0) Sample #18: Dark yellow brown, poorly sorted, subangular, fine to coarse sand with fine gravel. Dry.	SW
95'	#19			(95.0-96.0) Sample #19: Dark yellow brown, moderately sorted, medium to coarse sand with some fine sand. No gravel. Dry.	SP
100'	#20			(100.0-101.0)Sample #20: Dark yellow brown, moderately sorted, subangular, medium to coarse sand with 20-30% fine sand. No gravel. Mostly basalt with minor quartz. Dry.	SP
105'	#21			(105.0-106.0)Sample #21: Dark yellow brown, poorly sorted, subangular, medium to coarse sand with abundant fine basalt gravel. Trace of fine sand. Dry.	SW
110'	#22			(110.0-111.0) Sample #22: Dark yellow brown, subangular, poorly sorted, medium to coarse sand with 20% fine sand and scattered granules. Mostly basalt and quartz. Dry.	SW
115'	#23			(115.0-116.0) Sample #23: Dark yellow brown, subangular, poorly sorted, medium to coarse sand with trace of fine sand and scattered granules. No gravel. Dry.	SW
120'	#24				

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 5 OF 8
BORING NO.: MW -7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	#24			(120.0-121.0) Sample #24: Dark yellow brown, subangular, poorly sorted, medium to coarse sand with 5% fine sand and abundant basalt granules. Dry.	SW
125'	#25			(125.0-126.0) Sample #25: Continue same as previous.	SW
130'	#26			(130.0-131.0)Sample #26: Dark yellow brown, subangular, moderately sorted medium sand with 20% coarse sand and granules and 10% fine sand. Dry.	SP
135'	#27			(135.0-136.0)Sample #27: Dark yellow brown, subangular, poorly sorted, medium to coarse sand with 10-20% fine sand and scattered small granules. No gravel. Dry.	SW
140'	#28			(140.0-141.0) Sample #28: Moderate yellow brown, subangular, fine to coarse sand with abundant fine gravel. Dry.	SW
145'	#29			(145.0-146.0) Sample #29: Moderate yellow brown, poorly sorted, subangular, medium to coarse sand. Approximately 10% fine sand. No gravel. Composition is basalt and quartz. Dry.	SW
150'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 6 OF 8
BORING NO. MW -7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
150'	#30			(150.0-151.0) Sample #30: Moderate yellow brown, subangular, moderately sorted, medium sand with 20% fine sand and 20% coarse sand. No gravel. Dry.	SP
155'	#31			(155.0-156.0) Sample #31: Moderate yellow brown, subangular, moderately sorted, medium to coarse sand with granules of basalt and dark red brown clay. Trace of fine sand. Dry.	SP
160'	#32			(160.0-161.0)Sample #32: Moderate yellow brown, moderately sorted, medium sand with 20% fine sand and 25% coarse sand. No gravel. Dry.	SP
165'	#33			(165.0-166.0)Sample #33: Moderate yellow brown, moderately sorted, medium to coarse sand with 10-20% fine sand. No gravel. Dry.	SP
170'	#34			(170.0-171.0) Sample #34: Moderate yellow brown, moderately sorted, medium to coarse sand. Same as previous with scattered granules. Dry.	SP
175'					
180'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 7 OF 8
BORING NO.: MW-7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
180'				Continue moderately sorted medium to coarse sand. Same as previous. No gravel.	SP
185'					
190'			191.0		191.0
				Top of red brown silty clay. Saprolite of highly weathered gneiss and schist.	
195'	#35			(195.0-196.0) Sample #35: Red brown silty clay; saprolite	
200'	#36			(200.0-201.0) Sample #36: Red brown silty clay; saprolite	
205'	#37			(205.0-206.0) Sample #37: Red brown silty clay. Contains quartz, feldspar crystals and fragments of gneiss.	
210'					

NOTES

Stratigraphic interval between 191' and 227' is better described in nearby well MW-7B where split spoon samples were collected.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 8 OF 8
BORING NO.: MW -7C
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8737.29
EASTING 12382.15

DATE COMPLETED : 10/15/90
TOTAL DEPTH : 227.0'
SURFACE ELEVATION : 2314.8'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : P. ZAGER / C. SCHWARZ

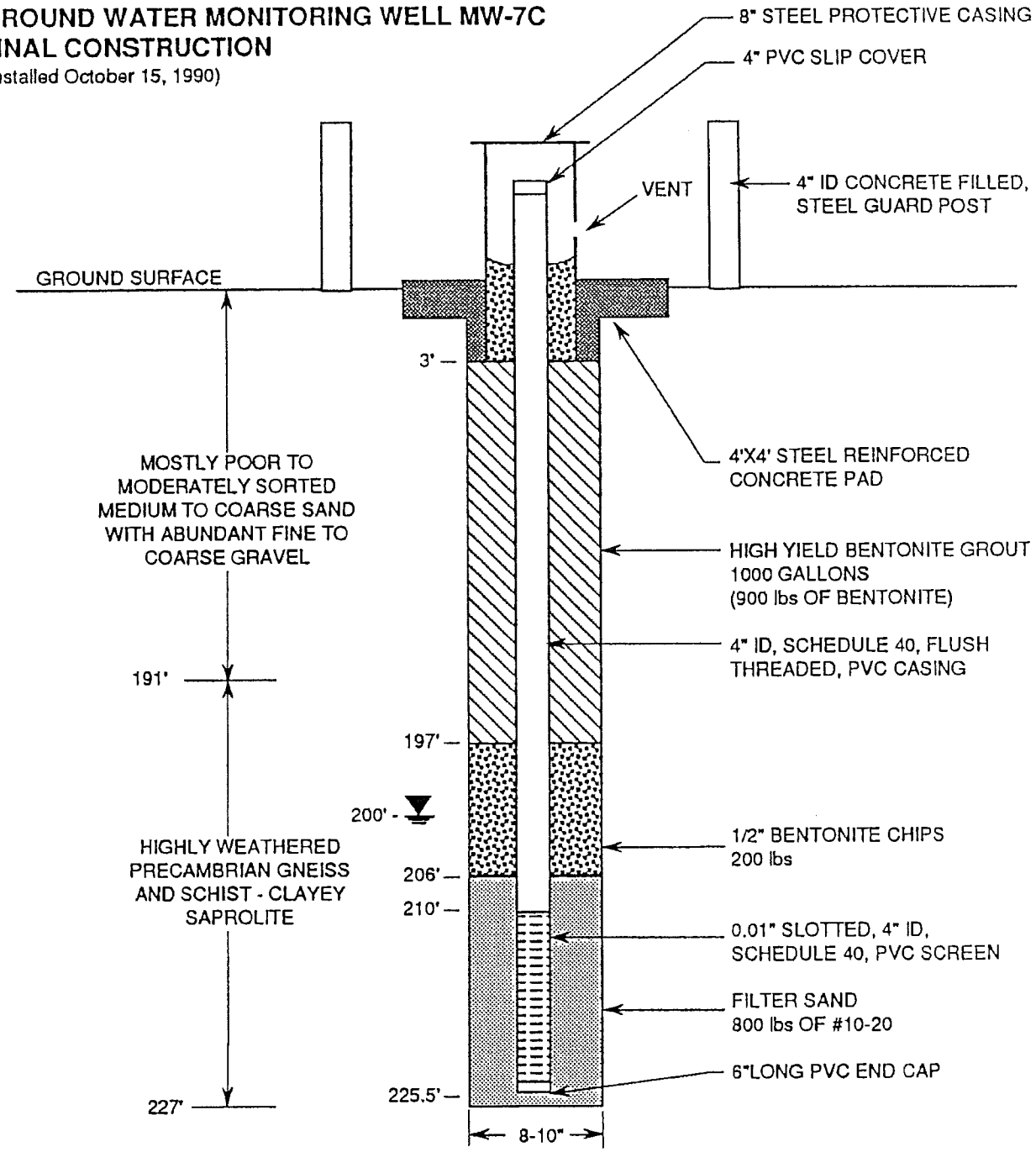
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
210'	#38			(210.0-211.0) Sample #38: Continue red brown silty clay. Same as previous; saprolite.	
215'					
220'	#22			Red brown silty clay continues to bottom of hole.	
225'			227.0		227.0
230'				Bottom of hole	
235'					
240'					

NOTES

Install 4" PVC well on 10/15/90 and pull all 8" steel conductor casing. Depth to water measured on 10/25/90 - 200' below ground surface.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

GROUND WATER MONITORING WELL MW-7C
FINAL CONSTRUCTION
(Installed October 15, 1990)



ELEVATIONS:

GROUND SURFACE	= 2314.8'
TOP OF PVC CASING	= 2316.90'
WATER SURFACE	= 2114.74' (10/25/90)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 5
BORING NO.: MW-8A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8809.51
EASTING 14619.24

DATE COMPLETED : 10/18/90
TOTAL DEPTH : 121.0'
SURFACE ELEVATION : 2133.6'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
					0.0
0'				(0-1.0) Very soft silty soil rich in organic material	
5'	#1	3 4 5		(5.0-6.0)Sample #1: Dusky yellow brown, loose, moderately sorted, subangular to angular medium to coarse sand with scattered basalt gravel. Sand is mostly composed of quartz and basalt fragments.	SP
10'	#2	4 6 5		(10.0-11.0)Sample #2: Dusky yellow brown, loose, well sorted, angular coarse medium sand with scattered coarse gravel up to 1.5". Sand is mostly composed of quartz and basalt fragments.	SP
15'	#3	5 19 14		(15.0-16.0) Sample #3: Continue same as above.	SP
20'	#4	6 15 15		(20.0-21.0) Sample #4: Dusky yellow brown, very firm, well sorted, coarse to very coarse sand. Consists mainly of subangular basalt and quartz fragments. Trace of medium sand and scattered basalt gravel up to 3/4".	SP
25'	#5	12 36 12		(25.0-25.5) Sample #5: Dusky yellow brown, dense, subangular, moderately sorted medium to coarse sand with gravel. Possible basalt cobble at 25.5'	SP
30'					

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EUGENE, OREGON 97402

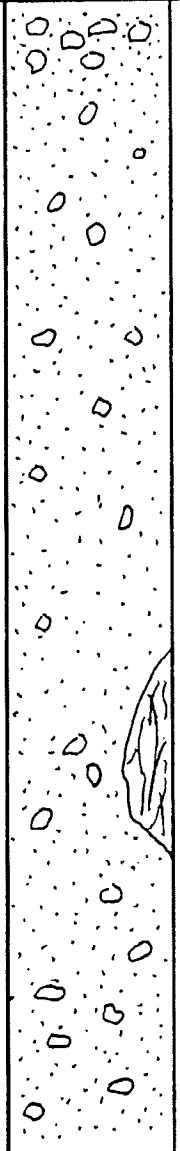
NOTES

Boring drilled with 8" cable tool. Hole advanced with 8" conductor casing. Samples collected with 2" ID split spoon sampler. Driller reports that material at 20' is very loose and easy to drill. Bailer retrieved abundant, coarse, basalt gravel from 30' during clean out.

BORING LOG

PAGE 2 OF 5
BORING NO.: MW-8A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8809.51
EASTING 14619.24

DATE COMPLETED : 10/18/90
TOTAL DEPTH : 121.0'
SURFACE ELEVATION : 2133.6'
DRILLING METHOD : 8" CABLE TOOL
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#6	7 13 25		(30.0 - 30.5) Sample #6:Dusky yellow brown, dense, poorly sorted, subangular, fine to coarse sand with abundant coarse basalt gravel up to 2".	SW
35'	#7	4 7 13		(35.0-36.0)Sample #7: Dusky yellow brown, firm, moderately sorted, medium to coarse sand with scattered basalt gravel.	SP
40'	#8	68 FOR 18"		(40.0-41.0)Sample #8:Continue same as above.	SP
45'	#9	12 18 14		(45.0-46.0) Sample #9: Dusky yellow brown, dense, angular, moderately sorted medium to coarse sand with abundant coarse gravel size fragments of basalt and gneiss?	SP
50'	#10	50 FOR 3"		(50.0-50.25) Sample #10: Sample consists of coarse, angular, basalt gravel up to 2"	GP
55'	#11	35 36 21		(55.0-55.75) Sample #11:Generally moderately sorted coarse sand and gravel containing coarse gravel size fragments of basalt, nodules of soft , pale yellow brown silt (up to 1") and rounded quartz gravel (up to 1")	GP
60'					

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2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

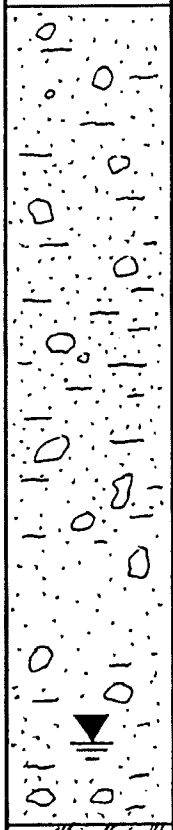
NOTES

Large basalt? boulder encountered at 47.0'. Conducter casing is being deflected slightly from vertical by this obstruction. Cuttings bailed from 55' during clean out contain coarse gravel size fragments of basalt and gray siltstone with plant fragments (Latah Formation?)

BORING LOG

PAGE 3 OF 5
BORING NO.: MW -8A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8809.51
EASTING 14619.24

DATE COMPLETED : 10/18/90
TOTAL DEPTH : 121.0'
SURFACE ELEVATION : 2133.6'
DRILLING METHOD : 8" CABLE TOOL & 7 7/8" AIR ROTARY
DRILLED BY : CARL PITTS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
					60.0
60'	#12	25 45 60 FOR 3"		(60.0 - 60.6) Sample #12:Poorly sorted medium to coarse sand and gravel (consisting mostly of basalt) set in olive gray clay matrix. Abundant coarse quartz sand and trace of mica.	SW & SC
65'	#13	21 45 55		(65.0-66.0)Sample #13: Dusky yellow brown poorly sorted, angular, gravelly, medium to coarse sand. Interbedded with 4" (layer?) of light olive gray silty, micaceous clay.	SW & CL
70'	#14	45 24 20		(70.0-71.0) Sample #14: Continue poorly sorted sand and gravel (same as above) with scattered lenses? of light olive gray silty micaceous clay.	SW & CL
75'	#15	34 51 52		(75.0-76.0) Sample #15: Poorly sorted medium to coarse sand with abundant coarse basalt gravel up to 2". Sand consists mostly of basalt and quartz fragments. Trace of dark olive gray silt.	SW & ML
80'	#16	35 50 50		(80.0-81.0) Sample #16: Poorly sorted coarse angular basalt gravel in matrix of fine to coarse sand and dark olive gray silty clay.	GP
					83.0'
85'	#17	50 for 0"		Top of Precambrian metamorphic rock. Sample #17: No sample recovery	
90'					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Driller reports that hole is staying open at 60'. Firm rock encounted at 83.0'. Boring advanced to 85' by cable tool. Pull cable tool rig and cap boring on 10/10/90. Casing advanced to 83'. Continue drilling on 10/17/90 with air rotary rig and 7 7/8" rotary bit.

BORING LOG

PAGE 4 OF 5
BORING NO.: MW-8A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION :NORTHING 8809.51
EASTING 14619.24

DATE COMPLETED : 10/18/90
TOTAL DEPTH : 121.0'
SURFACE ELEVATION : 2133.6'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#18			Sample #18:Cuttings consist of 80% dark mica schist (muscovite) and 20% coarse quartz and feldspar crystals.	
95'	#19			Sample #19: Cuttings consist of 95% quartz and feldspar fragments and 5% finely crystalline mica schist. Gravel size rock fragments have the fabric of gneiss.	
100'	#20			Sample #20:Cuttings are 80-90% finely crystalline mica schist (dark gray) and 10-20% coarse quartz and feldspar crystals with fragments of gneiss.	
105'	#21			Sample #21: Cuttings are 5-10% mica schist and 90-95% coarse quartz and feldspar crystals and weathered fragments of gneiss.	
110'	#22			Sample #22: Cuttings are 10% mica schist (muscovite) and 90% coarse quartz and feldspar fragments and fragments of gneiss.	
115'	#23			Sample #23: Continue same as above.	
120'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 5 OF 5
BORING NO.: MW-8A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8809.51
EASTING 14619.24

DATE COMPLETED : 10/18/90
TOTAL DEPTH : 121.0'
SURFACE ELEVATION : 2133.6'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

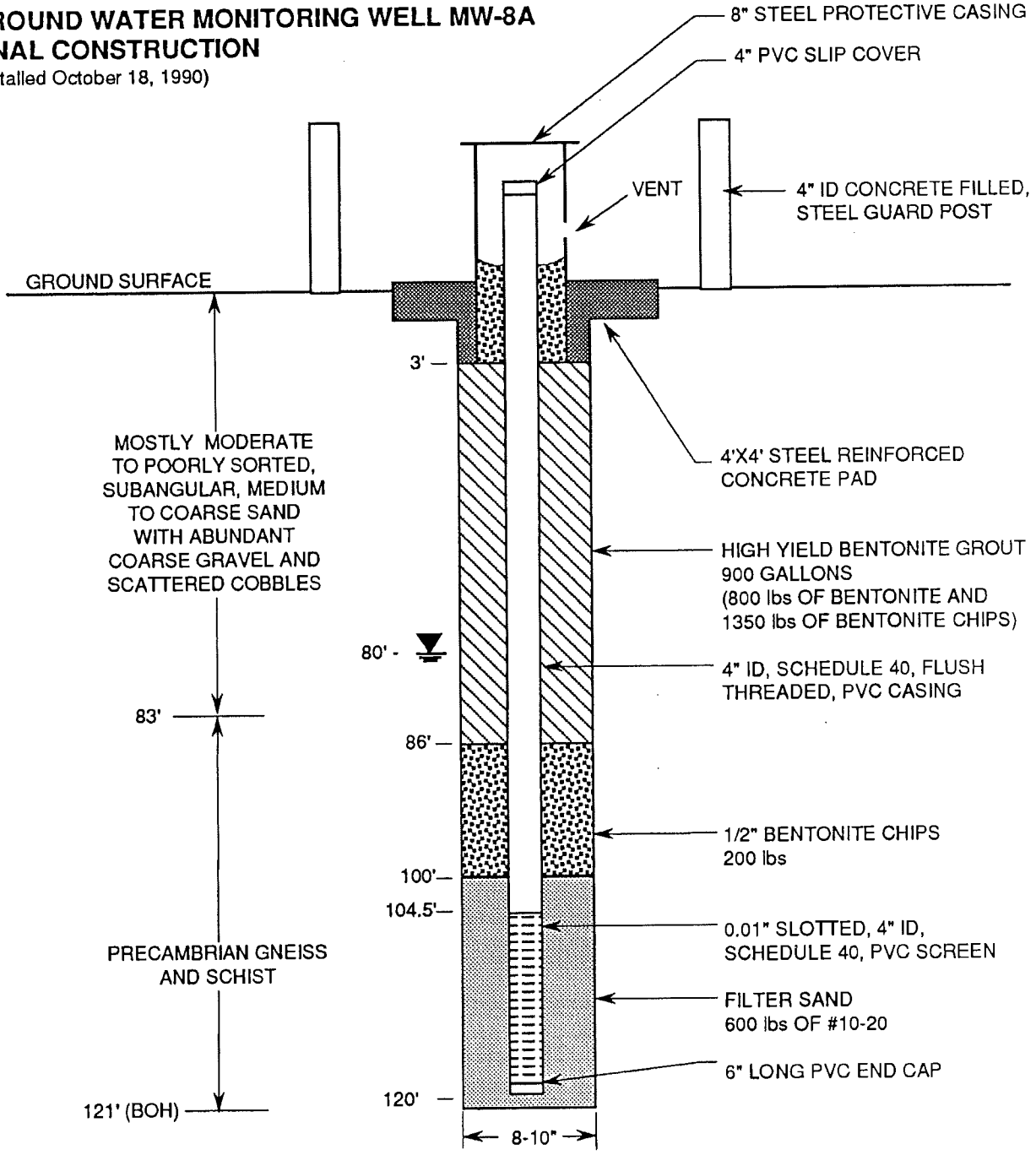
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	#24			Sample #24:Continue same as above.	121.0'
125'				Bottom of hole.	

NOTES

Install 4" PVC well on 10/18/90 and pull all 8" steel conductor casing. Depth to water measured on 10/25/90- 81' below ground surface.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

GROUND WATER MONITORING WELL MW-8A
FINAL CONSTRUCTION
(Installed October 18, 1990)



ELEVATIONS:

GROUND SURFACE	= 2133.6'
TOP OF PVC CASING	= 2135.87'
WATER SURFACE	= 2053.49' (10/25/90)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 4
BORING NO.: MW-8B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8823.52
EASTING 14640.17

DATE COMPLETED : 3/1/91
TOTAL DEPTH : 91'
SURFACE ELEVATION : 2133.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				(0-1.0) Very soft silty soil rich in organic material	
5'	#1			(1.0-30.0) Mostly dusky yellow brown, dry, moderate to well sorted, subangular medium to coarse sand with scattered basalt gravel and cobbles.	SP
10'	#2				
15'	#3				
20'	#4				
25'	#5				
30'					

NOTES

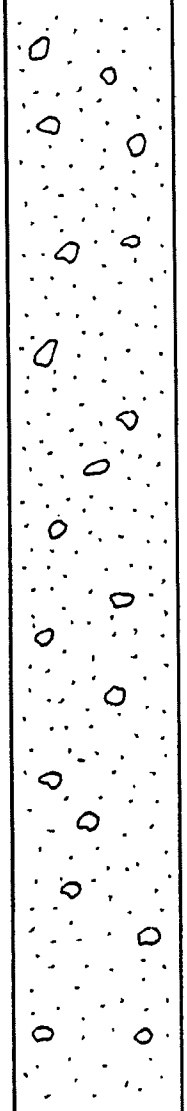
Boring is located approximately 25' north of well MW-8A. Hole advanced with 8" steel conductor casing. Samples collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 4
BORING NO.: MW-8B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8823.52
EASTING 14640.17

DATE COMPLETED : 3/1/91
TOTAL DEPTH : 91'
SURFACE ELEVATION : 2133.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#6			(30.0-55.0) Generally same as previous. Dusky yellow brown, poor to moderately sorted, fine to coarse, angular sand with often abundant coarse gravel size fragments of basalt and gneiss.	SP & SW
35'	#7				
40'	#8				
45'	#9				
50'	#10				
55'	#11			(55.0-60.0) Same as previous, however, there is a significant component of greyish silt and clay with samples.	SP & SW
60'					

NOTES

Split spoon samples were collected from nearby well boring MW-8A and are generally more descriptive of the subsurface geology at this location.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 4
BORING NO.: MW-8B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8823.52
EASTING 14640.17

DATE COMPLETED : 3/1/91
TOTAL DEPTH : 91'
SURFACE ELEVATION : 2133.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
					60.0
60'	#12			(60.0-85.4) Poorly sorted medium to coarse sand with occasionally abundant coarse basalt gravel mixed with light olive grey, silty micaceous clay.	SW & CL
65'	#13				
70'	#14				
75'	#15				
80'	#16				
85'	#17		85.4		85.4
90'				Top of Precambrian metamorphic rock. (85.4-90.0) Cuttings consist mostly of mica schist (muscovite) with minor coarse quartz and feldspar crystals.	

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 4 OF 4
BORING NO.: MW-8B
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8823.52
EASTING 14640.17

DATE COMPLETED : 3/1/91
TOTAL DEPTH : 91'
SURFACE ELEVATION : 2133.5'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTOLOMEW BROTHERS DRILLING
LOGGED BY : CHARLES SCHWARZ

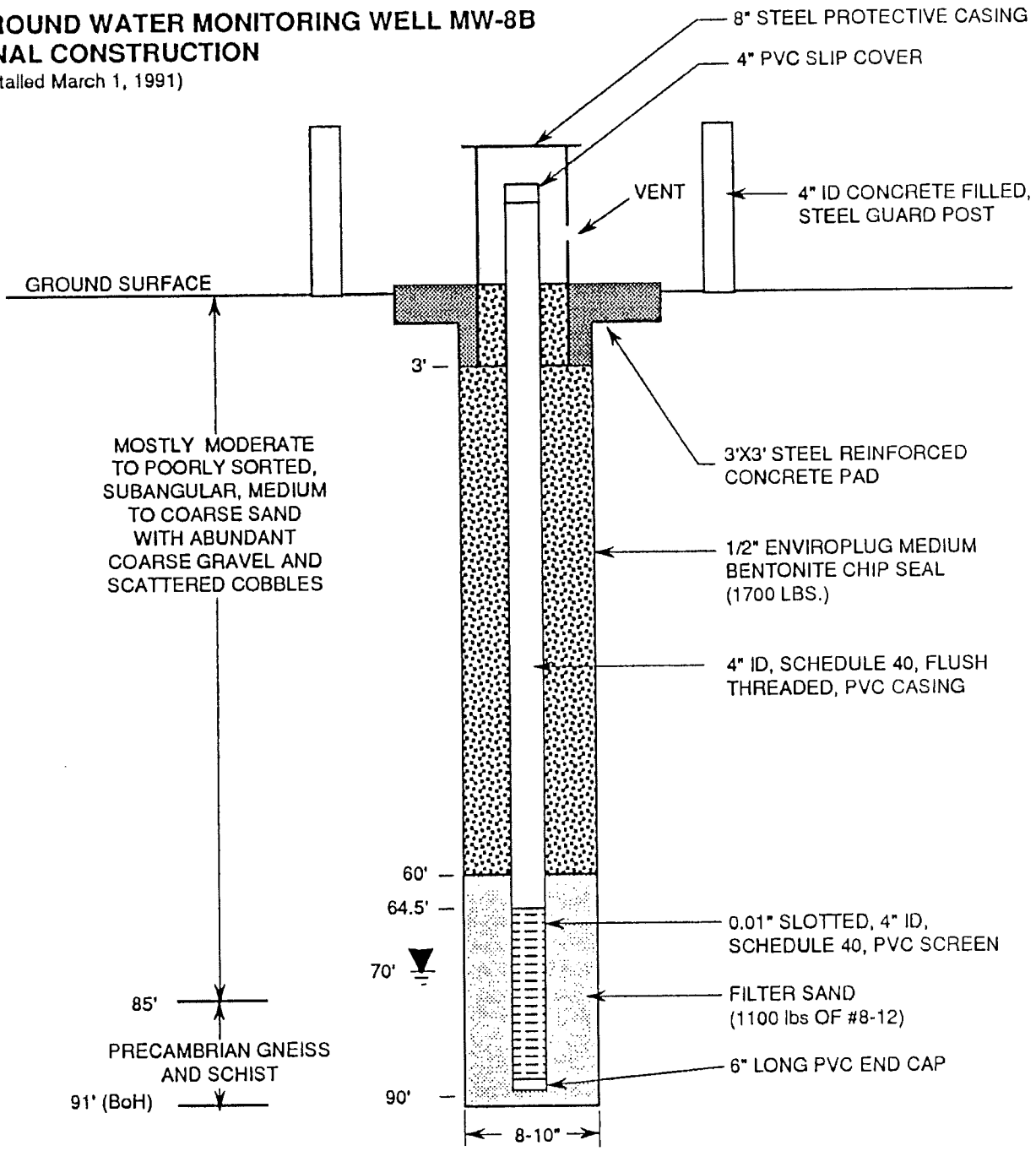
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#18		91.0	(90.0-91.0) Continue same as previous	91.0
				Bottom of hole.	
95'					
100'					
105'					
110'					
115'					
120'					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Depth to water measured on 4/8/91- 70' below ground surface. Testing indicates that well is capable of producing at least 15gpm. Installed 4" PVC monitoring well on 3/1/91 and pulled all 8" conductor casing.

GROUND WATER MONITORING WELL MW-8B
FINAL CONSTRUCTION
(Installed March 1, 1991)



ELEVATIONS:

GROUND SURFACE = 2133.5'
TOP OF PVC CASING = 2135.77'
WATER SURFACE = 2063.25' (4/8/91)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 3
BORING NO.: MW-9A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 6299.21
EASTING 12547.83

DATE COMPLETED : 3/5/91
TOTAL DEPTH : 74'
SURFACE ELEVATION : 2152'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				Sand and gravel at surface	
5'	#1			(5.0-6.0) Sample #1: Dusky yellow brown, wet, poorly sorted, fine to coarse sand. Silty and micaceous with abundant fine gravel size fragments of basalt. Angular sand and gravel.	SW
10'	#2			(10.0-11.0) Sample #2: Light yellow brown, dry, poorly sorted, medium to coarse sand with abundant coarse gravel size basalt fragments. Subangular to angular sand and gravel.	SW
15'	#3			(15.0-16.0) Sample #3: Dusky yellow brown, moist, moderately sorted, medium to mostly coarse sand. Subangular. Trace of fine sand and mica. Composition is mostly basalt fragments with minor quartz, feldspar.	SP
20'	#4			(20.0-21.0) Sample #4: Dusky yellow brown, damp to moist, poorly sorted, medium to very coarse, angular sand with scattered fine to medium basalt gravel. Minor fine sand and silt. Sand composition is same as previous.	SW
25'	#5			(25.0-26.0) Sample #5: Dusky yellow brown, damp, poorly sorted, fine to coarse, angular sand with abundant fine gravel. Sand composition same as previous. Gravel is composed mostly of basalt with minor granitic fragments.	SW
30'					

NOTES

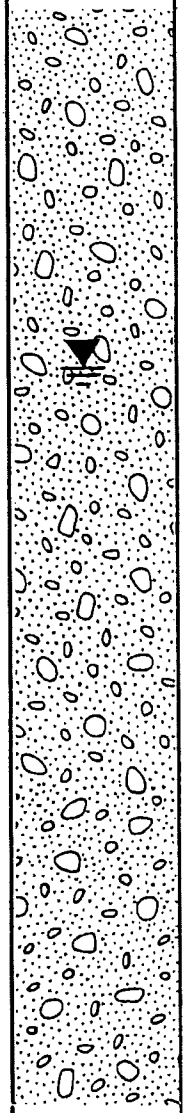
Boring is located near the north end of Queen Lucas Lake. Boring advanced using 8" steel conductor casing. Soil samples collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 3
BORING NO.: MW-9A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 6299.21
EASTING 12547.83

DATE COMPLETED : 3/5/91
TOTAL DEPTH : 74'
SURFACE ELEVATION : 2152'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#6			(30.0-31.0)Sample #6: Dusky yellow brown, damp, poor to moderately sorted, medium to coarse, angular sand. Composed mostly of basalt and quartz with minor feldspar and mica. 5% fine gravel size basalt.	SP
35'	#7			(35.0-36.0) Sample #7: Same as previous. Poorly sorted.	SW
40'	#8			(40.0-41.0) Sample #8: Dusky yellow brown, damp, poorly sorted, medium to coarse, subangular sand with abundant fine to medium basalt gravel.	SW
45'	#9			(45.0-46.0) Sample #9: Dusky yellow brown, damp, moderately sorted, medium to coarse, angular sand composed mostly of basalt and quartz with minor feldspar and biotite. No gravel.	SP
50'	#10			(50.0-51.0) Sample #10: Same as previous.	SP
55'	#11			(55.0-56.0) Sample #11: Same as previous.	SP
60'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 3
BORING NO.: MW-9A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 6299.21
EASTING 12547.83

DATE COMPLETED : 3/5/91
TOTAL DEPTH : 74'
SURFACE ELEVATION : 2152'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

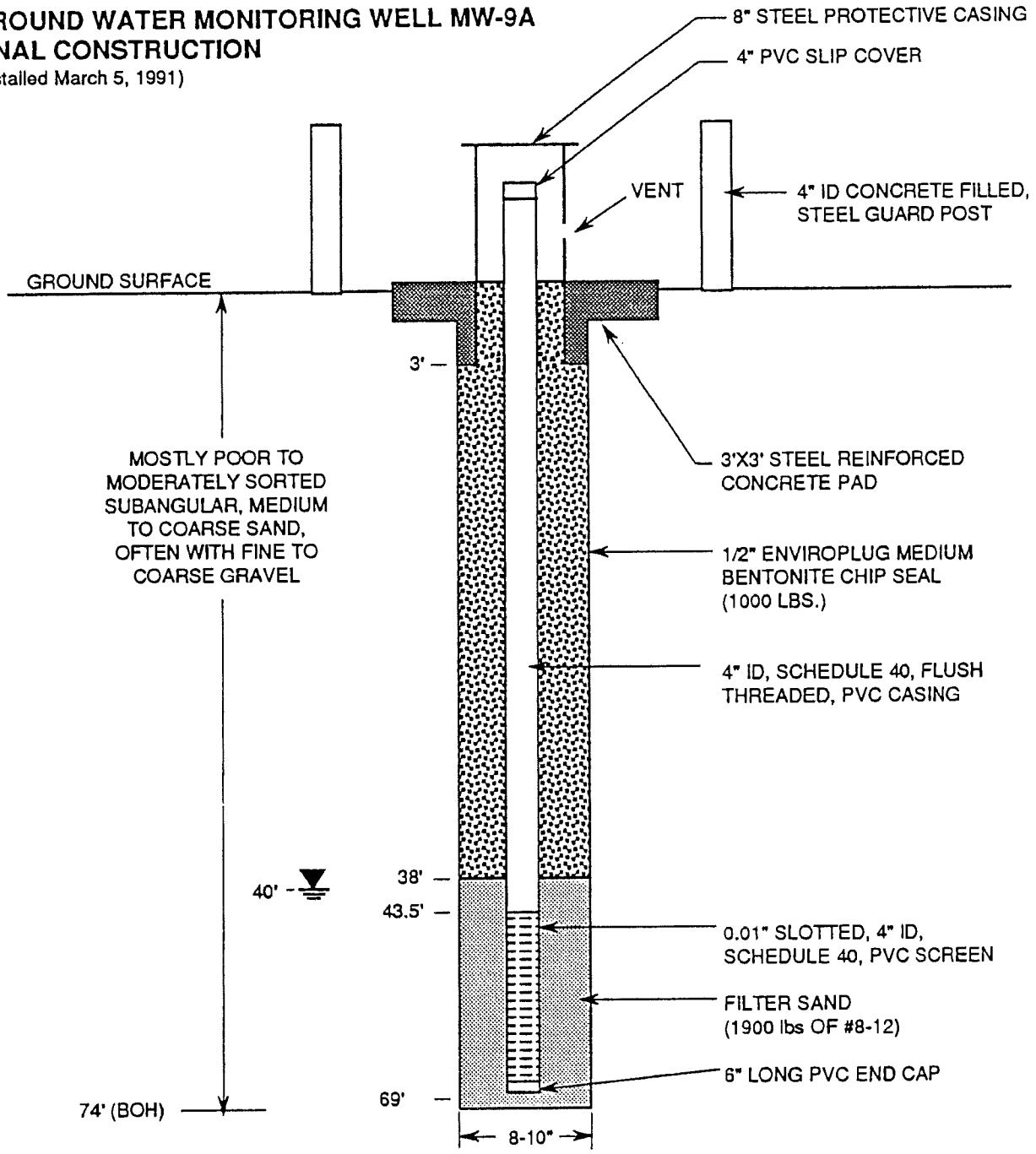
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#12			(60.0-61.0) Sample #12: Dusky yellow brown, moist, moderately sorted, medium to mostly coarse, subangular sand. Composed mostly of quartz and basalt fragments Scattered fine basalt gravel.	SP
65'	#13			(65.0-66.0) Sample #13: Dusky yellow brown, wet, moderately sorted, coarse, subangular sand and gravel. No silt or fine sand. Mostly composed of quartz and basalt	SP
70'	#14			(70.0-71.0) Sample #14: Dusky yellow brown, wet, poorly sorted, angular, silty coarse sand and gravel. Composed mostly of basalt with scattered gravel size fragments of granitic rock.	SW
75'			74.0		74.0
80'				Bottom of hole.	
85'					
90'					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Depth to water measured on 4/8/91- 39' below ground surface. Testing indicates well capable of producing as much as 40gpm. Pulled 8" conductor casing on 3/5/91 and installed 4" PVC monitoring well.

GROUND WATER MONITORING WELL MW-9A
FINAL CONSTRUCTION
(Installed March 5, 1991)



ELEVATIONS:

GROUND SURFACE = 2152'
TOP OF PVC CASING = 2153.24'
WATER SURFACE = 2111.91' (4/8/91)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 9

BORING NO.: MW-11A

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH 04

LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91

TOTAL DEPTH : 245'

SURFACE ELEVATION : 2313'

DRILLING METHOD : 7 7/8" AIR ROTARY

DRILLED BY : BARTHOLOMEW BROS. DRILLING

LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'			2.0	Soil horizon is 2' deep. Dark brown, clay loam containing abundant round to subround basalt cobbles and boulders.	
5'	#1			(5.0-6.0') Sample #1: Brown, medium grained, lithic sand.	
10'	#2			(10.0-11.0') Sample #2: Light brown, coarse lithic sand with basalt chips.	
15'	#3			(15.0-16.0') Sample #3: Medium grey, poorly sorted, pebbles, lithic sand.	
20'	#4			(20.0-21.0') Sample #4: Same as previous with increasing pebbles.	
25'	#5			(25.0-26.0') Sample #5: Same as previous with decreasing pebbles.	
30'					

NOTES

Boring advanced using 8" steel conductor casing. Soil samples collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	#6			(30.0-31.0') Sample #6: Same as previous. Color change to lighter grey.	
35'	#7			(35.0-36.0') Sample #7: Medium brown, poorly sorted, medium to coarse, lithic sand.	
			38.0	(38.0-40.0') : Steel grey silt.	
40'	#8		40.0	(40.0-41.0') Sample #8: Medium brown, poorly sorted, pebble bearing, fine to medium, lithic sand.	
45'	#9			(45.0-46.0') Sample #9: Light brown, pebble bearing, fine to medium, lithic sand.	
50'	#10			(50.0-51.0') Sample #10: Pebbly, poorly sorted, fine to coarse lithic sand.	
55'	#11			(55.0-56.0') Sample #11: Light brown, poorly sorted, fine to coarse lithic sand.	
60'					

NOTES

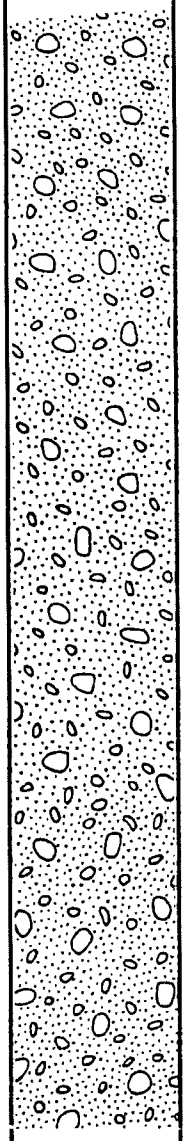
Dry hole to 60'

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#12			(60.0-61.0') Sample #12: Very coarse, lithic sand with some pea gravel.	
65'	#13			(65.0-66.0') Sample #13: Light brown, pebbly, poorly sorted, very coarse lithic sand composed of basalt, quartz and pink feldspar.	
70'	#14			(70.0-71.0') Sample #14: Light brown, poorly sorted, medium to coarse, lithic sand.	
75'	#15			(75.0-76.0') Sample #15: Light brown to tan, coarse, lithic sand.	
80'	#16			(80.0-81.0') Sample #16: Light brown to tan, coarse, lithic sand.	
85'	#17			(85.0-86.0') Sample #17: Tan, pebble bearing, medium to coarse lithic sand.	
90'					

NOTES

Dry hole to 90'

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 4 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#18			(90.0-91.0') Sample #18: Tan, pebble bearing, poorly sorted, medium to coarse lithic sand.	
95'	#19			(95.0-96.0') Sample #19: Tan to light brown, poorly sorted, medium to coarse lithic sand.	
100'	#20			(100.0-101.0') Sample #20: Light brown, poorly sorted, medium to very coarse, lithic sand.	
105'	#21			(105.0-106.0') Sample #21: Same as previous.	
110'	#22			(110.0-111.0') Sample #22: Same as previous.	
115'	#23			(115.0-116.0') Sample #23: Same as previous.	
120'					

NOTES

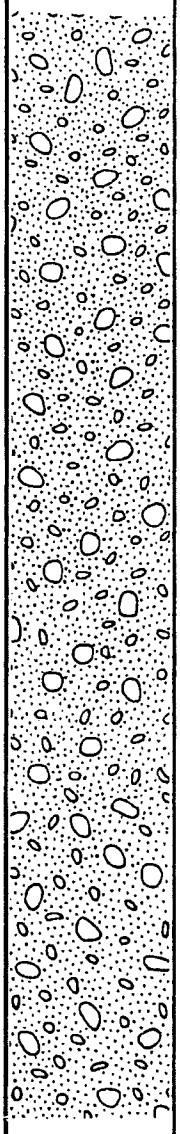
Dry hole to 120'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 5 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	#24			(120.0-121.0') Sample #24: Tan to slightly yellow brown, poorly sorted, fine lithic sand.	
125'	#25			(125.0-126.0') Sample #25: Tan to slightly yellow brown, poorly sorted, fine to medium, lithic sand.	
130'	#26			(130.0-131.0') Sample #26: Tan to slightly yellow brown, poorly sorted, medium to coarse lithic sand. Lithics consist predominantly of quartz with minor muscovite.	
135'	#27			(135.0-136.0') Sample #27: Pebbles bearing, medium to coarse, lithic sand, moderate to poorly sorted.	
140'	#28			(140.0-141.0') Sample #28: Tan to slightly yellow brown, poorly sorted, fine to medium, lithic sand.	
145'	#29			(145.0-146.0') Sample #29: Poorly sorted, medium to coarse, lithic sand.	
150'					

NOTES

Dry hole to 150'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 6 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
150'	#30			(150.0-151.0') Sample #30: Tan to yellow brown, poorly sorted, fine to medium, lithic sand.	
155'	#31			(155.0-156.0') Sample #31: Tan, moderately sorted, coarse, lithic sand.	
160'	#32			(160.0-161.0') Sample #32: Tan to dusky yellow brown, moderately sorted, fine to medium lithic sand.	
165'	#33			(165.0-166.0') Sample #33: Same as previous.	
170'	#34			(170.0-171.0') Sample #34: Same as previous.	
175'	#35			(175.0-176.0') Sample #35: Dusky yellow brown, poorly sorted, fine to medium lithic sand.	
180'					

NOTES

Dry hole to 180'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 7 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
180'	#36			(180.0-181.0') Sample #36: Dusky yellow brown, well sorted, fine, lithic sand. Slightly moist.	
185'	#37			(185.0-186.0') Sample #37: Well sorted, silty, fine, lithic sand.	
190'	#38			(190.0-919.0') Sample #38: Brown, moderatley sorted, medium, lithic sand.	
195'	#39			(195.0-196.0') Sample #39: Brown, poorly sorted, fine to very coarse, lithic sand.	
200'	#40			(200.0-201.0') Sample #40: Brown, poorly sorted, coarse, lithic sand. Dominant lithic component is quartz.	
			205.0		205.0
205'	#41			Weathered Precambrian Basement (205.0-206.0') Sample #41: Reddish brown, well sorted, silty sand. Moist.	
210'					

NOTES

Dry hole to 210'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 8 OF 9
BORING NO.: MW-11A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91
TOTAL DEPTH : 245'
SURFACE ELEVATION : 2313'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : DAVID WHITSON

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
210'	#42			(210.0-211.0') Sample #42: Reddish brown, poorly sorted, clayey, silty sand. Moist.	
215'	#43			(215.0-216.0') Sample #43: Reddish brown, micoceous, silty clay. Moist.	
220'					
225'					
230'					
235'				(235.0-243.0') Light brown clay. Contains very coarse lithic sand. Lothics consist mostly of quartz.	
240'					

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EUGENE, OREGON 97402

NOTES

No sample recovery between 215' and 235', probably due to moist clay sticking to inside of casing. Added water to remove clay.

BORING LOG

PAGE 9 OF 9

BORING NO.: MW-11A

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH 04

LOCATION : NORTHING 8644.21
EASTING 11308.92

DATE COMPLETED : 3/14/91

TOTAL DEPTH : 245'

SURFACE ELEVATION : 2313'

DRILLING METHOD : 7 7/8" AIR ROTARY

DRILLED BY : BARTHOLOMEW BROS. DRILLING

LOGGED BY : DAVID WHITSON

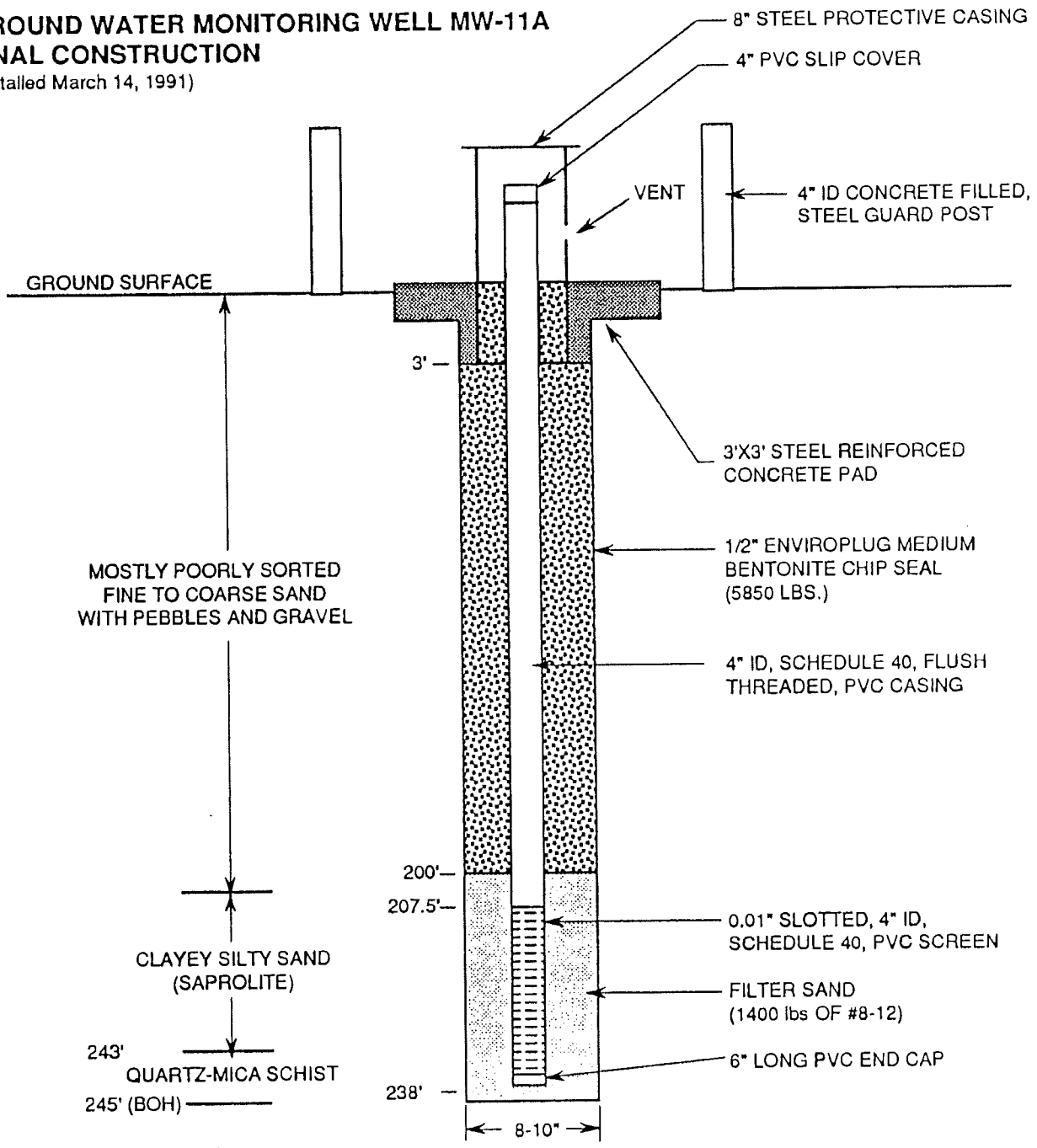
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
240'				Continue sandy clay, same as previous.	
			243.0	Firm basement encountered at 243.0'	243.0
	#44			(243.0-244.0') Sample #44: Cuttings consist of angular grey quartzite, micoschist, biotite and epidote.	
245'			245.0		245.0
				Bottom of hole.	

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EUGENE, OREGON 97402

NOTES

Depth to water measured on 3/14/91 - 221' below ground surface. Installed 4" PVC monitoring well and pulled all 8" conductor casing on 3/14/91.

GROUND WATER MONITORING WELL MW-11A
FINAL CONSTRUCTION
(Installed March 14, 1991)



ELEVATIONS:

GROUND SURFACE	= 2313'
TOP OF PVC CASING	= 2313.30'
WATER SURFACE	= 2094.28' (4/8/91)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

BORING LOG

PAGE 1 OF 5

BORING NO.: MW-12A

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH 04

LOCATION : NORTHING 9676.94
EASTING 12042.12

DATE COMPLETED : 3/8/91

TOTAL DEPTH : 137'

SURFACE ELEVATION : 2340'

DRILLING METHOD : 7 7/8" AIR ROTARY

DRILLED BY : BARTHOLOMEW BROS. DRILLING

LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'				Sand and gravel at surface.	
5'	#1			(5.0-6.0) Sample #1: Dark yellow brown, damp, poorly sorted, angular, fine to coarse sand with fine to coarse gravel. Sand and gravel are composed mainly of basalt fragments.	SW
10'			11.1		11.1
				Top of basalt.	
15'					
20'	#2			(20.0-21.0) Sample #2: Dark grey black basalt. Scattered small vesicles and 'limonite' staining.	
25'	#3			(25.0-26.0) Sample #3: Dark grey black basalt. Hard and unweathered.	
30'					

NOTES

Boring is located approximately 150' southeast of corehole CH-1. 8" steel conductor casing advanced to 11'. Open hole drilling from 11' to BOH. Soil samples and rock cuttings collected from cyclone.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 2 OF 5
BORING NO.: MW-12A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 9676.94
EASTING 12042.12

DATE COMPLETED : 3/8/91
TOTAL DEPTH : 137'
SURFACE ELEVATION : 2340'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'				Continue basalt, same as previous.	
35'	#4			(35.0-36.0) Sample #4: Dark grey black basalt. Very soft.	
40'	#5			(40.0-41.0) Sample #5: Dark grey black basalt. Very soft.	
45'	#6			(45.0-46.0) Sample #6: Dark grey black basalt. Hard.	
50'	#7			(50.0-51.0) Sample #7: Dark grey black basalt. Hard.	
55'	#8			(55.0-56.0) Sample #8: Dark grey black basalt. Hard. Some fragments are red stained.	
60'					

NOTES

The basalt sequence encountered here is better described in nearby core hole CH-1 which was drilled and logged to a depth of 334'.

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 3 OF 5
BORING NO.: MW-12A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 9676.94
EASTING 12042.12

DATE COMPLETED : 3/8/91
TOTAL DEPTH : 137'
SURFACE ELEVATION : 2340'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	#9			(60.0-61.0) Sample #9: Continue dark grey black, hard basalt. Red staining of fragments more apparent than previous.	
65'	#10			(65.066.0) Sample #10: Dark grey black, hard basalt . Same as previous.	
70'	#11			(70.0-71.0) Sample #11: Dark grey black basalt with 5% light brown to moderate orange pink silty clay.	
75'	#12			(75.0-76.-) Sample #12: Continue same as previous with 10% light brown to moderate orange pink silty clay.	
80'	#13			(80.0-81.0) Sample #13: Dark grey black basalt. Less silty clay than previous.	
85'	#14			(85.0-86.0) Sample #14: Dark grey black basalt. No silty clay. (Silty clay may represent layer of interflow sediments.)	
90'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

BORING LOG

PAGE 4 OF 5
BORING NO.: MW-12A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 9676.94
EASTING 12042.12

DATE COMPLETED : 3/8/91
TOTAL DEPTH : 137'
SURFACE ELEVATION : 2340'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	#15			(90.0-91.0) Sample#15: Dark grey black basalt with minor 'limonite' staining.	
95'	#16			(95.0-96.0) Sample #16: Conintue dark grey black basalt. Same as previous.	
100'	#17			(100.0-101.0) Sample #17: Continue dark grey black basalt. Same as previous.	
105'	#18			(105.0-106.0) Sample #18: Dark grey black basalt with 10% light brown to moderate orange pink silty clay. Basalt contains vesicles up tp 1/2" in diameter. Vesicles are not filled.	
	#19			(107.0-108.0) Sample #19: Yellowish, very soft, glassy basalt. Sideromelane.	
110'	#20			(110.0-111.0) Sample #20: Dark grey black basalt. Hard.	
115'					
120'					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Boring is located approximately 150' southwest of corehole CH-1. 8" steel conductor casing advanced to 11'. Open hole drilling from 11' to BoH. Soil samples and rock cuttings collected from cyclone.

BORING LOG

PAGE 5 OF 5
BORING NO.: MW-12A
PROJECT : MARSHALL LANDFILL
PROJECT CODE: MARSH 04
LOCATION : NORTHING 9676.94
EASTING 12042.12

DATE COMPLETED : 3/8/91
TOTAL DEPTH : 137'
SURFACE ELEVATION : 2340'
DRILLING METHOD : 7 7/8" AIR ROTARY
DRILLED BY : BARTHOLOMEW BROS. DRILLING
LOGGED BY : CHARLES SCHWARZ

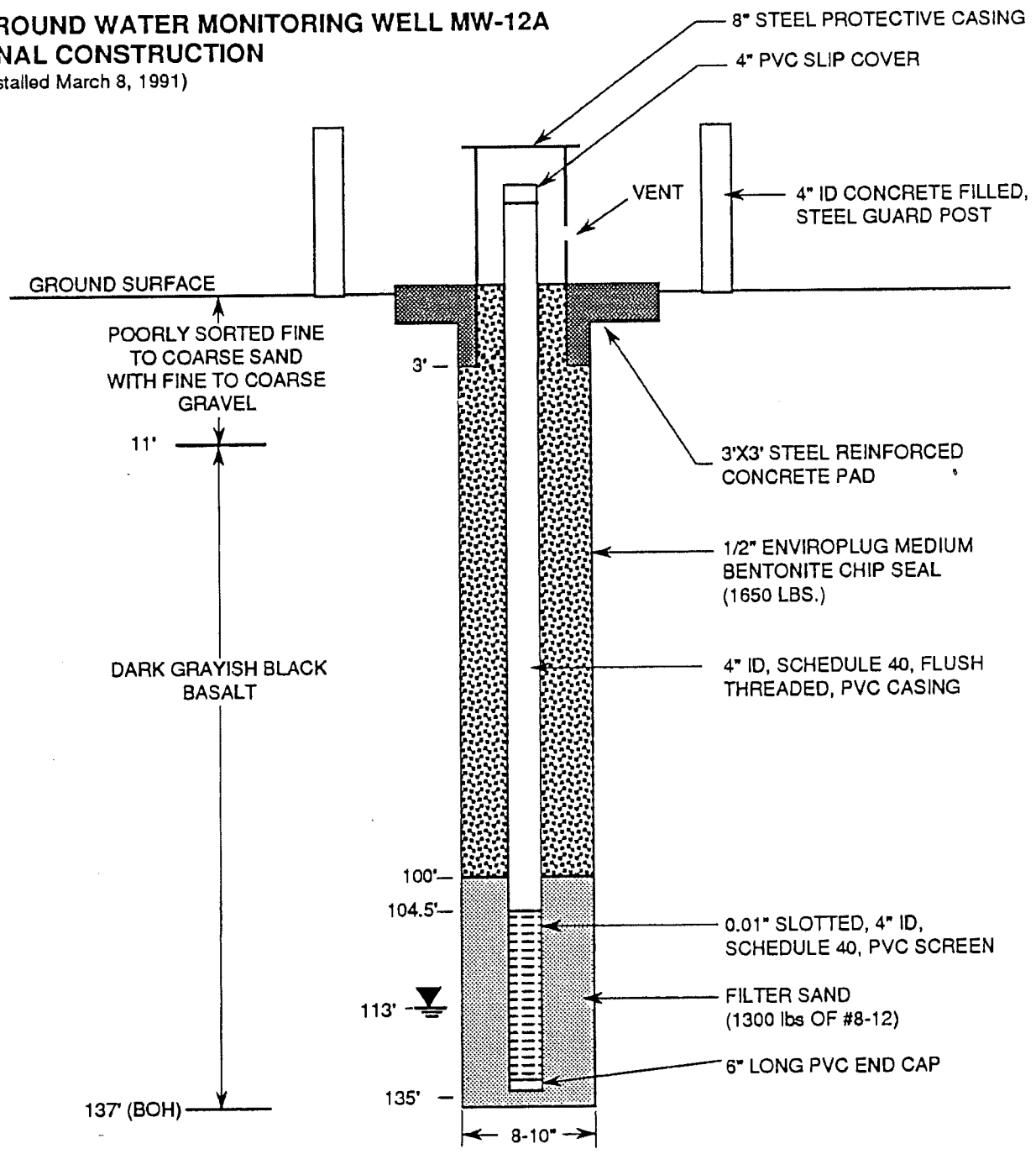
DEPTH	SAMPLE NUMBER/ LOCATION	PENE-TRATION BLOW COUNTS	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	#21			(120.0-121.0) Sample #21: Dark grey black basalt.	
125'	#22			(125.0-126.0) Sample #22: Dark grey black vesicular basalt.	
130'	#23			(130.0-131.0) Sample #23: Dark grey black basalt. Boring is producing water at about 1gpm.	
135'	#24			(135.0-136.0) Sample #24: Dark grey black basalt. Hard.	
			137.0		137.0
140'				Bottom of hole.	
145'					
150					

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

NOTES

Installed 4" PVC monitoring well on 3/8/91. Pulled 8" conductor casing. Depth to water measured on 4/8/91- 113' below ground surface. Testing indicates that well is capable of producing 1gpm.

GROUND WATER MONITORING WELL MW-12A
FINAL CONSTRUCTION
(Installed March 8, 1991)



ELEVATIONS:

GROUND SURFACE = 2340'
TOP OF PVC CASING = 2342.05'
WATER SURFACE = 2227.10' (4/8/91)

MARSHALL LANDFILL
SITE CHARACTERIZATION STUDY

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD
EUGENE, OREGON 97402

(DRAWING NOT TO SCALE)

CORE HOLE LOG

PAGE 1 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
			0.0		0.0
0'	1			(0.0-4.5) OVERBURDEN : SANDY GRAVEL WITH COBBLES AND BOULDERS	GW
					4.5
5'	2			RUN #2 (4.5-8.8)	
	3			(4.5-22.5) BASALT, DARK GRAY FINE GRAINED, SCATTERED VESICULES TO 0.5" SCATTERED QUARTZ HEALED, HIGH ANGLE FRACTURES RUN #3 (8.8-11.4)	
10'	4			RUN #4 (11.4-16.3) 4.5 - 15.0: TWO SETS OF FRACTURES AT 30 TO 35° AND 55 TO 60°. IRON STAINED WITH THIN CLAYEY COATING. FREQUENCY DECREASING WITH DEPTH.	
15'					
	5			RUN #5 (16.3-21.1) WATER TIGHT HOLE FROM 4.8 TO 21.1'	
20'	6			RUN #6 (21.1-25.8)	
				(22.5-28.5) BASALT, DARK GRAY WITH~ 15% VESICULES TO 0.03" TWO SETS OF FRACTURES AT 35° AND 55°	
25'	7			RUN #7 (25.8-30.8)	
				(28.5-52.5) VESICULAR BASALT, DARK GRAY, VERY VESICULAR, VESICULES TO 0.7", SOME FILLED WITH RED BROWN FINE SAND.	
30'				28.5 - 40.0 : NUMEROUS HORIZONTAL FRACTURES, SOME WITH CLAYEY FILLING TO 6mm	

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
(503) 689-8110

CORE HOLE LOG

PAGE 2 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

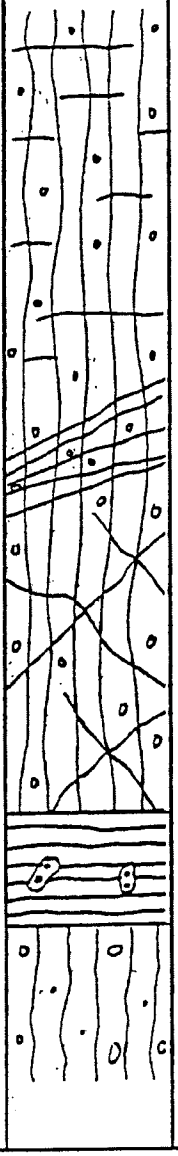
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
30'	8			RUN #8 (30.8-35.7) (28.5 - 52.5) CONTINUE VESICULAR BASALT, DARK GREY, VERY VESICULAR, VESICULES TO 0.7", SOME FILLED WITH REAL BROWN FINE SAND.	
35'	9			RUN #9 (35.7-40.6) 40.0 : VESICULE SIZE BECOMES SMALLER TO 0.4"	
40'	10			RUN #10 (40.6-45.6) 42 - 45.5 : HIGHLY FRACTURED ZONE WITH IRON STAINED SILT AND SAND . LOST CIRCULATION	
45'	11			RUN #11 (45.6-50.4) 49.5 - 50.0 : MODERATELY WEATHERED, REDDISH BROWN FRACTURES ARE GENERALLY AT 35° AND 55° WITH RUST AND GREENISH STAIN	
50'	12			RUN #12 (50.4-55.4) (52.5-55.3) MODERATELY INDURATED, SILTY SAND GENERALLY QUARTZ SAND (FINE) IN A CLAYEY SILT MATRIX, NUMEROUS MICA FLAKES TO 1 mm, BANDED FLUVIAL OR LACUSTRINE DEPOSIT. NUMEROUS VESICULAR BASALT INCLUSIONS 52.5-54.2	
55'	13			RUN #13 (55.4-58.5) (55.3-93.0) VESICULAR BASALT, VESICULES TO 1" , DARK GRAY, FINE GRAINED	
	14			RUN #14 (58.5-62.9)	
60'					

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
(503) 689-8110

CORE HOLE LOG

PAGE 3 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

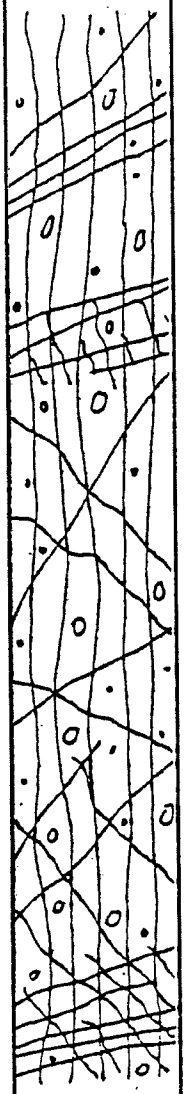
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
60'	14			RUN #14 (58.5-62.9) (55-93.0) VESICULAR BASALT DARK GRAY, FINE GRAINED, VESICULES TO 1", GENERALLY 0.5", SOME VESICULES HAVE FINE IRON STAINED QUARTZ CRYSTALS RUN #15 (62.9-67.6) SOME VESICULES TO 2" MANY ARE INTERCONNECTED - 64.5 : 1.5" CLAY FILLED FRACTURE, REDDISH BROWN, SOFT CLAY TWO SIZES OF VESICLULES PRESENT: LARGE, FROM 1/2" TO 2"; FINE, NUMEROUS, ~2mm. RUN #16 (67.6-72.5) 67 - 70: TWO SETS OF FRACTURES AT 10 AND 80°. THIN, IRON STAINED, TIGHT. - 70.0 : LARGE VESICULES BECOME SCATTERED RUN 17 (72.5-77.4) VESICULES TO 3 mm THREE SETS OF FRACTURES AT 35, 60, AND 90°. IRON STAINED, TIGHT. RUN #18 (77.4-82.3) ONE 70° AND ONE 30° JOINT WITH IRON STAINING, 2mm THICK, TIGHT. RUN #19 (82.3-87.1) RUN #20 (87.1-91.8) - 87.3 : LARGE VESICULES TO 0.8" - 88.0 : HIGHLY WEATHERED ZONE	
65'	15				
70'	16				
75'	17				
80'	18				
85'	19				
90'	20				

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
(503) 689-8110

CORE HOLE LOG

PAGE 4 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40

EASTING 12206.92

DATE COMPLETED : 4/25/90

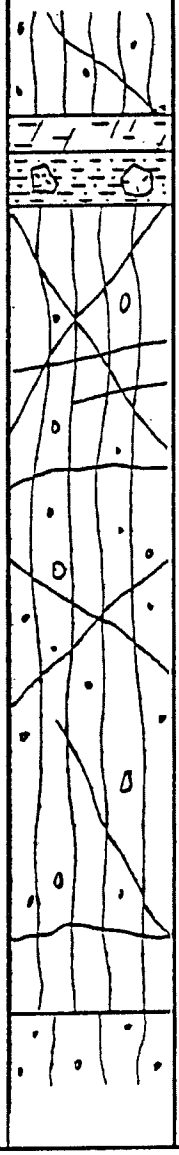
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
90'	20			RUN #20 (87.1-91.8) (55.3-93.0) VESICULAR BASALT, DARK GRAY, FINE GRAINED. VESICULES MOSTLY TO 3mm RUN #21 (91.8-94.6) (93.0-94.0) CLAYEY SILT, LIGHT BROWN, SOFT. MOST OF SAMPLE WASHED IN DRILLING (94.0-95.5) SILTSTONE WITH BASALT INCLUSIONS, LIGHT BROWN, BANDED RUN #22 (94.6-99.2) (95.5-118.0) VESICULAR BASALT, DARK GRAY, VESICULES TO 1", TWO SIZES ' 1"-0.5" AND 1-2 mm, FINE GRAINED MOSTLY VERTICLE JOINTING IN VESICULAR BASALT. SOME JOINTS AT 60 AND 30° RUN 23 (99.2-104.1) JOINTING / FRACTURE ANGLES VARY FROM 30 TO 90°. JOINTS HAVE THIN REDDISH BROWN AND GREENISH COATINGS RUN #24 (104.1-108.9) OPPOSING 50° JOINTS WITH IRON STAIN, SOME SCALE RUN #25 (108.9-114.0) VERTICLE FRACTURE FROM 108.0 TO 112.5 CONTAINS BLACK SCALE WHICH IS SLIGHTLY OILY AND HAS A DIESEL SMELL, PART OF CORE WAS LOST IN THIS SECTION (OVM READING 1.2 ppm WITH .2-.4 BACKGROUND) THE SURROUNDING ROCK WAS PENETRATED ~ .25" RUN #26 (114-118.7) RUN #27 (118.7-123.6) (118–153.0) BASALT, DARK GRAY FINE GRAINED. VESICULES ~ 3%, FINE (1-2mm)	
95'	21				
100	22				
105	23				
110	24				
115	25				
120	26				
	27				

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
(503) 689-8110

CORE HOLE LOG

PAGE 5 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

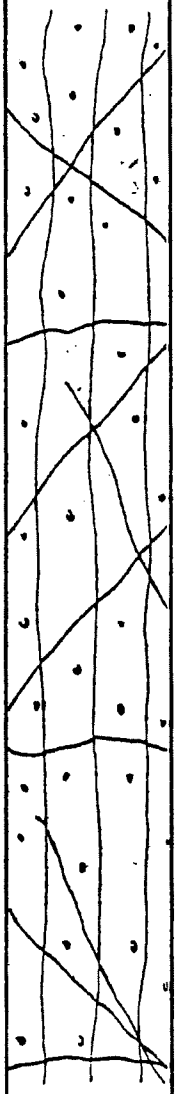
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
120'	27			RUN #27 (118.7-123.6) (118.0–153.0) BASALT, DARK GRAY FINE GRAINED. VESICULES ~ 3% FINE (1-2mm) THREE SETS OF JOINTS AT 30, 60, AND 90°. THIN BLUISH COATING ON JOINT FACES RUN #28 (123.65-128.4) JOINTS CONTAIN THIN COATINGS OF MINERALIZATION- CHLORITE, PYRITE, AND QUARTZ RUN #29 (128.4-133.2) TWO JOINT SETS AT 30 AND 60°. MINERALIZED COATINGS. FORMATION APPEARS VERY TIGHT RUN #30 (133.2-138.1) FOUR SETS OF FRACTURE/ JOINTS AT 20, 40, 50, AND 70°. COATED WITH THIN DARK SCALES, IRON STAINED, MINOR MINERALIZATION RUN #31 (138.1-142.8) VESICULAR ZONE : (139.0-141.3) -141.8 : 70° JOINT WITH BROWN CLAYEY FILLING AND BLACK FLAKEY FILLING TO 3mm IN THICKNESS RUN #32 (142.8-147.8) EXTEND THROUGH CORE, GENERALLY < .5" VESICULAR ZONE (145.3-146.7) TWO JOINTS IN VESICULAR ZONE. SOME YELLOWISH RED, SILTY IRON STAIN - 147.4 : LARGE VESICULES EXTEND THROUGH CORE RUN #33 (147.6-152.6) VESICULAR (147.6-148.1)	
125'	28				
130'	29				
135'	30				
140'	31				
145'	32				
150'	33				

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
(503) 689-8110

CORE HOLE LOG

PAGE 6 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

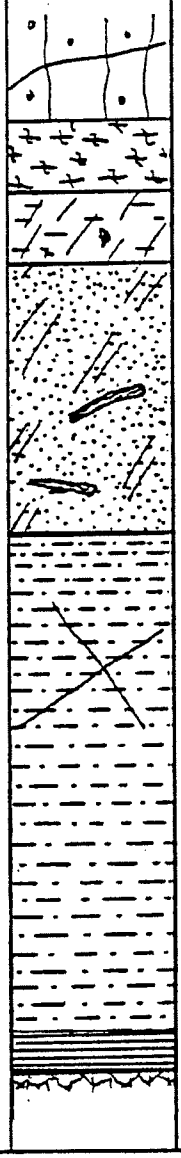
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
150	33			RUN #33 (147.6-152.6) (118.0-153.0) CONTINUE DARK GRAY BASALT, FINE GRAINED. < 3% VESICULES 1-2mm RUN #34 (152.6-157.4) (153.0-155.0) ORGANICS, DARK BROWN COMPRESSED ORGANIC MATERIAL (155.0-157.0) CLAYEY SILT WITH TRACE ORGANICS, LIGHT GRENISH-GRAY, MICACEOUS, POORLY INDURATED, ORGANICS ARE WOOD FRAGMENTS UP TO 2" THICK AND AS LARGE AS THE CORE RUN #35 (157.4-162.5) (157.0-164.3) SILTY SAND WITH TRACE ORGANICS, GREENISH-GRAY, FINE, POORLY INDURATED, ORGANICS ARE WOOD, MICACEOUS BEDDING WITHIN LACUSTERINE SEDIMENTS IS HORIZONTAL. WOOD FRAGMENTS ARE RANDOMLY ORIENTED RUN #36 (162.5-167.6) (164.3-178.4) SILTSTONE GRAY TO TAN-GRAY, SLIGHTLY MICACEOUS, SOME SOFT SEDIMENT DEFORMATION RUN #37 (167.6-172.5) -168.0 : SMOOTH, CLEAN JOINTS AT 37 AND 72° -169.0 : SILTSTONE BECOMES DARK BROWNISH-GRAY, VERY FINE, NO MICA VISIBLE RUN #38 (172.5-177.3) RUN # 39 (177.3-180.9) (178.4-179.3) CLAYSTONE, LIGHT YELLOWISH-TAN, SCATTERED FINE DEPOSITION LAMINAE (179.3-181.1) COMPLETELY WEATHERED SCORIA AND VESICULAR BASALT	
155	34	153			
160	35				
165	36				
170	37				
175	38				
180	39				

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
(503) 689-8110

CORE HOLE LOG

PAGE 7 OF 12

CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40

EASTING 12206.92

DATE COMPLETED : 4/25/90

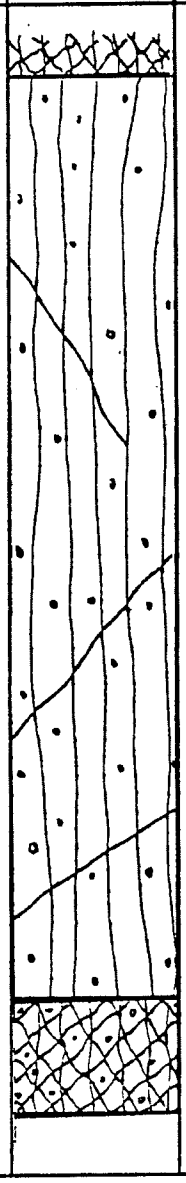
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
180'	39			RUN # 39 (177.3-180.9) (179.3-181.1) COMPLETELY WEATHERED SCORIA AND VESICULAR BASALT, CONTINUED RUN #40 (180.9-184.9) (181.1-207.0) VESICULAR BASALT DARK GRAY, (WEATHERED YELLOW AT JOINTS DOWN TO 183.3) VESICULES - 25%GENERALLY < .5" RUN #41 (184.9-189.8) FRACTURES RANDOM AND ROUGH SOME CONTAINING SILT AND CLAY TO 3mm . MANY VESICULES ARE CONNECTED AND ARE IRON STAINED RUN #42 (189.8-194.8) - 194.8' : ~ 2" CLAY FILLED SEAM. BASALT IS LIGHT YELLOW FOR ~ 6" BELOW SEAM RUN #43 (194.8-199.4) SOME HIGH ANGLE JOINTS AT 50°. OPPOSING SETS AT 30 AND 60° - 197.0 : VESICLES - 3% < .5" ,GENERALLY < .25" RUN #44 (199.4-204.1) SOME FRACTURES IRON STAINED WITH WEATHERED MARGINS. OTHERS CONTAIN BLACK SCALE TO 3mm SLIGHT ODOR RUN #45 (204.1-209.2) FRACTURES GENERALLY ROUGH WITH SLIGHT WEATHERING. SMOOTH JOINTS APPEAR TIGHT AND HAVE THIN GREENISH COATING (207.0-210.0) COMPLETELY TO HIGHLY WEATHERED SCORIA AND VESICULAR BASALT, YELLOW AND RED WITH INCLUSIONS OF BLACK FOAMY SCORIA AND GRANITIC FRAGMENTS RUN #46 (209.2-212.5) 5% RECOVERY VERY SOFT, CLAYEY SILT ON TUBE	
185'	40				
190'	41				
195'	42				
200'	43				
205'	44				
210'	45				
	46				

NOTES

RUSS FETROW ENGINEERING, INC.

2535 B PRAIRIE ROAD EUGENE, OREGON 97402

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CORE HOLE LOG

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PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40

EASTING 12206.92

DATE COMPLETED : 4/25/90

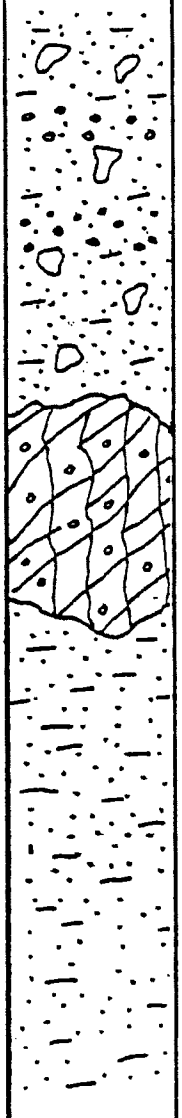
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
210'	46			RUN #46 (209.2-212.5) 5% RECOVERY VERY SOFT, CLAYEY, SILT ON TUBE RUN #47 (212.5-217.6) (210.0-221.0) CLAYEY SILT, COMPLETELY WEATHERED GRANITIC GRAVELS WITH SCATTERED VESICULAR BASALT GRAVELS, SOIL IS GREENISH YELLOW WITH WHITE SPOTS TO .25", BASALT GRAVELS ARE BLACK OR BROWN GENERALLY VESICULAR AND ANGULAR, RELICS OF GRANITIC GRAVELS ARE ANGULAR, FORMATION APPEARS CLAYEY AND TIGHT RUN #48 (217.6-221.2) RUN #49 (221.2-223.7) (221.0-226.4) VESICULAR BASALT BOULDER, FRACTURES HAVE BRIGHT GREEN COATING TO 2 mm THICK, ROCK IS MODERATELY WEATHERED, BROWN TO DARK GRAY RUN #50 (223.7-228.7) RUN #51 (228.7-234.5) -229.5 : SORTED SANDY LENSE ~ 2" THICK (226.4-263.7) CLAYEY SILT WITH TRACE SAND AND GRAVEL, LIGHT GREENISH-TAN, MODERATE TO LOW PLASTICITY, VERY COHESIVE, VERY MOIST, GRAVELS ARE VERY ANGULAR, GENERALLY THERE HAS BEEN NO SORTING OF MATERIAL RUN #52 (234.5-240.5)	
215'	47				
220'	48				
225'	49				
230'	50				
235'	51				
240'	52				

NOTES

RUSS FETROW ENGINEERING, INC.
2535 B PRAIRIE ROAD EUGENE, OREGON 97402
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CORE HOLE LOG

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CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

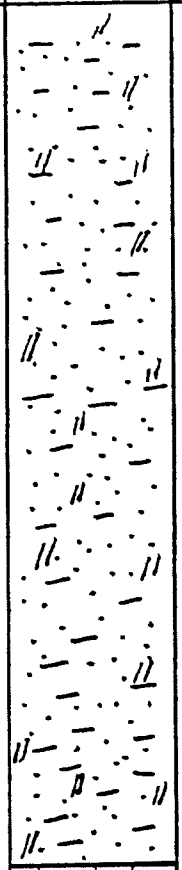
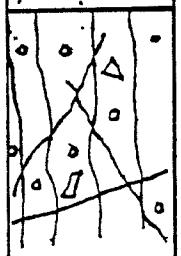
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
240'	52			RUN #52 (234.5-240.5)	
	53			RUN #53 (240.5-244.0)	
				(226.4-263.7) CLAYEY SILT WITH TRACE SAND AND GRAVEL, LIGHT GREENISH-TAN, MODERATE TO LOW PLASTICITY, VERY COHESIVE, VERY MOIST, GRAVELS ARE VERY ANGULAR, GENERALLY THERE HAS BEEN NO SORTING OF MATERIAL	
	54			RUN # 54 (244.0-248.9)	
245'					
	55			RUN #55 (248.9-251.3)	
250'				- 251.0 : AS ABOVE BUT MODERATELY INDURATED IN RECOVERED CORE, CEMENTING APPEARS TO BE CLAY	
	56			RUN #56 (251.3-254.2)	
	57			RUN # 57 (254.2-259.1)	
255'					
	58			RUN #58 (259.1-263.2)	
260'					
	59	263		RUN # 59 (263.2-268.1)	
265'				(263.7-334.3) GRAY BASALT ~0% VESICLES GENERALLY < .24", BASALT HAS INCLUSIONS TO 2" THEY ARE COUNTRY ROCK AND HAVE RECRYSTALIZED MARGINS TO .25"	
	60			RUN #60 (268.1-272.7)	
270'				FRACTURES ARE ROUGH AND AT RANDOM ANGLES, SOME HIGH ANGLE JOINTS ARE WELDED WITH A DARKER GRAY MATERIAL	

NOTES

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2535 B PRAIRIE ROAD EUGENE, OREGON 97402
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CORE HOLE LOG

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CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

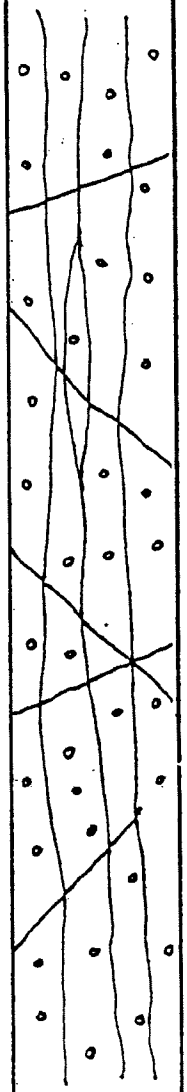
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
270	60			RUN # 60 (268.1-272.7) - INCUSIONS DECREASE WITH DEPTH, AT 270.0 THEY ARE SCATTERED AND SMALL TO .25"	
	61			RUN #61 (272.7-277.5) (263.7-334.3) CONTINUE GRAY BASALT, ~ 6% VESICLES GENERALLY < .25", BASALT HAS INCLUSIONS TO 2" OF ROCK WITH RECRYSTALIZED MARGINS TO .25", OCCURANCE OF INCLUSIONS DECREASE WITH DEPTH	
275	62			RUN #62 (277.5-282.3)	
280	63			RUN #63 (282.3-287.1) VESICLES APPEAR ELONGATE AT ~ 30 (FLOW STRUCTURE)	
285	64			RUN # 64 (287.1-292.0) -288.8 : LARGE VESICLE < 2" WITH COATING TO 2 mm THICK OF QUARTZ CRYSTALS < 1mm -SOME FLOW STRUCTURE AS IN RUN # 63	
290	65			RUN # 65 (292.0-296.9) -SMALL VESICLES DECREASE TO~ 3%	
295	66			RUN # 66 (296.9-301.8) -SCATTERED VESICLES TO 1.5" NO INCLUSIONS NOTED IN RUN # 66 SOME JOINTS MINERALIZED TO 2mm OTHERS ARE ROUGH AND ONLY SLIGHTLY MINERALIZED	
300					

NOTES

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CORE HOLE LOG

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CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40

EASTING 12206.92

DATE COMPLETED : 4/25/90

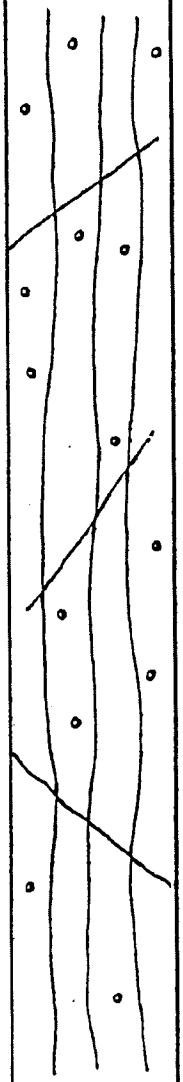
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
300'	66			RUN # 66 (296.9-301.6)	
	67			RUN # 67 (301.6-306.4)	
				(263.7-334.3) CONTINUE DARK GRAY BASALT, ~ 6 % VESICLES AND SCATTERED INCLUSIONS AT TOP OF FLOW DECREASING TO ~ 3 % AT 245', NO INCLUSIONS NOTED AT 300', FINE GRAINED	
305'					
	68			RUN #68 (306.4-310.4)	
				THREE SETS OF JOINTS- VERTICLE, 55°, AND 30° GENERALLY ROUGH WITH SOME QUARTZ AND PYRITE MINERALIZATION TO 2mm. COATINGS ARE THIN AND SPOTTY	
310'	69			RUN #69 (310.4-315.3)	
				FRACTURES ARE VERY TIGHT	
315'	70			RUN # 70 (315.3-320.1)	
				-SCATTERED VESICLES AND NO OBSERVED INCLUSIONS, FINE GRAINED	
				ONE HIGH ANGLE JOINT (~75°) AND TWO 60° FRACTURES, TIGHT	
320'	71			RUN # 71 (320.1-324.8)	
				TWO VERTICLE JOINTS MINERALIZED TO 1mm. ALL FRACTURES APPEAR MECHANICAL JOINTS ARE WELDED	
325'	72			RUN # 72 (324.8-329.5)	
				-NO VESICLES	
330'	73			RUN # 73 (329.5-334.3)	

NOTES

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CORE HOLE LOG

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CORE HOLE NO. : CH-1

PROJECT : MARSHALL LANDFILL

PROJECT CODE: MARSH-04

LOCATION : NORTHING 9770.40
EASTING 12206.92

DATE COMPLETED : 4/25/90

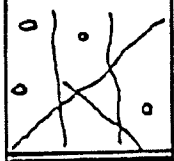
TOTAL DEPTH : 334.3'

SURFACE ELEVATION : 2339'

DRILLING METHOD : NX CORE DIAMOND BIT

DRILLED BY : JOHNSON EXPLORATION

LOGGED BY : AL LILES

DEPTH	RUN NUMBER	FALLING HEAD TEST NO.	LITHOLOGY	LITHOLOGIC DESCRIPTION	USCS
330'	73			RUN # 73 (329.5-334.3) (263.7-334.3) BASALT, GRAY, FINE GRAINED	334.3'
335'				BOTTOM OF HOLE	

NOTES

NOTE : CORE HOLE ABANDONED WITH VOLCLAY GROUT TO SURFACE. MONUMENT PLACED AT DRILL SITE. LOCATION SURVEYED JUNE, 1990

RUSS FETROW ENGINEERING, INC.
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APPENDIX B
Historic Groundwater Elevation Data

Table B-1

Historic Groundwater Elevation Summary

Marshall Landfill

Spokane County, Washington

Well Identification	MW-1A		MW-2		MW-2A		MW-3		MW-4A		MW-5		MW-5A		MW-6 [3]	
Reference Elevation [1,2] (feet)	2335.52		2176.05		2175.80		2182.30		2159.26		2187.91		2187.46		2180.72	
Date	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)
03/06/89	–		–		–		–		–		–		–		–	
03/30/89	–		–		–		–		–		–		–		–	
04/14/89	–		60.9	2115.15	–		74.24	2108.06	–		90.8	2097.11	–		–	
06/03/89	–		–		–		–		–		–		–		–	
06/07/89	204.3	2131.22	64.05	2112.00	–		76.7	2105.60	–		91.5	2096.41	–		–	
08/07/89	–		–		–		–		–		–		–		–	
08/09/89	205	2130.52	77.6	2098.45	–		87.9	2094.40	–		101.3	2086.61	–		–	
03/22/90	207.5	2128.02	–		–		103.7	2078.60	–		116.2	2071.71	–		–	
04/16/90	–		–		–		102.33	2079.97	–		–		–		–	
04/17/90	206.16	2129.36	–		–		–		–		114.16	2073.75	–		–	
05/05/90	–		–		–		–		–		–		–		–	
06/18/90	–		–		–		102.51	2079.79	–		–		–		106.98	2073.74
06/19/90	–		–		–		–		–		115.16	2072.75	–		–	
06/20/90	205.95	2129.57	–		–		–		–		–		–		–	
08/21/90	–		–		–		107.18	2075.12	–		–		–		–	
08/22/90	205.74	2129.78	–		–		–		–		118.83	2069.08	–		–	
08/23/90	–		–		–		–		–		–		–		–	
08/24/90	–		–		–		–		–		–		–		110.08	2070.64
10/25/90	205.52	2130.00	–		–		112.5	2069.80	76.73	2082.53	–		–		115.5	2065.22
11/13/90	204	2131.52	–		–		–		–		–		–		–	
11/14/90	–		–		–		112	2070.30	–		–		–		–	
11/15/90	–		–		–		–		–		–		–		115	2065.72
11/28/90	–		–		–		–		–		–		–		–	
11/29/90	–		–		–		–		–		–		–		115	2065.72
11/30/90	–		–		–		–		76.5	2082.76	–		–		–	
12/03/90	–		–		–		–		76.42	2082.84	–		–		–	
12/04/90	–		–		–		–		–		–		–		–	
12/06/90	–		–		100.8	2075.00	–		–		–		–		–	
02/07/91	–		–		–		–		–		–		–		–	
02/28/91	205.38	2130.14	–		91.37	2084.43	106.5	2075.80	62.04	2097.22	119.5	2068.41	–		111.25	2069.47
03/01/91	–		–		–		–		–		–		–		–	
03/04/91	–		–		–		–		–		–		–		–	
03/05/91	–		–		–		–		61.31	2097.95	–		–		–	
03/06/91	–		–		–		–		–		–		–		–	
03/08/91	–		–		–		–		60.46	2098.80	–		–		–	
03/18/91	205.71	2129.81	–		86.95	2088.85	–		56.42	2102.84	115.98	2071.93	–		107.69	2073.03
03/19/91	–		–		–		102.35	2079.95	–		–		–		–	
03/21/91	–		–		–		101.8	2080.50	55	2104.26	115.34	2072.57	115	2072.46	–	
04/08/91	205.21	2130.31	80.31	2095.74	80.33	2095.47	96.93	2085.37	48.65	2110.61	111.34	2076.57	110.3	2077.16	102.95	2077.77

04/10/91	–		–		–		–		–		–		–		–	
04/12/91	–		–		–		95.89	2086.41	46.7	2112.56	–		–		–	
08/04/91	206.71	2128.81	–		–		98.63	2083.67	62.69	2096.57	111.22	2076.69	110.22	2077.24	102.79	2077.93
08/05/91	–		–		85.96	2089.84	–		–		–		–		–	
08/06/91	–		–		–		–		–		–		–		–	
11/03/91	207.33	2128.19	–		–		111.28	2071.02	–		–		–		–	
11/04/91	–		–		99.04	2076.76	–		75.83	2083.43	–		–		–	
11/05/91	–		–		–		–		–		–		121.41	2066.05	–	
11/06/91	–		–		–		–		–		–		–		114.14	2066.58
11/08/91	–		–		–		–		–		–		–		–	
06/22/92	208.46	2127.06	–		–		112.77	2069.53	76.16	2083.10	–		122.82	2064.64	115.52	2065.20
06/24/92	–		–		100.25	2075.55	–		–		–		–		–	
10/13/92	209.62	2125.90	–		107.73	2068.07	–		–		–		130	2057.46	122.73	2057.99
06/14/93	206.4	2129.12	65.69	2110.36	65.65	2110.15	81.02	2101.28	35.74	2123.52	97.56	2090.35	96.42	2091.04	88.71	2092.01
09/21/93	207.03	2128.49	–		84.38	2091.42	96.49	2085.81	61.53	2097.73	108.89	2079.02	107.92	2079.54	100.51	2080.21
01/17/94	208.27	2127.25	–		106.32	2069.48	108.78	2073.52	72.64	2086.62	120	2067.91	119.03	2068.43	111.78	2068.94
06/27/94	209.66	2125.86	–		99.57	2076.23	112.1	2070.20	75.55	2083.71	–		122.09	2065.37	114.82	2065.90
12/06/94	–		–		106.28	2069.52	–		–		–		129.77	2057.69	122.53	2058.19
12/14/94	–		–		–		–		–		–		–		–	
03/24/95	205.25	2130.27	57.19	2118.86	57.14	2118.66	72.33	2109.97	24.89	2134.37	90.11	2097.80	88.91	2098.55	81.32	2099.40
07/24/95	203.75	2131.77	66.41	2109.64	65.24	2110.56	78.56	2103.74	42.35	2116.91	92.31	2095.60	91.31	2096.15	83.8	2096.92
10/02/95	206	2129.52	–		81.03	2094.77	92.35	2089.95	59.63	2099.63	104.23	2083.68	103.25	2084.21	95.88	2084.84
10/03/95	–		–		–		–		–		–		–		–	
12/11/95	206.26	2129.26	86.95	2089.10	86.9	2088.90	99.02	2083.28	63.78	2095.48	110.69	2077.22	109.75	2077.71	100.24	2080.48
03/25/96	202.75	2132.77	51.58	2124.47	51.51	2124.29	64.18	2118.12	24.62	2134.64	78.76	2109.15	77.71	2109.75	70.23	2110.49
07/11/96	193.2	2142.32	49.82	2126.23	49.63	2126.17	60.67	2121.63	25.2	2134.06	73.51	2114.40	72.47	2114.99	65.19	2115.53
10/01/96	201.1	2134.42	57.36	2118.69	57.18	2118.62	67.94	2114.36	34.83	2124.43	79.95	2107.96	78.97	2108.49	71.64	2109.08
12/10/96	205.05	2130.47	63.99	2112.06	63.83	2111.97	75.35	2106.95	39.71	2119.55	87.49	2100.42	86.5	2100.96	79.18	2101.54
03/18/97	182.08	2153.44	36.65	2139.40	35.41	2140.39	44.75	2137.55	16.52	2142.74	55.59	2132.32	54.65	2132.81	47.57	2133.15
06/10/97	173.54	2161.98	36.12	2139.93	35.78	2140.02	44.66	2137.64	18.69	2140.57	55.52	2132.39	54.6	2132.86	47.43	2133.29
09/30/97	183.58	2151.94	43.1	2132.95	42.82	2132.98	52.03	2130.27	23.03	2136.23	62.57	2125.34	61.65	2125.81	54.48	2126.24
12/03/97	–		48.19	2127.86	47.9	2127.90	57.52	2124.78	26.87	2132.39	68.25	2119.66	–		60.11	2120.61
12/04/97	196.23	2139.29	–		–		–		–		–		67.33	2120.13	–	
12/05/97	–		–		–		–		–		–		–		–	
03/23/98	–		47.52	2128.53	47.31	2128.49	–		24.22	2135.04	69.36	2118.55	–		61.11	2119.61
03/24/98	–		–		–		57.8	2124.50	–		–		68.5	2118.96	–	
03/25/98	200.24	2135.28	–		–		–		–		–		–		–	
06/26/98	203.66	2131.86	53.93	2122.12	53.74	2122.06	64.65	2117.65	30.43	2128.83	76.74	2111.17	75.77	2111.69	68.43	2112.29
09/23/98	205.55	2129.97	67.8	2108.25	67.57	2108.23	77.98	2104.32	46.64	2112.62	89.04	2098.87	88.08	2099.38	80.77	2099.95
12/22/98	206.33	2129.19	79.89	2096.16	–		91.18	2091.12	57.08	2102.18	102.46	2085.45	101.48	2085.98	94.22	2086.50
03/31/99	199.71	2135.81	46.11	2129.94	45.92	2129.88	56.22	2126.08	23.12	2136.14	67.96	2119.95	66.99	2120.47	59.74	2120.98
06/22/99	192.01	2143.51	48.12	2127.93	47.89	2127.91	58.43	2123.87	26.48	2132.78	70.6	2117.31	69.61	2117.85	62.27	2118.45
09/08/99	200.56	2134.96	57.35	2118.70	57.02	2118.78	67.41	2114.89	35.69	2123.57	78.83	2109.08	77.88	2109.58	70.6	2110.12
12/28/99	209	2126.52	71.93	2104.12	71.77	2104.03	82.35	2099.95	39.28	2119.98	93.95	2093.96	93	2094.46	85.82	2094.90
03/05/00	–		60.17	2115.88	60.2	2115.60	75.63	2106.67	–		88.33	2099.58	89.36	2098.10	81.12	2099.60
03/06/00	206.15	2129.37	–		–		–		28.5	2130.76	–		–		–	
06/20/00	199.97	2135.55	51.66	2124.39	51.49	2124.31	63.02	2119.28	27.71	2131.55	75.82	2112.09	74.81	2112.65	–	
09/24/00	205.55	2129.97	65.14	2110.91	64.92	2110.88	75.55	2106.75	43.68	2115.58	86.69	2101.22	87.93	2099.53	–	
12/11/00	–		75.97	2100.08	75.75	2100.05	86.77	2095.53	44.28	2114.98	97.81	2090.10	96.86	2090.60	–	
03/25/01	206.64	2128.88	81.51	2094.54	81.48	2094.32	93.77	2088.53	56.31	2102.95	106.2	2081.71	105.22	2082.24	–	
06/05/01	206.7	2128.82	82.87	2093.18	82.76	2093.04	95.19	2087.11	58.21	2101.05	107.14	2080.77	106.11	2081.35	–	
10/07/01	–		–		98.71	2077.09	110.52	2071.78	76.35	2082.91	120.94	2066.97	120.07	2067.39	–	

12/18/01	--		--		--		--		--		--		122.99	2064.47	--	
12/19/01	--		--		99.22	2076.58	112.73	2069.57	78.11	2081.15	--		--		--	
03/18/02	--		--		--		88.2	2094.10	34.42	2124.84	--		105.11	2082.35	--	
03/19/02	--		69.55	2106.50	69.71	2106.09	--		--		--		--		--	
06/03/02	--		63.11	2112.94	63.09	2112.71	77.42	2104.88	34.65	2124.61	--		91.61	2095.85	--	
10/08/02	--		--		85.33	2090.47	97.12	2085.18	63.34	2095.92	108.92	2078.99	107.98	2079.48	--	
12/29/02	--		--		--		--		--		--		--		--	
12/30/02	--		--		92.25	2083.55	104.57	2077.73	69.13	2090.13	116.07	2071.84	115.13	2072.33	--	
03/04/03	--		82.92	2093.13	82.91	2092.89	98.02	2084.28	53.83	2105.43	111.57	2076.34	110.58	2076.88	--	
06/02/03	--		70.9	2105.15	70.91	2104.89	85.51	2096.79	42.87	2116.39	99.94	2087.97	98.9	2088.56	--	
09/30/03	--		88	2088.05	92.48	2083.32	104.38	2077.92	70.42	2088.84	115.55	2072.36	114.63	2072.83	--	
10/01/03	--		--		--		--		--		--		--		--	
12/18/03	--		85.5	2090.55	96.6	2079.20	109.21	2073.09	72.79	2086.47	120.28	2067.63	119.71	2067.75	--	
12/19/03	--		--		--		--		--		--		--		--	
03/04/04	--		--		--		--		--		--		--		--	
03/23/04	--		83.06	2092.99	83.15	2092.65	99.74	2082.56	51.6	2107.66	113.56	2074.35	112.87	2074.59	--	
06/24/04	--		--		89.41	2086.39	102.48	2079.82	64.9	2094.36	114.44	2073.47	113.79	2073.67	--	
06/25/04	--		--		--		--		--		--		--		--	
09/27/04	--		--		101.76	2074.04	112.84	2069.46	78.15	2081.11	--		122.78	2064.68	--	
12/20/04	--		--		101.31	2074.49	114.67	2067.63	75.91	2083.35	--		125.07	2062.39	--	
03/15/05	--		--		98.01	2077.79	111.65	2070.65	72.36	2086.90	--		122.49	2064.97	--	
03/16/05	--		--		--		--		--		--		--		--	
06/23/05	--		80.55	2095.50	80.57	2095.23	96.71	2085.59	50.57	2108.69	110.48	2077.43	110.27	2077.19	--	
08/29/05	--		--		92.5	2083.30	105.08	2077.22	69.21	2090.05	116.97	2070.94	116.33	2071.13	--	
08/30/05	--		--		--		--		--		--		--		--	
12/20/05	--		--		99.72	2076.08	112.48	2069.82	75.51	2083.75	122.05	2065.86	123.01	2064.45	--	
12/21/05	--		--		--		--		--		--		--		--	
03/22/06	--		54.65	2121.40	54.58	2121.22	68.27	2114.03	25.63	2133.63	83.04	2104.87	83.03	2104.43	--	
03/23/06	--		--		--		--		--		--		--		--	
05/21/06	--		58.25	2117.80	58.15	2117.65	71.21	2111.09	31.79	2127.47	85.68	2102.23	84.93	2102.53	--	
05/22/06	--		--		--		--		--		--		--		--	
08/24/06	--		--		--		78.96	2103.34	--		--		90.98	2096.48	--	
08/25/06	--		67.4	2108.65	67.53	2108.27	--		44.86	2114.40	91.79	2096.12	--		--	
12/20/06	--		79.11	2096.94	78.97	2096.83	91.44	2090.86	54.59	2104.67	103.87	2084.04	103.21	2084.25	--	
12/21/06	--		--		--		--		--		--		--		--	
03/10/08	--		82.29	2093.76	82.31	2093.49	96.95	2085.35	52.39	2106.87	109.95	2077.96	109.29	2078.17	--	
03/11/08	--		--		--		--		--		--		--		--	
06/15/08	--		56.71	2119.34	56.64	2119.16	69.97	2112.33	30.01	2129.25	84.38	2103.53	83.62	2103.84	--	
06/16/08	--		--		--		--		--		--		--		--	
09/21/08	--		70.5	2105.55	70.31	2105.49	81.78	2100.52	48.36	2110.90	94.08	2093.83	93.39	2094.07	--	
09/23/08	--		--		--		--		--		--		--		--	
12/15/08	--		--		--		--		57.94	2101.32	104.35	2083.56	104.75	2082.71	--	
12/16/08	--		80.96	2095.09	80.8	2095.00	92.65	2089.65	--		--		--		--	
03/22/09	--		65.04	2111.01	65.18	2110.62	81.25	2101.05	30.87	2128.39	96.67	2091.24	96.1	2091.36	--	
03/23/09	--		--		--		--		--		--		--		--	
06/14/09	--		54.34	2121.71	54.24	2121.56	66.63	2115.67	29.28	2129.98	79.5	2108.41	80.22	2107.24	--	
06/15/09	--		--		--		--		--		--		--		--	
09/13/09	--		67.52	2108.53	67.34	2108.46	78.66	2103.64	45.06	2114.20	90.87	2097.04	90.2	2097.26	--	
12/06/09	--		77.98	2098.07	77.82	2097.98	89.7	2092.60	54.46	2104.80	101.48	2086.43	100.82	2086.64	--	
12/07/09	--		--		--		--		--		--		--		--	
03/28/10	--		69.92	2106.13	69.9	2105.90	93.6	2088.70	42.11	2117.15	97.26	2090.65	96.57	2090.89	--	
06/13/10	--		70	2106.05	69.95	2105.85	93.75	2088.55	42.42	2116.84	96.56	2091.35	97.21	2090.25	--	
09/19/10	--		--		83.97	2091.83	95.61	2086.69	61.77	2097.49	107.18	2080.73	106.55	2080.91	--	

11/28/10	--		--		90.06	2085.74	102.47	2079.83	66.42	2092.84	114.03	2073.88	113.4	2074.06	--	
11/18/15	207.80	2127.72	--		103.57	2072.23	116.20	2066.10	79.44	2079.82	--		126.18	2061.28	--	
08/21/16	206.38	2129.14	--		86.68	2089.12	98.64	2083.66	64.15	2095.11	110.58	2077.33	109.97	2077.49	--	
11/28/16	--		--		91.20	2084.60	105.67	2076.63	63.65	2095.61	--		117.40	2070.06	--	
02/20/17	--		--		86.57	2089.23	100.73	2081.57	57.88	2101.38	112.33	2075.58	112.99	2074.47	--	
12/07/17	195.46	2,140.06	47.52	2128.53	47.28	2128.52	56.76	2125.54	26.12	2133.14	67.03	2120.88	66.42	2121.04	--	

Well Identification	MW-7A [3]		MW-7B		MW-7C [3]		MW-8A		MW-8B		MW-9A		MW-12A	
Reference Elevation [1,2] (feet)	2321.50		2327.48		2320.70		2139.65		2139.56		2156.97		2353.36	
Date	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation [1] (feet)
03/06/89	--		--		--		--		--		--		--	
03/30/89	--		--		--		--		--		--		--	
04/14/89	--		--		--		--		--		--		--	
06/03/89	--		--		--		--		--		--		--	
06/07/89	--		--		--		--		--		--		--	
08/07/89	--		--		--		--		--		--		--	
08/09/89	--		--		--		--		--		--		--	
03/22/90	--		--		--		--		--		--		--	
04/16/90	--		--		--		--		--		--		--	
04/17/90	--		--		--		--		--		--		--	
05/05/90	--		--		--		--		--		--		--	
06/18/90	--		--		--		--		--		--		--	
06/19/90	--		--		--		--		--		--		--	
06/20/90	--		--		--		--		--		--		--	
08/21/90	--		--		--		--		--		--		--	
08/22/90	--		--		--		--		--		--		--	
08/23/90	--		--		--		--		--		--		--	
08/24/90	--		--		--		--		--		--		--	
10/25/90	216.39	2105.11	180.42	2147.06	202.16	2118.54	82.38	2057.27	--		--		--	
11/13/90	--		--		--		--		--		--		--	
11/14/90	--		--		--		--		--		--		--	
11/15/90	--		--		--		--		--		--		--	
11/28/90	--		--		202.62	2118.08	83.41	2056.24	--		--		--	
11/29/90	--		--		--		--		--		--		--	
11/30/90	--		--		--		--		--		--		--	
12/03/90	--		--		--		--		--		--		--	
12/04/90	218.07	2103.43	268.4	2059.08	--		--		--		--		--	
12/06/90	--		--		--		86.82	2052.83	--		--		--	
02/07/91	217.94	2103.56	--		--		--		--		--		--	
02/28/91	218	2103.50	225	2102.48	201.25	2119.45	--		--		--		--	
03/01/91	--		--		--		79.45	2060.20	--		--		--	
03/04/91	--		--		--		--		78.83	2060.73	--		--	
03/05/91	--		--		--		--		--		--		--	
03/06/91	--		--		--		--		--		54.62	2102.35	--	
03/08/91	--		--		--		--		--		--		--	
03/18/91	216.13	2105.37	224.23	2103.25	201.56	2119.14	76.37	2063.28	76.33	2063.23	49.51	2107.46	115.29	2238.07
03/19/91	--		--		--		--		--		--		--	
03/21/91	--		--		--		--		75.66	2063.90	--		--	
04/08/91	215.82	2105.68	222.87	2104.61	201.2	2119.50	72.24	2067.41	72.52	2067.04	41.33	2115.64	114.95	2238.41

04/10/91	–		–		–		–		71.86	2067.70	40.21	2116.76	–	
04/12/91	–		–		–		–		71.54	2068.02	39.29	2117.68	115.1	2238.26
08/04/91	–		–		–		–		–		–		115.2	2238.16
08/05/91	–		–		–		70.73	2068.92	70.71	2068.85	–		–	
08/06/91	213.68	2107.82	221.42	2106.06	201.26	2119.44	–		–		58.5	2098.47	–	
11/03/91	–		–		–		–		–		–		–	
11/04/91	–		–		–		–		80.81	2058.75	–		–	
11/05/91	–		–		–		–		–		71.41	2085.56	116.71	2236.65
11/06/91	216.36	2105.14	225.36	2102.12	202.66	2118.04	80.85	2058.80	–		–		–	
11/08/91	–		–		–		–		–		–		–	
06/22/92	217.58	2103.92	226.66	2100.82	203.58	2117.12	82.24	2057.41	82.25	2057.31	71.41	2085.56	117.25	2236.11
06/24/92	–		–		–		–		–		–		–	
10/13/92	219.37	2102.13	228.75	2098.73	204.64	2116.06	88.97	2050.68	88.07	2051.49	–		118.8	2234.56
06/14/93	213.39	2108.11	217.78	2109.70	202.82	2117.88	59.2	2080.45	59.07	2080.49	30.16	2126.81	114.67	2238.69
09/21/93	213.93	2107.57	221.18	2106.30	203.15	2117.55	68.06	2071.59	68.1	2071.46	57.67	2099.30	116.7	2236.66
01/17/94	216.91	2104.59	225.56	2101.92	203.9	2116.80	78.37	2061.28	78.34	2061.22	67.75	2089.22	118.04	2235.32
06/27/94	218.7	2102.80	227.34	2100.14	194.8	2125.90	81.08	2058.57	81.09	2058.47	70.84	2086.13	119	2234.36
12/06/94	220.65	2100.85	229.75	2097.73	205.41	2115.29	–		87.87	2051.69	72.73	2084.24	119.84	2233.52
12/14/94	–		–		–		88.08	2051.57	–		–		–	
03/24/95	214.84	2106.66	217.86	2109.62	202.97	2117.73	52.74	2086.91	52.05	2087.51	18.77	2138.20	114.8	2238.56
07/24/95	209.29	2112.21	213.58	2113.90	202.02	2118.68	51.04	2088.61	51.03	2088.53	38.96	2118.01	115.7	2237.66
10/02/95	211.6	2109.90	218.37	2109.11	201.62	2119.08	61.98	2077.67	–		56.22	2100.75	116.72	2236.64
10/03/95	–		–		–		–		61.91	2077.65	–		–	
12/11/95	213.44	2108.06	221.21	2106.27	202.23	2118.47	68.76	2070.89	68.81	2070.75	59.6	2097.37	117.4	2235.96
03/25/96	207.56	2113.94	209.42	2118.06	199.75	2120.95	37.91	2101.74	37.68	2101.88	19.5	2137.47	113.58	2239.78
07/11/96	201.25	2120.25	202.79	2124.69	198.31	2122.39	30.99	2108.66	30.89	2108.67	23	2133.97	164.11	2189.25
10/01/96	202.04	2119.46	205.1	2122.38	199.11	2121.59	36.62	2103.03	36.65	2102.91	31.07	2125.90	115.37	2237.99
12/10/96	203.51	2117.99	208.24	2119.24	199.24	2121.46	44.32	2095.33	44.41	2095.15	34.85	2122.12	115.18	2238.18
03/18/97	194.36	2127.14	193.2	2134.28	190.06	2130.64	–		11.25	2128.31	14.37	2142.60	111.59	2241.77
06/10/97	188.51	2132.99	188.28	2139.20	187.16	2133.54	11.41	2128.24	11.32	2128.24	16.21	2140.76	111.57	2241.79
09/30/97	190.26	2131.24	191.71	2135.77	193.5	2127.20	18.09	2121.56	18.04	2121.52	19.62	2137.35	113.55	2239.81
12/03/97	192.71	2128.79	195.04	2132.44	195.87	2124.83	23.89	2115.76	23.85	2115.71	23.1	2133.87	115.1	2238.26
12/04/97	–		–		–		–		–		–		–	
12/05/97	–		–		–		–		–		–		–	
03/23/98	194.34	2127.16	196.58	2130.90	196.09	2124.61	25.8	2113.85	–		–		113.69	2239.67
03/24/98	–		–		–		–		25.85	2113.71	19.93	2137.04	–	
03/25/98	–		–		–		–		–		–		–	
06/26/98	196.2	2125.30	199.57	2127.91	197.4	2123.30	33.35	2106.30	33.32	2106.24	26.27	2130.70	113.93	2239.43
09/23/98	200.5	2121.00	203.72	2123.76	198.45	2122.25	45	2094.65	44.99	2094.57	43.25	2113.72	114.98	2238.38
12/22/98	205.44	2116.06	213.2	2114.28	–		59	2080.65	59.16	2080.40	53.69	2103.28	113.03	2240.33
03/31/99	–		199.95	2127.53	196.74	2123.96	24.65	2115.00	24.57	2114.99	18.7	2138.27	108.24	2245.12
06/22/99	195.05	2126.45			196.84	2123.86	27.62	2112.03	27.61	2111.95	22.77	2134.20	111.48	2241.88
09/08/99	197.57	2123.93	201.72	2125.76	198.18	2122.52	34.98	2104.67	35.02	2104.54	32.01	2124.96	134.61	2218.75
12/28/99	201.35	2120.15	203.87	2123.61	201.78	2118.92	48.11	2091.54	48.13	2091.43	39.23	2117.74	141.32	2212.04
03/05/00	–		–		–		–		–		–		–	
03/06/00	203.81	2117.69	209.53	2117.95	199.47	2121.23	48.42	2091.23	47.16	2092.40	27.55	2129.42	105.64	2247.72
06/20/00	197.5	2124.00	200.49	2126.99	197.97	2122.73	33.18	2106.47	33.14	2106.42	23.34	2133.63	108.12	2245.24
09/24/00	200.4	2121.10	205.87	2121.61	199.15	2121.55	42.99	2096.66	42.96	2096.60	40.22	2116.75	112.53	2240.83
12/11/00	204.24	2117.26	211.7	2115.78	200.14	2120.56	55.03	2084.62	55.08	2084.48	52.24	2104.73	118.46	2234.90
03/25/01	209.02	2112.48	216.43	2111.05	201.14	2119.56	64.01	2075.64	63.94	2075.62	51.3	2105.67	113.83	2239.53
06/05/01	209.03	2112.47	217.19	2110.29	202	2118.70	65.13	2074.52	65.12	2074.44	53.58	2103.39	112.45	2240.91
10/07/01	212.5	2109.00	222.05	2105.43	202.28	2118.42	78.3	2061.35	78.42	2061.14	72.21	2084.76	116.15	2237.21

12/18/01	213.98	2107.52	223.82	2103.66	202.73	2117.97	--		81.9	2057.66	68.01	2088.96	--	
12/19/01	--		--		--		--		--		--		114.16	2239.20
03/18/02	--		--		--		66.51	2073.14	66.13	2073.43	26.91	2130.06	--	
03/19/02	211.61	2109.89	218.44	2109.04	201.09	2119.61	--		--		--		101	2252.36
06/03/02	206.99	2114.51	212.75	2114.73	200.58	2120.12	52.37	2087.28	52.26	2087.30	29.43	2127.54	105.34	2248.02
10/08/02	210.52	2110.98	218.5	2108.98	201.88	2118.82	67	2072.65	67.02	2072.54	59.71	2097.26	111.72	2241.64
12/29/02	--		--		--		--		--		--		--	
12/30/02	212.87	2108.63	221.84	2105.64	202.59	2118.11	74.38	2065.27	74.31	2065.25	64.85	2092.12	112.39	2240.97
03/04/03	213.11	2108.39	221.31	2106.17	202.09	2118.61	71.38	2068.27	71.23	2068.33	47.89	2109.08	102.07	2251.29
06/02/03	206.99	2114.51	216.3	2111.18	201.19	2119.51	59.49	2080.16	59.36	2080.20	37.67	2119.30	104.71	2248.65
09/30/03	213.59	2107.91	222.14	2105.34	202.53	2118.17	73.46	2066.19	73.39	2066.17	66.61	2090.36	110.49	2242.87
10/01/03	--		--		--		--		--		--		--	
12/18/03	215.04	2106.46	224.11	2103.37	207.05	2113.65	78.37	2061.28	78.27	2061.29	68.02	2088.95	111.8	2241.56
12/19/03	--		--		--		--		--		--		--	
03/04/04	--		--		--		--		--		--		--	
03/23/04	215.05	2106.45	223.06	2104.42	202.24	2118.46	73.62	2066.03	73.39	2066.17	44.89	2112.08	101.05	2252.31
06/24/04	214.48	2107.02	222.69	2104.79	202.62	2118.08	73.22	2066.43	73.13	2066.43	60.36	2096.61	107.28	2246.08
06/25/04	--		--		--		--		--		--		--	
09/27/04	216.57	2104.93	215.67	2111.81	203.46	2117.24	81.22	2058.43	81.17	2058.39	72.67	2084.30	111.4	2241.96
12/20/04	217.56	2103.94	226.69	2100.79	203.85	2116.85	83.96	2055.69	83.95	2055.61	70.62	2086.35	113.49	2239.87
03/15/05	217.61	2103.89	226.41	2101.07	203.89	2116.81	81.89	2057.76	81.83	2057.73	67.25	2089.72	111.56	2241.80
03/16/05	--		--		--		--		--		--		--	
06/23/05	215.79	2105.71	223.03	2104.45	203.05	2117.65	71.74	2067.91	71.58	2067.98	45.05	2111.92	108.06	2245.30
08/29/05	--		224.3	2103.18	203.16	2117.54	76.08	2063.57	75.98	2063.58	65.28	2091.69	110.81	2242.55
08/30/05	--		--		--		--		--		--		--	
12/20/05	218.11	2103.39	226.85	2100.63	203.95	2116.75	82.24	2057.41	82.18	2057.38	70.79	2086.18	113.77	2239.59
12/21/05	--		--		--		--		--		--		--	
03/22/06	209.35	2112.15	211.58	2115.90	200.73	2119.97	44.04	2095.61	43.89	2095.67	20.07	2136.90	102.02	2251.34
03/23/06	--		--		--		--		--		--		--	
05/21/06	206.31	2115.19	209.51	2117.97	200.26	2120.44	44.34	2095.31	44.22	2095.34	27.06	2129.91	107.5	2245.86
05/22/06	--		--		--		--		--		--		--	
08/24/06	--		--		--		--		49.12	2090.44	41.02	2115.95	--	
08/25/06	206.85	2114.65	209.11	2118.37	200.77	2119.93	49.19	2090.46	--		--		110.61	2242.75
12/20/06	--		--		--		61.8	2077.85	61.69	2077.87	50.1	2106.87		
12/21/06	210.56	2110.94	217.69	2109.79	201.75	2118.95	--		--		--		112.71	2240.65
03/10/08	213.11	2108.39	220.94	2106.54	202.62	2118.08	69.08	2070.57	--		45.4	2111.57	113.17	2240.19
03/11/08	--		--		--		--		68.91	2070.65	--		--	
06/15/08	--		--		--		42.82	2096.83	42.72	2096.84	25.1	2131.87	--	
06/16/08	205.37	2116.13	199.75	2127.73	208.58	2112.12	--		--		--		106.2	2247.16
09/21/08	--		--		--		51.18	2088.47	51.13	2088.43	44.87	2112.10	--	
09/23/08	206.35	2115.15	212.1	2115.38	--		--		--		--		113.53	2239.83
12/15/08	216.97	2104.53	--		--		61.77	2077.88	61.72	2077.84	54.05	2102.92	116.91	2236.45
12/16/08	--		--		--		--		--		--		--	
03/22/09	--		--		--		56.16	2083.49	55.72	2083.84	23.35	2133.62	--	
03/23/09	217.32	2104.18	--		--		--		--		--		105.75	2247.61
06/14/09	--		--		--		38.11	2101.54	38.01	2101.55	24.82	2132.15	--	
06/15/09	205.73	2115.77	--		--		--		--		--		103.75	2249.61
09/13/09	209.74	2111.76	--		--		47.76	2091.89	47.72	2091.84	41.48	2115.49	110.16	2243.20
12/06/09	--		--		--		58.31	2081.34	58.24	2081.32	50.77	2106.20	--	
12/07/09	215.32	2106.18	--		--		--		--		--		113	2240.36
03/28/10	214.25	2107.25	--		--		55.59	2084.06	55.44	2084.12	36.57	2120.40	107.62	2245.74
06/13/10	213.88	2107.62	--		--		55.21	2084.44	55.1	2084.46	37.15	2119.82	108.9	2244.46
09/19/10	218	2103.50	--		--		64.58	2075.07	64.62	2074.94	58.08	2098.89	111.77	2241.59

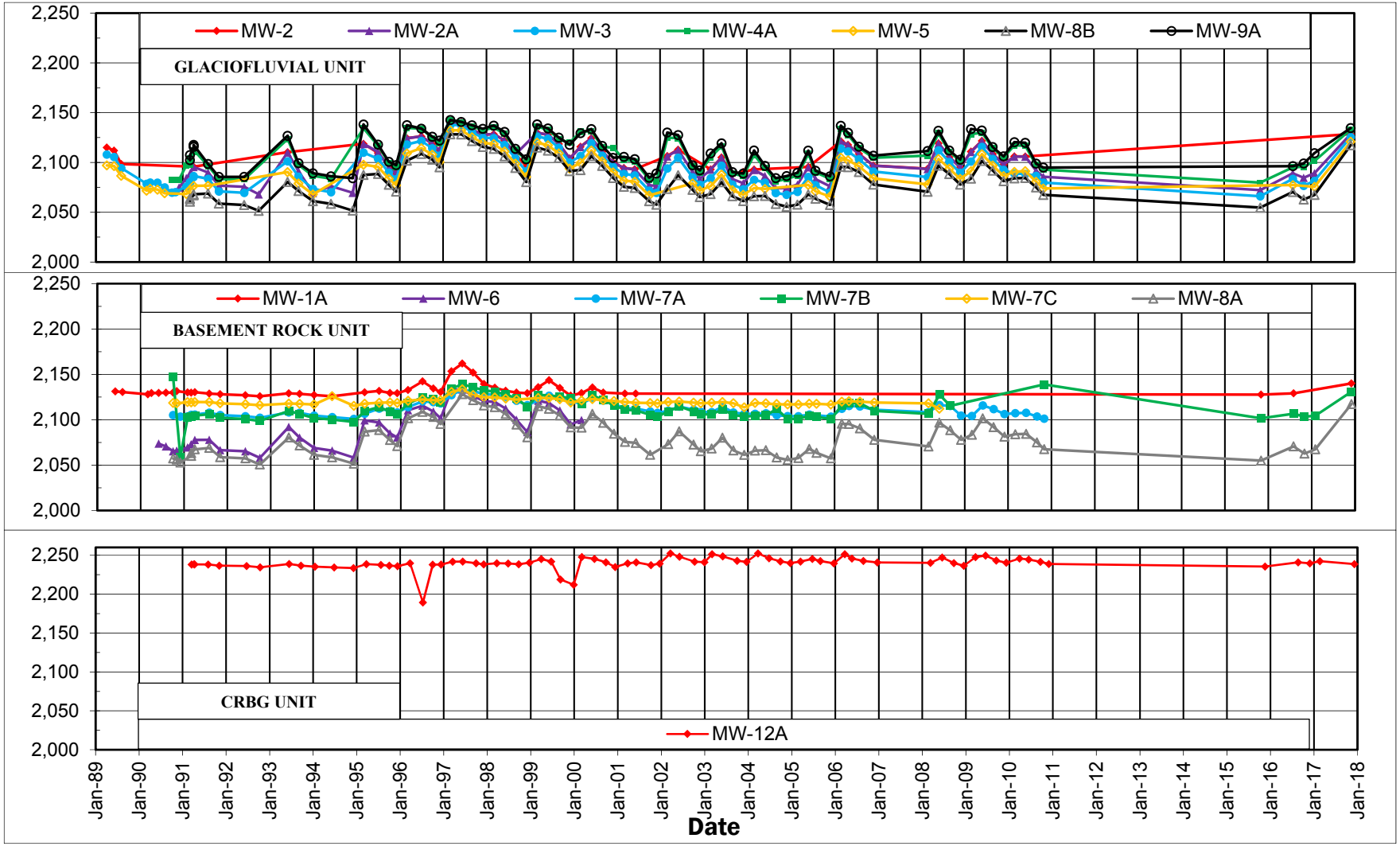
11/28/10	220.35	2101.15	188.58	2138.90	--		72.13	2067.52	72.1	2067.46	62.08	2094.89	114.57	2238.79
11/18/15	--		225.94	2101.54	--		84.65	2055.00	84.85	2054.71	--		117.93	2235.43
08/21/16	--		220.81	2106.67	--		69.00	2070.65	69.14	2070.42	60.62	2096.35	112.46	2240.90
11/28/16	--		224.02	2103.46	--		76.93	2062.72	76.74	2062.82	57.96	2099.01	113.83	2239.53
02/20/17	--		223.05	2104.43	--		72.26	2067.39	72.12	2067.44	47.51	2109.46	111.05	2242.31
12/07/17	--		196.60	2130.88	--		22.35	2117.30	22.19	2117.37	22.34	2134.63	114.69	2238.67

Notes:

[1] Groundwater elevations are referenced to NAVD88 datum.

[2] The reference elevations for the historic depth to groundwater measurements are assumed to be the top of polyvinyl (PVC) well casing, as surveyed on December 9, 2016.

[3] Monitoring wells MW-6, MW-7A, and MW-7C were not available for the December 9, 2016 survey. The provided elevations are from Fetrow (1991). Examination of the Fetrow (1991) survey indicates the datum was the National Geodetic Vertical Datum of 1929 (NGVD 29). 3.80 feet was added to correct to NAVD 88.



Historic Groundwater Elevations
Hydrostratigraphic Units

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure B-1

APPENDIX C
Historic Groundwater Laboratory Analytical Data

Table C-1

Historical Water Supply Well Designation Correlation

Marshall Landfill

Spokane County, Washington

Analytical Tables Reference	Sheet 10[1]	Table embedded with Sheet 10[1]
?	55	?
?	147	?
?	148	?
301	?	?
?	Countryman Well	?
?	DuPont Well	14
?	Green Well	2
?	Miller Well	124
BAG/Bagley	Bagley	155
BEK	Beck Well	128
DCW	?	?
FAV	Favre Well	127
Fawler	?	?
FOW	?	?
GES	Geschke Well	3
Hin/Hinrichs	Hinrichs	158
Home	?	?
House	?	?
MCC	Community Church Well	160
MCWA	?	?
No. 60	No. 60	60
OMS	Marshall Old School Well	48

Notes

[1]Information was provided by Sheet 10, Approximate Extent of Sand Aquifer, included in the Marshall Site Characterization Study (Fetrow Engineering, 1991). Question marks are included for locations or names that could not be verified.

Table C-2

Historical Groundwater Analytical Data 1989[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date	
					MW-1A MW-1A_19890607 06/07/89	MW-3 MW-3_19890607 06/07/89
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.05 U	0.05 U
	Chemical Oxygen Demand	mg/L	NE	NE	**107.9**	**77.8**
	Chloride	mg/L	NE	NE	**134**	**15.5**
	Conductivity	umhos/cm	NE	NE	**1,518**	**345**
	pH	SU	NE	NE	**7.29**	**6.44**
	Sulfate	mg/L	NE	NE	**40**	**20**
	Temperature	Deg C	NE	NE	**10**	**10**
	Total Organic Carbon	mg/L	NE	NE	**20**	**5**
Metals[4]	Antimony	ug/L	NE	6.4	2 U	2 U
	Arsenic	ug/L	5	NL	0.8 U	**4**
	Barium	ug/L	NE	3,200	2 U	2 U
	Beryllium	ug/L	NE	32	**4**	**2**
	Cadmium	ug/L	5	NL	0.1 U	0.1 U
	Chromium	ug/L	50	NL	**1**	0.5 U
	Copper	ug/L	NE	640	20 U	20 U
	Iron	ug/L	NE	11,200	**4,830**	**710**
	Manganese	ug/L	NE	2,240	**420**	**135**
	Mercury	mg/L	0.002	NL	0.00005 U	0.00005 U
	Nickel	ug/L	NE	320	10 U	10 U
	Selenium	ug/L	NE	80	2 U	2 U
	Silver	ug/L	NE	80	0.1 U	0.1 U
	Thallium	ug/L	NE	0.16	4 U	4 U
	Zinc	ug/L	NE	4,800	**30**	6 U
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	**16**	**10**
	Dibutyl phthalate	ug/L	NE	1,600	10 U	10 U
	Total Phenols	mg/L	NE	NE	**0.023**	0.003 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**130**	5 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	5 U	5 U
	1,1-Dichloroethane	ug/L	NE	7.68	**23**	5 U
	1,1-Dichloroethene	ug/L	NE	400	**8.9**	5 U
	1,2-Dichloroethane	ug/L	5	NL	5 U	5 U
	1,2-Dichloropropane	ug/L	NE	1.22	5 U	5 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U
	Acetone	ug/L	NE	7,200	10 U	10 U
	Benzene	ug/L	5	NL	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	–	5 U
	Chloroethane	ug/L	NE	NE	10 U	10 U
	Chloroform	ug/L	NE	1.41	5 U	5 U
	Dibutyl phthalate	ug/L	NE	1,600	10 U	10 U
	Methylene Chloride	ug/L	5	NL	**490**	5 U
	Tetrachloroethene	ug/L	5	NL	**11**	5 U
	Toluene	ug/L	1,000	NL	5 U	5 U
	Trichloroethene	ug/L	5	NL	5 U	5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**19**	–

Table C-3

Historical Groundwater Analytical Data 1990[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					BEK BEK_19900830 08/30/90	BEK BEK_19901108 11/08/90	DCW DCW_19901206 12/06/90	FAV FAV_19901108 11/08/90	GES GES_19901108 11/08/90	MCWA MCWA_19900411 04/11/90	MCWA MCWA_19900830 08/30/90	MCWA MCWA_19901108 11/08/90	MW-1A MW-1A_19900417 04/17/90
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	0.01
	Chemial Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	95
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	440
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	3,100
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	6.64
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	67
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	26
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	20 U*
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	3
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	330
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	7 U
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	2 U
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	44
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	21
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	8,200
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	44
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	570
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	0.0002 U
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	10 U
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	1 U
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	10 U
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	1
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	160
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	41.5
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	6 U
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	0.005 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1.7	5.6	--	--	--	--	--	--	83
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	2.3
	1,1-Dichloroethane	ug/L	NE	7.68	--	--	--	--	--	--	--	--	22
	1,1-Dichloroethene	ug/L	NE	400	--	--	--	--	--	--	--	--	9.2
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	2.5
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	3.5
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	16
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	17
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	2.8
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	5 U
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	1 U
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	6 U
	Methylene Chloride	ug/L	5	NL	1.4	4.8	1.8	13	4.6	4.9	3.3	4.5	600
	Tetrachloroethene	ug/L	5	NL	1.1	1.2	--	--	--	--	--	--	26
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	1 U
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	4.5
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1.7	2.9	--	--	--	--	--	--	38

Analytical Group	Analyte	Sample Location, Name and Date						
		MW-1A MW-1A_19900620 06/20/90	MW-1A MW-1A_19900822 08/22/90	MW-1A MW-1A_19901113 11/13/90	MW-3 MW-3_19900416 04/16/90	MW-3 MW-3_19900618 06/18/90	MW-3 MW-3_19900821 08/21/90	MW-3 MW-3_19901114 11/14/90
General Chemistry[3]	Ammonia	0.048	0.006	0.02	0.008	0.007	0.009	0.005 U
	Chemial Oxygen Demand	112	190	59	17	10 U	--	7.5
	Chloride	3.5	--	1 U	27	3.5	26	27
	Conductivity	2,070	2,000	2,000	1,000	461	410	520
	pH	6.73	6.6	7.1	6.84	7.07	6.7	6.9
	Sulfate	64	52	96	24	20.1	11	11
	Temperature	12	13.9	13		10	7.8	10
	Total Organic Carbon	50.7	40	66	3.1	5.38	20	23
Metals[4]	Antimony	4	1	1 U	20 U*	25	3	3
	Arsenic	3	22	6	11	2	10	49
	Barium	362	420	490	100	22	120	370
	Beryllium	7 U	--	5 U	7 U	7 U	--	5 U
	Cadmium	0.5 U	--	4	2 U	0.5 U	--	4
	Chromium	1.3	--	11	20	0.8	10	30
	Copper	2 U	20	22	15	11	28	80
	Iron	2,800	370	7,500	13,000	60	190	80
	Lead	1	8	1 U	39	16	5	2
	Manganese	30	300	230	440	16	20	100
	Mercury	0.0002 U	0.0007	0.0073	0.0002 U	0.0002 U	0.0003	0.0002 U
	Nickel	10 U	20	20	11	10 U	--	40
	Selenium	1 U	--	1	1 U	1 U	--	1 U
	Silver	0.3 U	--	10 U	10 U	0.3 U	--	10 U
	Thallium	1	--	1	2	1 U*	--	3
	Zinc	33	170	90	180	28	30	26
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	2.1	4	--	2 U	8.9	2.1	--
	Dibutyl phthalate	2 U	--	--	2 U	2 U	--	--
	Total Phenols	0.012	--	0.005 U	0.005 U	0.025	--	0.005 U
VOCs[8]	1,1,1-Trichloroethane	79	52	66	1 U	1 U	--	4.2
	1,1,2-Trichloroethane	1 U*	--	1 U*	1 U*	1 U*	--	1 U*
	1,1-Dichloroethane	16	12	18	1 U	1 U	--	5.7
	1,1-Dichloroethene	9.5	14	1 U	1 U	1 U	--	1 U
	1,2-Dichloroethane	1.8	1.6	1.9	1 U	1 U	--	1 U
	1,2-Dichloropropane	2.1	2.2	2.4	1 U	1 U	--	1 U
	2-Butanone (MEK)	10 U	--	50 U	19	10 U	--	50 U
	Acetone	10 U	--	20 U	15	10 U	--	20 U
	Benzene	1.9	1.7	3.5	1 U	1 U	--	1 U
	Carbon Disulfide	--	--	--	1 U	1 U	--	1 U
	Chloroethane	5 U	--	5 U	5 U	5 U	--	5.1
	Chloroform	2.2	--	2.3	1 U	1 U	--	1 U
	Dibutyl phthalate	2 U	--	--	2 U	2 U	--	--
	Methylene Chloride	530	490	490	2.3	1.1	2.9	19
	Tetrachloroethene	18	17	18	1 U	1 U	--	3.4
	Toluene	1 U	2	1 U	1 U	1 U	1.4	1 U
	Trichloroethene	3.9	4.1	5.1	1 U	1 U	--	1 U
	Trichlorofluoromethane (CFC-11)	21	16	7.7	1 U	1 U	--	1 U

Table C-4

Historical Groundwater Analytical Data 1991[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					BAG - OUT BAG - OUT_19910806 08/06/91	bagley bagley_19910409 04/09/91	Bagley Bagley_19910806 08/06/91	BEK BEK_19910409 04/09/91	BEK BEK_19910806 08/06/91	BEK BEK_19911107 11/07/91	BEK - OUT BEK - OUT_19910806 08/06/91	DCW DCW_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					BAG - OUT BAG - OUT_19910806 08/06/91	bagley bagley_19910409 04/09/91	Bagley Bagley_19910806 08/06/91	BEK BEK_19910409 04/09/91	BEK BEK_19910806 08/06/91	BEK BEK_19911107 11/07/91	BEK - OUT BEK - OUT_19910806 08/06/91	DCW DCW_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE		--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					BAG - OUT BAG - OUT_19910806 08/06/91	bagley bagley_19910409 04/09/91	Bagley Bagley_19910806 08/06/91	BEK BEK_19910409 04/09/91	BEK BEK_19910806 08/06/91	BEK BEK_19911107 11/07/91	BEK - OUT BEK - OUT_19910806 08/06/91	DCW DCW_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	**3**	**9**	**12**	**5**	**5**	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	3 U*	3 U*	3 U*	3 U*	3 U*	--	3 U*	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	**2**	**4**	**1**	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	2-Hexanone	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Acetone	ug/L	NE	7200	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Dibromochloromethane	ug/L	NE	0.521	3 U*	3 U*	3 U*	3 U*	3 U*	--	3 U*	3 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					BAG - OUT BAG - OUT_19910806 08/06/91	bagley bagley_19910409 04/09/91	Bagley Bagley_19910806 08/06/91	BEK BEK_19910409 04/09/91	BEK BEK_19910806 08/06/91	BEK BEK_19911107 11/07/91	BEK - OUT BEK - OUT_19910806 08/06/91	DCW DCW_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--
VOCs[8]	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Methylene Chloride	ug/L	5	NL	1 U	1 U	1 U	**2**	**5**	1 U	1 U	1 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	**2**	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--	1 U	--	--
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					DCW DCW_19911107 11/07/91	FAV FAV_19910409 04/09/91	FAV FAV_19910806 08/06/91	FAV FAV_19911107 11/07/91	FOW FOW_19911107 11/07/91	GES GES_19910409 04/09/91	GES GES_19911107 11/07/91	HIN - OUT HIN - OUT_19910806 08/06/91	Hinrichs Hinrichs_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					DCW DCW_19911107 11/07/91	FAV FAV_19910409 04/09/91	FAV FAV_19910806 08/06/91	FAV FAV_19911107 11/07/91	FOW FOW_19911107 11/07/91	GES GES_19910409 04/09/91	GES GES_19911107 11/07/91	HIN - OUT HIN - OUT_19910806 08/06/91	Hinrichs Hinrichs_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE		--	--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					DCW DCW_19911107 11/07/91	FAV FAV_19910409 04/09/91	FAV FAV_19910806 08/06/91	FAV FAV_19911107 11/07/91	FOW FOW_19911107 11/07/91	GES GES_19910409 04/09/91	GES GES_19911107 11/07/91	HIN - OUT HIN - OUT_19910806 08/06/91	Hinrichs Hinrichs_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	**2**	1 U	1 U	1 U	**5**
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	--	3 U*	3 U*	--	--	3 U*	--	3 U*	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	1 U*	1 U*	--	--	1 U*	--	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	2-Hexanone	ug/L	NE	NE	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	Acetone	ug/L	NE	7200	--	5 U	5 U	--	--	5 U	--	**3 J**	5 U
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	--	1 U*	1 U*	--	--	1 U*	--	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Bromomethane	ug/L	NE	11.2	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	1 U*	1 U*	--	--	1 U*	--	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	Chloroethane	ug/L	NE	NE	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	Chloroform	ug/L	NE	1.41	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Chloromethane	ug/L	NE	NE	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	Dibromochloromethane	ug/L	NE	0.521	--	3 U*	3 U*	--	--	3 U*	--	3 U*	3 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					DCW DCW_19911107 11/07/91	FAV FAV_19910409 04/09/91	FAV FAV_19910806 08/06/91	FAV FAV_19911107 11/07/91	FOW FOW_19911107 11/07/91	GES GES_19910409 04/09/91	GES GES_19911107 11/07/91	HIN - OUT HIN - OUT_19910806 08/06/91	Hinrichs Hinrichs_19910409 04/09/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
VOCs[8]	Ethylbenzene	ug/L	700	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Methylene Chloride	ug/L	5	NL	1 U	1 U	1 U	**1**	1 U	1 U	1 U	**1**	1 U
	Styrene	ug/L	NE	1,600	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	--	3 U	3 U	--	--	3 U	--	3 U	3 U
	Trichloroethene	ug/L	5	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	--	--	1 U	**3**	--	1 U	--	--
	Vinyl Acetate	ug/L	NE	8,000	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	--	1 U*	1 U*	--	--	1 U*	--	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	--	1 U	1 U	--	--	1 U	--	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					Hinrichs Hinrichs_19910806 08/06/91	MCC MCC_19910409 04/09/91	MCWA MCWA_19910409 04/09/91	MCWA MCWA_19911104 11/04/91	NO60 NO60_19910410 04/10/91	NO60 NO60_19910807 08/07/91	OMS OMS_19910409 04/09/91	OMS OMS_19910806 08/06/91	MW-1A MW-1A_19910411 04/11/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	**0.01**	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	10 U	10 U	--	--	**64**
	Chloride	mg/L	NE	NE	--	--	--	--	--	**20**	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	**430**	**440**	--	--	**2,100**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	0.005 U	--	--	--	**0.22**
	pH	SU	NE	NE	--	--	--	--	**7.1**	**7**	--	--	**6.6**
	Sulfate	mg/L	NE	NE	--	--	--	--	**13**	**14**	--	--	**62**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	**5.1**	**6.6**	--	--	**30**
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	6 U	6 U	--	--	60 U*
	Arsenic	ug/L	5	NL	--	--	--	--	5 U	5 U	--	--	5 U
	Barium	ug/L	NE	3,200	--	--	--	--	**40**	**42**	--	--	**400**
	Beryllium	ug/L	NE	32	--	--	--	--	1 U	1 U	--	--	10 U
	Cadmium	ug/L	5	NL	--	--	--	--	1 U	1 U	--	--	10 U*
	Chromium	ug/L	50	NL	--	--	--	--	1 U	**3**	--	--	10 U
	Copper	ug/L	NE	640	--	--	--	--	**6**	**53**	--	--	**19**
	Iron	ug/L	NE	11,200	--	--	--	--	10 U	**34**	--	--	10 U
	Lead	ug/L	15	NL	--	--	--	--	5 U	10 U	--	--	50 U*
	Manganese	ug/L	NE	2,240	--	--	--	--	**1**	**6**	--	--	**150**
	Mercury	mg/L	0.002	NL	--	--	--	--	0.001 U	0.001 U	--	--	0.001 U
	Nickel	ug/L	NE	320	--	--	--	--	2 U	2 U	--	--	**20**
	Selenium	ug/L	NE	80	--	--	--	--	5 U	5 U	--	--	5 U
	Silver	ug/L	NE	80	--	--	--	--	1 U	1 U	--	--	10 U
	Thallium	ug/L	NE	0.16	--	--	--	--	2 U*	1 U*	--	--	2 U*
	Zinc	ug/L	NE	4,800	--	--	--	--	**210**	**24**	--	--	**14**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					Hinrichs Hinrichs_19910806 08/06/91	MCC MCC_19910409 04/09/91	MCWA MCWA_19910409 04/09/91	MCWA MCWA_19911104 11/04/91	NO60 NO60_19910410 04/10/91	NO60 NO60_19910807 08/07/91	OMS OMS_19910409 04/09/91	OMS OMS_19910806 08/06/91	MW-1A MW-1A_19910411 04/11/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	**0.01**	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	10 U	10 U	--	--	**64**
	Chloride	mg/L	NE	NE	--	--	--	--	--	**20**	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	**430**	**440**	--	--	**2,100**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	0.005 U	--	--	--	**0.22**
	pH	SU	NE	NE	--	--	--	--	**7.1**	**7**	--	--	**6.6**
	Sulfate	mg/L	NE	NE	--	--	--	--	**13**	**14**	--	--	**62**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	**5.1**	**6.6**	--	--	**30**
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE		--	--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					Hinrichs Hinrichs_19910806 08/06/91	MCC MCC_19910409 04/09/91	MCWA MCWA_19910409 04/09/91	MCWA MCWA_19911104 11/04/91	NO60 NO60_19910410 04/10/91	NO60 NO60_19910807 08/07/91	OMS OMS_19910409 04/09/91	OMS OMS_19910806 08/06/91	MW-1A MW-1A_19910411 04/11/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	**0.01**	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	10 U	10 U	--	--	**64**
	Chloride	mg/L	NE	NE	--	--	--	--	--	**20**	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	**430**	**440**	--	--	**2,100**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	0.005 U	--	--	--	**0.22**
	pH	SU	NE	NE	--	--	--	--	**7.1**	**7**	--	--	**6.6**
	Sulfate	mg/L	NE	NE	--	--	--	--	**13**	**14**	--	--	**62**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	**5.1**	**6.6**	--	--	**30**
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	0.005 U	0.005 U	--	--	0.005 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**11**	1 U	1 U	1 U	1 U	--	1 U	--	**41**
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	3 U*	3 U*	3 U*	3 U*	3 U*	--	3 U*	--	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	--	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**16**
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**7**
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	**3**
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	--	1 U		1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U	3 U
	2-Hexanone	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U	3 U
	Acetone	ug/L	NE	7200	5 U	5 U	5 U	**6**	5 U	--	5 U	5 U	5 U
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**2**
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	--	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	--	1 U*
	Chlorobenzene	ug/L	NE	160	3 U	3 U	3 U	3 U	3 U	--	3 U	--	3 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	--	**1 J**
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**2**
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**3**
	cis-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	--	3 U
	Dibromochloromethane	ug/L	NE	0.521	3 U*	3 U*	3 U*	3 U*	3 U*	--	3 U*	--	3 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					Hinrichs Hinrichs_19910806 08/06/91	MCC MCC_19910409 04/09/91	MCWA MCWA_19910409 04/09/91	MCWA MCWA_19911104 11/04/91	NO60 NO60_19910410 04/10/91	NO60 NO60_19910807 08/07/91	OMS OMS_19910409 04/09/91	OMS OMS_19910806 08/06/91	MW-1A MW-1A_19910411 04/11/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	**0.01**	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	10 U	10 U	--	--	**64**
	Chloride	mg/L	NE	NE	--	--	--	--	--	**20**	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	**430**	**440**	--	--	**2,100**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	0.005 U	--	--	--	**0.22**
	pH	SU	NE	NE	--	--	--	--	**7.1**	**7**	--	--	**6.6**
	Sulfate	mg/L	NE	NE	--	--	--	--	**13**	**14**	--	--	**62**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	**5.1**	**6.6**	--	--	**30**
VOCs[8]	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Methylene Chloride	ug/L	5	NL	**2**	1 U	1 U	**1**	1 U	--	1 U	--	**190**
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**20**
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	--	3 U	--	3 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	**5**
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	--	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	--	1 U	--	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-1A MW-1A_19910808 08/08/91	MW-1A MW-1A_19911103 11/03/91	MW-2 MW-2_19910411 04/11/91	MW-2A MW-2A_19910806 08/06/91	MW-2A MW-2A_19911105 11/05/91	MW-3 MW-3_19910411 04/11/91	MW-3 MW-3_19910807 08/07/91	MW-3 MW-3_19911103 11/03/91	MW-4A MW-4A_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.02**	--	--	0.01 U	--	--	**0.02**	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	**47**	**20**	**12**	**20**	10 U	**31**	**16**	**50**	10 U
	Chloride	mg/L	NE	NE	**110**	--	--	**21**	--	--	**22**	--	--
	Conductivity	umhos/cm	NE	NE	**1,700**	**1,600**	**560**	**420**	**490**	**460**	**380**	**660**	**330**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	0.005 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	**0.018**	0.005 U	--	0.005 U	0.005 U	--	**0.006**	**0.007**
	pH	SU	NE	NE	**6.8**	**6.6**	**6.3**	**7**	**6.9**	**6.9**	**6.9**	**6.4**	**6.9**
	Sulfate	mg/L	NE	NE	**45**	**43**	**17**	**8**	**8**	**14**	**11**	**5**	**12**
	Total Organic Carbon	mg/L	NE	NE	**53**	**14**	**5.8**	**7.9**	**140**	**8.6**	**9.8**	**41**	**4.3**
Metals[4]	Antimony	ug/L	NE	6.4	24 U*	6 U	6 U	6 U	6 U	6 U	12 U*	**7**	6 U
	Arsenic	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	**9**	**23**	5 U
	Barium	ug/L	NE	3,200	**350**	**64**	**45**	**36**	**48**	**110**	**140**	**350**	**38**
	Beryllium	ug/L	NE	32	4 U	1 U	1 U	1 U	1 U	1 U	2 U	**3**	1 U
	Cadmium	ug/L	5	NL	4 U	1 U	1 U	1 U	1 U	1 U	2 U	5	1 U
	Chromium	ug/L	50	NL	**20**	**4**	1 U	**2**	**3**	**2**	**5**	**10**	**2**
	Copper	ug/L	NE	640	**16**	**30**	**3**	**4**	**5**	**5**	**28**	**66**	**4**
	Iron	ug/L	NE	11,200	**190**	**250**	10 U	10 U	**16**	**13**	**34**	**10,000**	**20**
	Lead	ug/L	15	NL	20 U*	20 U*	5 U	5 U	5 U	5 U	5 U	**12**	**7**
	Manganese	ug/L	NE	2,240	**130**	**99**	**5**	**2**	**2**	**27**	**13**	**220**	**5**
	Mercury	mg/L	0.002	NL	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
	Nickel	ug/L	NE	320	8 U	**3**	2 U	2 U	2 U	**4**	**10**	**23**	**2**
	Selenium	ug/L	NE	80	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Silver	ug/L	NE	80	4 U	1 U	1 U	1 U	1 U	**2**	2 U	1 U	1 U
	Thallium	ug/L	NE	0.16	1 U*	2 U*	2 U*	1 U*	2 U*	2 U*	1 U*	2 U*	2 U*
	Zinc	ug/L	NE	4,800	**16**	**16**	**8**	**25**	**7**	**7**	**7**	**64**	**770**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--	--	1 U	--	--	1 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	--	--	1 U	--	--	1 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	1 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	--	--	1 U	--	--	1 U	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	2 U	--	--	2 U	--	--	2 U	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	2 U	--	--	2 U	--	--	2 U	--
	2,4-Dichlorophenol	ug/L	NE	24	--	2 U	--	--	2 U	--	--	2 U	--
	2,4-Dimethylphenol	ug/L	NE	160	--	1 U	--	--	1 U	--	--	1 U	--
	2,4-Dinitrophenol	ug/L	NE	32	--	10 U	--	--	10 U	--	--	10 U	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	2 U*	--	--	2 U*	--	--	2 U*	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	2 U*	--	--	2 U*	--	--	2 U*	--
	2-Chloronaphthalene	ug/L	NE	640	--	1 U	--	--	1 U	--	--	1 U	--
	2-Chlorophenol	ug/L	NE	40	--	1 U	--	--	1 U	--	--	1 U	--
	2-Methylnaphthalene	ug/L	160	NL	--	1 U	--	--	1 U	--	--	1 U	--
	2-Nitroaniline	ug/L	NE	160	--	2 U	--	--	2 U	--	--	2 U	--
	2-Nitrophenol	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	2 U	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	10 U*	--	--	10 U*	--	--	10 U*	--
	3-Nitroaniline	ug/L	NE	NE	--	5 U	--	--	5 U	--	--	5 U	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	10 U	--	--	10 U	--	--	10 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-1A MW-1A_19910808 08/08/91	MW-1A MW-1A_19911103 11/03/91	MW-2 MW-2_19910411 04/11/91	MW-2A MW-2A_19910806 08/06/91	MW-2A MW-2A_19911105 11/05/91	MW-3 MW-3_19910411 04/11/91	MW-3 MW-3_19910807 08/07/91	MW-3 MW-3_19911103 11/03/91	MW-4A MW-4A_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.02**	--	--	0.01 U	--	--	**0.02**	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	**47**	**20**	**12**	**20**	10 U	**31**	**16**	**50**	10 U
	Chloride	mg/L	NE	NE	**110**	--	--	**21**	--	--	**22**	--	--
	Conductivity	umhos/cm	NE	NE	**1,700**	**1,600**	**560**	**420**	**490**	**460**	**380**	**660**	**330**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	0.005 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	**0.018**	0.005 U	--	0.005 U	0.005 U	--	**0.006**	**0.007**
	pH	SU	NE	NE	**6.8**	**6.6**	**6.3**	**7**	**6.9**	**6.9**	**6.9**	**6.4**	**6.9**
	Sulfate	mg/L	NE	NE	**45**	**43**	**17**	**8**	**8**	**14**	**11**	**5**	**12**
	Total Organic Carbon	mg/L	NE	NE	**53**	**14**	**5.8**	**7.9**	**140**	**8.6**	**9.8**	**41**	**4.3**
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	2 U	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	2 U	--
	4-Chloroaniline	ug/L	NE	0.219	--	1 U*	--	--	1 U*	--	--	1 U*	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	1 U	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	1 U	--	--	1 U	--	--	1 U	--
	4-Nitroaniline	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	2 U	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	10 U	--	--	10 U	--	--	10 U	--
	Acenaphthene	ug/L	NE	960	--	1 U	--	--	1 U	--	--	1 U	--
	Acenaphthylene	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	1 U	--
	Aniline	ug/L	NE	7.68	--	5 U	--	--	5 U	--	--	5 U	--
	Anthracene	ug/L	NE	4,800	--	1 U	--	--	1 U	--	--	1 U	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Benzo(ghi)perylene	ug/L	NE		--	1 U	--	--	1 U	--	--	1 U	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	1 U	--	--	1 U	--	--	1 U	--
	Benzoic Acid	ug/L	NE	64,000	--	25 U	--	--	25 U	--	--	25 U	--
	Benzyl Alcohol	ug/L	NE	800	--	1 U	--	--	1 U	--	--	1 U	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	1 U	--	--	1 U	--	--	1 U	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	1 U	--	--	1 U	--	--	1 U	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	**3**	--	--	**2**	--	--	**29**	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	1 U	--	--	1 U	--	--	1 U	--
	Chrysene	ug/L	NE	12.0	--	1 U	--	--	1 U	--	--	1 U	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Dibenzofuran	ug/L	NE	16	--	1 U	--	--	1 U	--	--	1 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	1 U	--	--	1 U	--	--	1 U	--
	Diethyl phthalate	ug/L	NE	12,800	--	1 U	--	--	1 U	--	--	1 U	--
	Dimethyl phthalate	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	1 U	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	1 U	--	--	1 U	--	--	1 U	--
	Fluoranthene	ug/L	NE	640	--	1 U	--	--	1 U	--	--	1 U	--
	Fluorene	ug/L	NE	640	--	1 U	--	--	1 U	--	--	1 U	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	2 U*	--	--	2 U*	--	--	2 U*	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	2 U	--	--	2 U	--	--	2 U	--
	Hexachloroethane	ug/L	NE	1.09	--	2 U*	--	--	2 U*	--	--	2 U*	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	1 U*	--	--	1 U*	--	--	1 U*	--
	Isophorone	ug/L	NE	46.1	--	1 U	--	--	1 U	--	--	1 U	--
	Naphthalene	ug/L	160	NL	--	1 U	--	--	1 U	--	--	1 U	--
	Nitrobenzene	ug/L	NE	16	--	1 U	--	--	1 U	--	--	1 U	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	1 U*	--	--	1 U*	--	--	1 U*	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-1A MW-1A_19910808 08/08/91	MW-1A MW-1A_19911103 11/03/91	MW-2 MW-2_19910411 04/11/91	MW-2A MW-2A_19910806 08/06/91	MW-2A MW-2A_19911105 11/05/91	MW-3 MW-3_19910411 04/11/91	MW-3 MW-3_19910807 08/07/91	MW-3 MW-3_19911103 11/03/91	MW-4A MW-4A_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.02**	--	--	0.01 U	--	--	**0.02**	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	**47**	**20**	**12**	**20**	10 U	**31**	**16**	**50**	10 U
	Chloride	mg/L	NE	NE	**110**	--	--	**21**	--	--	**22**	--	--
	Conductivity	umhos/cm	NE	NE	**1,700**	**1,600**	**560**	**420**	**490**	**460**	**380**	**660**	**330**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	0.005 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	**0.018**	0.005 U	--	0.005 U	0.005 U	--	**0.006**	**0.007**
	pH	SU	NE	NE	**6.8**	**6.6**	**6.3**	**7**	**6.9**	**6.9**	**6.9**	**6.4**	**6.9**
	Sulfate	mg/L	NE	NE	**45**	**43**	**17**	**8**	**8**	**14**	**11**	**5**	**12**
	Total Organic Carbon	mg/L	NE	NE	**53**	**14**	**5.8**	**7.9**	**140**	**8.6**	**9.8**	**41**	**4.3**
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	1 U	--	--	1 U	--	--	1 U	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	1 U	--	--	1 U	--	--	1 U	--
	Pentachlorophenol	ug/L	NE	0.219	--	10 U*	--	--	10 U*	--	--	10 U*	--
	Phenanthrene	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	1 U	--
	Phenol	ug/L	NE	2,400	--	1 U	--	--	1 U	--	--	1 U	--
	Pyrene	ug/L	NE	480	--	1 U	--	--	1 U	--	--	1 U	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	0.755 U	--	--	0.755 U	--	--	0.755 U	--
	Total Phenols	mg/L	NE	NE	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**85**	**85**	**6**	1 U	1 U	1 U	--	**3**	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	--	3 U*	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	**17**	**18**	1 U	1 U	1 U	1 U	--	**6**	1 U
	1,1-Dichloroethene	ug/L	NE	400	**15**	**13**	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--	--	1 U	--	--	1 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	--	--	1 U	--	--	1 U	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	**2**	**2**	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	**2**	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	2 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	1 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	--	--	1 U	--	--	1 U	--
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	2-Hexanone	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Acetone	ug/L	NE	7200	5 U	**7**	5 U	**10**	5 U	5 U	--	**6**	5 U
	Aniline	ug/L	NE	7.68	--	5 U	--	--	5 U	--	--	5 U	--
	Benzene	ug/L	5	NL	1 U	**3**	1 U	1 U	1 U	1 U	--	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	25 U*	--	--	25 U*	--	--	25 U*	--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	**2**	1 U	1 U	1 U	1 U	--	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	--	**4**	3 U
	Chloroform	ug/L	NE	1.41	1 U	**2**	1 U	1 U	1 U	1 U	--	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	**2**	**2**	1 U	1 U	1 U	1 U	--	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Dibromochloromethane	ug/L	NE	0.521	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	--	3 U*	3 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	1 U	--	--	1 U	--	--	1 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-1A MW-1A_19910808 08/08/91	MW-1A MW-1A_19911103 11/03/91	MW-2 MW-2_19910411 04/11/91	MW-2A MW-2A_19910806 08/06/91	MW-2A MW-2A_19911105 11/05/91	MW-3 MW-3_19910411 04/11/91	MW-3 MW-3_19910807 08/07/91	MW-3 MW-3_19911103 11/03/91	MW-4A MW-4A_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.02	--	--	0.01 U	--	--	0.02	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	47	20	12	20	10 U	31	16	50	10 U
	Chloride	mg/L	NE	NE	110	--	--	21	--	--	22	--	--
	Conductivity	umhos/cm	NE	NE	1,700	1,600	560	420	490	460	380	660	330
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	0.005 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.018	0.005 U	--	0.005 U	0.005 U	--	0.006	0.007
	pH	SU	NE	NE	6.8	6.6	6.3	7	6.9	6.9	6.9	6.4	6.9
	Sulfate	mg/L	NE	NE	45	43	17	8	8	14	11	5	12
	Total Organic Carbon	mg/L	NE	NE	53	14	5.8	7.9	140	8.6	9.8	41	4.3
VOCs[8]	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Methylene Chloride	ug/L	5	NL	230	360	1 U	2	1 U	6	--	36	1 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	19	17	3	1 U	1 U	1 U	--	3	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U	3 U
	Trichloroethene	ug/L	5	NL	4	4	1 U	1 U	1 U	1 U	--	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-4A MW-4A_19910806 08/06/91	MW-4A MW-4A_19911105 11/05/91	MW-5 MW-5_19910411 04/11/91	MW-5 MW-5_19910807 08/07/91	MW-5A MW-5A_19911105 11/05/91	MW-6 MW-6_19910411 04/11/91	MW-6 MW-6_19910808 08/08/91	MW-7A MW-7A_19910416 04/16/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.01**	--	--	0.01 U	--	--	**0.23**	--
	Chemical Oxygen Demand	mg/L	NE	NE	**12**	10 U	**34**	**12**	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**13**	--	--	**39**	--	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**370**	**400**	**480**	**720**	**640**	**300**	**340**	**260**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	**0.006**	--	0.005 U	**0.062**	--	0.005 U
	pH	SU	NE	NE	**7**	**7**	**6.7**	**6.5**	**6.9**	**7.6**	**7.8**	**7.5**
	Sulfate	mg/L	NE	NE	**14**	**11**	**10**	**31**	**16**	**14**	**19**	**5**
	Total Organic Carbon	mg/L	NE	NE	**5.3**	**5.7**	**8.7**	**14**	**4.5**	**1.8**	**5.1**	**1.5**
Metals[4]	Antimony	ug/L	NE	6.4	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
	Arsenic	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Barium	ug/L	NE	3,200	**32**	**68**	**140**	**180**	**120**	**48**	**51**	**48**
	Beryllium	ug/L	NE	32	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Cadmium	ug/L	5	NL	1 U	1 U	**3**	1 U	1 U	1 U	1 U	1 U
	Chromium	ug/L	50	NL	**3**	**8**	**4**	**6**	**5**	1 U	**2**	**3**
	Copper	ug/L	NE	640	**3**	**12**	**20**	**8**	**5**	1 U	1 U	**3**
	Iron	ug/L	NE	11,200	**51**	10 U	**16**	**15**	10 U	**13**	**150**	10 U
	Lead	ug/L	15	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Manganese	ug/L	NE	2,240	**1**	1 U	**9**	**4**	**91**	**55**	**82**	**160**
	Mercury	mg/L	0.002	NL	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
	Nickel	ug/L	NE	320	2 U	**4**	**4**	**3**	**5**	2 U	2 U	**6**
	Selenium	ug/L	NE	80	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Silver	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Thallium	ug/L	NE	0.16	1 U*	2 U*	2 U*	1 U*	2 U*	2 U*	**1**	2 U*
	Zinc	ug/L	NE	4,800	**7**	**10**	**10**	**5**	**460**	**4**	**2**	**13**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--	--	1 U	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	--	--	1 U	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	--	--	1 U	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	2 U	--	--	2 U	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	2 U	--	--	2 U	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	2 U	--	--	2 U	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	1 U	--	--	1 U	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	10 U	--	--	10 U	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	2 U*	--	--	2 U*	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	2 U*	--	--	2 U*	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	1 U	--	--	1 U	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	1 U	--	--	1 U	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	1 U	--	--	1 U	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	2 U	--	--	2 U	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	10 U*	--	--	10 U*	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	5 U	--	--	5 U	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	10 U	--	--	10 U	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-4A MW-4A_19910806 08/06/91	MW-4A MW-4A_19911105 11/05/91	MW-5 MW-5_19910411 04/11/91	MW-5 MW-5_19910807 08/07/91	MW-5A MW-5A_19911105 11/05/91	MW-6 MW-6_19910411 04/11/91	MW-6 MW-6_19910808 08/08/91	MW-7A MW-7A_19910416 04/16/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.01**	--	--	0.01 U	--	--	**0.23**	--
	Chemical Oxygen Demand	mg/L	NE	NE	**12**	10 U	**34**	**12**	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**13**	--	--	**39**	--	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**370**	**400**	**480**	**720**	**640**	**300**	**340**	**260**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	**0.006**	--	0.005 U	**0.062**	--	0.005 U
	pH	SU	NE	NE	**7**	**7**	**6.7**	**6.5**	**6.9**	**7.6**	**7.8**	**7.5**
	Sulfate	mg/L	NE	NE	**14**	**11**	**10**	**31**	**16**	**14**	**19**	**5**
	Total Organic Carbon	mg/L	NE	NE	**5.3**	**5.7**	**8.7**	**14**	**4.5**	**1.8**	**5.1**	**1.5**
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	1 U*	--	--	1 U*	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	1 U	--	--	1 U	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	10 U	--	--	10 U	--	--	--
	Acenaphthene	ug/L	NE	960	--	1 U	--	--	1 U	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	--
	Aniline	ug/L	NE	7.68	--	5 U	--	--	5 U	--	--	--
	Anthracene	ug/L	NE	4,800	--	1 U	--	--	1 U	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	1 U*	--	--	1 U*	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	1 U*	--	--	1 U*	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	1 U*	--	--	1 U*	--	--	--
	Benzo(ghi)perylene	ug/L	NE		--	1 U	--	--	1 U	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	1 U	--	--	1 U	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	25 U	--	--	26 U	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	1 U	--	--	1 U	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	1 U	--	--	1 U	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	1 U*	--	--	1 U*	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	1 U	--	--	1 U	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	**2**	--	--	**6**	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	1 U	--	--	1 U	--	--	--
	Chrysene	ug/L	NE	12.0	--	1 U	--	--	1 U	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	1 U*	--	--	1 U*	--	--	--
	Dibenzofuran	ug/L	NE	16	--	1 U	--	--	1 U	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	1 U	--	--	1 U	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	1 U	--	--	1 U	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	1 U	--	--	1 U	--	--	--
	Fluoranthene	ug/L	NE	640	--	1 U	--	--	1 U	--	--	--
	Fluorene	ug/L	NE	640	--	1 U	--	--	1 U	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	2 U*	--	--	2 U*	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	1 U*	--	--	1 U*	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	2 U	--	--	2 U	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	2 U*	--	--	2 U*	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	1 U*	--	--	1 U*	--	--	--
	Isophorone	ug/L	NE	46.1	--	1 U	--	--	1 U	--	--	--
	Naphthalene	ug/L	160	NL	--	1 U	--	--	1 U	--	--	--
	Nitrobenzene	ug/L	NE	16	--	1 U	--	--	1 U	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	1 U*	--	--	1 U*	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-4A MW-4A_19910806 08/06/91	MW-4A MW-4A_19911105 11/05/91	MW-5 MW-5_19910411 04/11/91	MW-5 MW-5_19910807 08/07/91	MW-5A MW-5A_19911105 11/05/91	MW-6 MW-6_19910411 04/11/91	MW-6 MW-6_19910808 08/08/91	MW-7A MW-7A_19910416 04/16/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.01**	--	--	0.01 U	--	--	**0.23**	--
	Chemical Oxygen Demand	mg/L	NE	NE	**12**	10 U	**34**	**12**	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**13**	--	--	**39**	--	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**370**	**400**	**480**	**720**	**640**	**300**	**340**	**260**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	**0.006**	--	0.005 U	**0.062**	--	0.005 U
	pH	SU	NE	NE	**7**	**7**	**6.7**	**6.5**	**6.9**	**7.6**	**7.8**	**7.5**
	Sulfate	mg/L	NE	NE	**14**	**11**	**10**	**31**	**16**	**14**	**19**	**5**
	Total Organic Carbon	mg/L	NE	NE	**5.3**	**5.7**	**8.7**	**14**	**4.5**	**1.8**	**5.1**	**1.5**
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	1 U	--	--	1 U	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	1 U	--	--	1 U	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	10 U*	--	--	10 U*	--	--	--
	Phenanthrene	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	--
	Phenol	ug/L	NE	2,400	--	1 U	--	--	1 U	--	--	--
	Pyrene	ug/L	NE	480	--	1 U	--	--	1 U	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	0.755 U	--	--	0.755 U	--	--	--
	Total Phenols	mg/L	NE	NE	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	**420**	--	**740**	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	3 U*	3 U*	3 U*	--	3 U*	3 U*	3 U*	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	**7**	--	**3**	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	**26**	--	1 U	1 U	1 U	1 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--	--	1 U	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	--	--	1 U	--	--	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	2 U	--	--	2 U	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	--	--	1 U	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	--	--	1 U	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	--	3 U	3 U	3 U	3 U
	2-Hexanone	ug/L	NE	NE	3 U	3 U	3 U	--	3 U	3 U	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	3 U	3 U	3 U	--	3 U	3 U	3 U	3 U
	Acetone	ug/L	NE	7200	**3 J**	5 U	5 U	--	5 U	5 U	5 U	5 U
	Aniline	ug/L	NE	7.68	--	5 U	--	--	5 U	--	--	--
	Benzene	ug/L	5	NL	1 U	1 U	**2**	--	**1**	1 U	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	25 U*	--	--	26 U*	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	3 U	3 U	3 U	--	3 U	3 U	3 U	3 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	**2 J**	--	3 U	3 U	3 U	3 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	--	3 U	3 U	3 U	3 U
	Dibromochloromethane	ug/L	NE	0.521	3 U*	3 U*	3 U*	--	3 U*	3 U*	3 U*	3 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	1 U	--	--	1 U			

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-4A MW-4A_19910806 08/06/91	MW-4A MW-4A_19911105 11/05/91	MW-5 MW-5_19910411 04/11/91	MW-5 MW-5_19910807 08/07/91	MW-5A MW-5A_19911105 11/05/91	MW-6 MW-6_19910411 04/11/91	MW-6 MW-6_19910808 08/08/91	MW-7A MW-7A_19910416 04/16/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.01**	--	--	0.01 U	--	--	**0.23**	--
	Chemical Oxygen Demand	mg/L	NE	NE	**12**	10 U	**34**	**12**	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**13**	--	--	**39**	--	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**370**	**400**	**480**	**720**	**640**	**300**	**340**	**260**
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	--	0.005 U	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	**0.006**	--	0.005 U	**0.062**	--	0.005 U
	pH	SU	NE	NE	**7**	**7**	**6.7**	**6.5**	**6.9**	**7.6**	**7.8**	**7.5**
	Sulfate	mg/L	NE	NE	**14**	**11**	**10**	**31**	**16**	**14**	**19**	**5**
	Total Organic Carbon	mg/L	NE	NE	**5.3**	**5.7**	**8.7**	**14**	**4.5**	**1.8**	**5.1**	**1.5**
VOCs[8]	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	**1**	1 U	**23**	--	**3**	1 U	1 U	1 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	**4**	--	**3**	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	--	3 U	3 U	3 U	3 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--	--	--	--
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-7A MW-7A_19910808 08/08/91	MW-7B MW-7B_19910416 04/16/91	MW-7B MW-7B_19910808 08/08/91	MW-7C MW-7C_19910416 04/16/91	MW-7C MW-7C_19910808 08/08/91	MW-8A MW-8A_19910416 04/16/91	MW-8A MW-8A_19910808 08/08/91	MW-8B MW-8B_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.06**	--	0.01 U	--	0.01 U	--	0.01 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	10 U	**12**	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**2**	--	**1**		**1**	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**270**	**340**	**440**	**440**	**320**	**420**	**420**	**690**
	Cyanide	ug/L	NE	0.0096	--	--	--		--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	0.005 U	--	**0.007**
	pH	SU	NE	NE	**7.2**	**7.5**	**7.3**	**7.2**	**7.4**	**7.3**	**7.4**	**7.2**
	Sulfate	mg/L	NE	NE	**5**	**20**	**7**	**6**	**11**	**10**	**10**	**16**
	Total Organic Carbon	mg/L	NE	NE	**11**	**2**	**9.8**	**2.3**	**5.3**	**1.8**	**7.3**	**4.1**
Metals[4]	Antimony	ug/L	NE	6.4	**6**	6 U	**6**	6 U	6 U	6 U	**6**	6 U
	Arsenic	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Barium	ug/L	NE	3,200	**49**	**36**	**98**	**110**	**38**	**57**	**49**	**170**
	Beryllium	ug/L	NE	32	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Cadmium	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chromium	ug/L	50	NL	**6**	**1**	**5**	**2**	**2**	1 U	**4**	1 U
	Copper	ug/L	NE	640	**4**	**8**	1 U	**2**	**3**	**11**	**13**	**3**
	Iron	ug/L	NE	11,200	10 U	**21**	**66**	**320**	**13**	**15**	**19**	10 U
	Lead	ug/L	15	NL	5 U	5 U	**5**	5 U	5 U	5 U	5 U	5 U
	Manganese	ug/L	NE	2,240	**580**	**21**	**82**	**500**	**7**	**28**	**24**	**4**
	Mercury	mg/L	0.002	NL	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
	Nickel	ug/L	NE	320	**8**	**7**	**2**	**3**	**10**	**9**	**17**	2 U
	Selenium	ug/L	NE	80	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Silver	ug/L	NE	80	1 U	1 U	**1**	1 U	1 U	1 U	1 U	1 U
	Thallium	ug/L	NE	0.16	1 U*	2 U*	**1**	2 U*	1 U*	2 U*	1 U*	2 U*
	Zinc	ug/L	NE	4,800	**11**	**77**	**4**	**4**	**17**	**70**	**76**	**37**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-7A MW-7A_19910808 08/08/91	MW-7B MW-7B_19910416 04/16/91	MW-7B MW-7B_19910808 08/08/91	MW-7C MW-7C_19910416 04/16/91	MW-7C MW-7C_19910808 08/08/91	MW-8A MW-8A_19910416 04/16/91	MW-8A MW-8A_19910808 08/08/91	MW-8B MW-8B_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.06**	--	0.01 U	--	0.01 U	--	0.01 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	10 U	**12**	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**2**	--	**1**		**1**	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**270**	**340**	**440**	**440**	**320**	**420**	**420**	**690**
	Cyanide	ug/L	NE	0.0096	--	--	--		--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	0.005 U	--	**0.007**
	pH	SU	NE	NE	**7.2**	**7.5**	**7.3**	**7.2**	**7.4**	**7.3**	**7.4**	**7.2**
	Sulfate	mg/L	NE	NE	**5**	**20**	**7**	**6**	**11**	**10**	**10**	**16**
	Total Organic Carbon	mg/L	NE	NE	**11**	**2**	**9.8**	**2.3**	**5.3**	**1.8**	**7.3**	**4.1**
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE		--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-7A MW-7A_19910808 08/08/91	MW-7B MW-7B_19910416 04/16/91	MW-7B MW-7B_19910808 08/08/91	MW-7C MW-7C_19910416 04/16/91	MW-7C MW-7C_19910808 08/08/91	MW-8A MW-8A_19910416 04/16/91	MW-8A MW-8A_19910808 08/08/91	MW-8B MW-8B_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.06**	--	0.01 U	--	0.01 U	--	0.01 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	10 U	**12**	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**2**	--	**1**		**1**	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**270**	**340**	**440**	**440**	**320**	**420**	**420**	**690**
	Cyanide	ug/L	NE	0.0096	--	--	--		--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	0.005 U	--	**0.007**
	pH	SU	NE	NE	**7.2**	**7.5**	**7.3**	**7.2**	**7.4**	**7.3**	**7.4**	**7.2**
	Sulfate	mg/L	NE	NE	**5**	**20**	**7**	**6**	**11**	**10**	**10**	**16**
	Total Organic Carbon	mg/L	NE	NE	**11**	**2**	**9.8**	**2.3**	**5.3**	**1.8**	**7.3**	**4.1**
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	**0.027**	0.005 U	0.005 U	0.005 U	**0.008**	0.005 U	0.005 U	0.005 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	**5**	**5**	1 U	**3**	**3**	**45**
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	**1**	1 U	1 U	1 U	1 U	**3**
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	**620**	3 U	3 U	3 U	3 U
	2-Hexanone	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Acetone	ug/L	NE	7200	5 U	5 U	5 U	**49**	5 U	5 U	5 U	5 U
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Dibromochloromethane	ug/L	NE	0.521	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*
	Dibutyl phthalate	ug/L	NE	1,600								

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-7A MW-7A_19910808 08/08/91	MW-7B MW-7B_19910416 04/16/91	MW-7B MW-7B_19910808 08/08/91	MW-7C MW-7C_19910416 04/16/91	MW-7C MW-7C_19910808 08/08/91	MW-8A MW-8A_19910416 04/16/91	MW-8A MW-8A_19910808 08/08/91	MW-8B MW-8B_19910410 04/10/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.06**	--	0.01 U	--	0.01 U	--	0.01 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	10 U	**12**	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**2**	--	**1**		**1**	--	**6**	--
	Conductivity	umhos/cm	NE	NE	**270**	**340**	**440**	**440**	**320**	**420**	**420**	**690**
	Cyanide	ug/L	NE	0.0096	--	--	--		--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	0.005 U	--	**0.007**
	pH	SU	NE	NE	**7.2**	**7.5**	**7.3**	**7.2**	**7.4**	**7.3**	**7.4**	**7.2**
	Sulfate	mg/L	NE	NE	**5**	**20**	**7**	**6**	**11**	**10**	**10**	**16**
	Total Organic Carbon	mg/L	NE	NE	**11**	**2**	**9.8**	**2.3**	**5.3**	**1.8**	**7.3**	**4.1**
VOCs[8]	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**3**
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--	--	--	--
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-8B MW-8B_19910806 08/06/91	MW-9A MW-9A_19910410 04/10/91	MW-9A MW-9A_19910806 08/06/91	MW-11A MW-11A_19910411 04/11/91	MW-11A MW-11A_19910808 08/08/91	MW-12A MW-12A_19910410 04/10/91	MW-12A MW-12A_19910806 08/06/91	MW-20 MW-20_19910808 08/08/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.01 U	--	0.01 U	--	**0.07**	--	**0.02**	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	**12**	10 U	10 U	**44**	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**12**	--	**22**	--	**4**	--	**1**	**2**
	Conductivity	umhos/cm	NE	NE	**650**	**430**	**450**	**280**	**410**	**180**	**190**	**140**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	**0.006**		--
	pH	SU	NE	NE	**7.2**	**7.4**	**7.1**	**7.3**	**7**	**7.3**	**7.6**	**7.2**
	Sulfate	mg/L	NE	NE	**16**	**17**	**5**	**11**	**11**	**13**	**10**	**4**
	Total Organic Carbon	mg/L	NE	NE	**8.3**	**4.4**	**8.4**	**4.4**	**13**	**3.3**	**2.5**	**1.5**
Metals[4]	Antimony	ug/L	NE	6.4	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
	Arsenic	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Barium	ug/L	NE	3,200	**150**	**42**	**62**	**68**	**91**	**31**	**20**	**46**
	Beryllium	ug/L	NE	32	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Cadmium	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chromium	ug/L	50	NL	**7**	1 U	**3**	**1**	**5**	**2**	**2**	**1**
	Copper	ug/L	NE	640	**1**	**2**	**4**	**6**	**9**	**3**	**3**	**1**
	Iron	ug/L	NE	11,200	**21**	10 U	**85**	**18**	**50**	**26**	**32**	10 U
	Lead	ug/L	15	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Manganese	ug/L	NE	2,240	**1**	**1**	**2**	**3**	**10**	**31**	**2**	1 U
	Mercury	mg/L	0.002	NL	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
	Nickel	ug/L	NE	320	2 U	2 U	**2**	2 U	2 U	2 U	2 U	2 U
	Selenium	ug/L	NE	80	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Silver	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Thallium	ug/L	NE	0.16	**1**	2 U*	**1**	2 U*	1 U*	2 U*	1 U*	1 U*
	Zinc	ug/L	NE	4,800	**8**	**22**	**17**	**29**	**490**	**32**	**4**	**2**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-8B MW-8B_19910806 08/06/91	MW-9A MW-9A_19910410 04/10/91	MW-9A MW-9A_19910806 08/06/91	MW-11A MW-11A_19910411 04/11/91	MW-11A MW-11A_19910808 08/08/91	MW-12A MW-12A_19910410 04/10/91	MW-12A MW-12A_19910806 08/06/91	MW-20 MW-20_19910808 08/08/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.01 U	--	0.01 U	--	**0.07**	--	**0.02**	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	**12**	10 U	10 U	**44**	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**12**	--	**22**	--	**4**	--	**1**	**2**
	Conductivity	umhos/cm	NE	NE	**650**	**430**	**450**	**280**	**410**	**180**	**190**	**140**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	**0.006**		--
	pH	SU	NE	NE	**7.2**	**7.4**	**7.1**	**7.3**	**7**	**7.3**	**7.6**	**7.2**
	Sulfate	mg/L	NE	NE	**16**	**17**	**5**	**11**	**11**	**13**	**10**	**4**
	Total Organic Carbon	mg/L	NE	NE	**8.3**	**4.4**	**8.4**	**4.4**	**13**	**3.3**	**2.5**	**1.5**
SVOCs (continued)	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE		--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE		--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE		--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-8B MW-8B_19910806 08/06/91	MW-9A MW-9A_19910410 04/10/91	MW-9A MW-9A_19910806 08/06/91	MW-11A MW-11A_19910411 04/11/91	MW-11A MW-11A_19910808 08/08/91	MW-12A MW-12A_19910410 04/10/91	MW-12A MW-12A_19910806 08/06/91	MW-20 MW-20_19910808 08/08/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.01 U	--	0.01 U	--	**0.07**	--	**0.02**	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	**12**	10 U	10 U	**44**	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**12**	--	**22**	--	**4**	--	**1**	**2**
	Conductivity	umhos/cm	NE	NE	**650**	**430**	**450**	**280**	**410**	**180**	**190**	**140**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	**0.006**		--
	pH	SU	NE	NE	**7.2**	**7.4**	**7.1**	**7.3**	**7**	**7.3**	**7.6**	**7.2**
	Sulfate	mg/L	NE	NE	**16**	**17**	**5**	**11**	**11**	**13**	**10**	**4**
	Total Organic Carbon	mg/L	NE	NE	**8.3**	**4.4**	**8.4**	**4.4**	**13**	**3.3**	**2.5**	**1.5**
SVOCs (continued)	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	0.1	NL	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**15**	1 U	1 U	1 U	**5**	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	**2**	1 U	1 U	1 U	**1**	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	2-Hexanone	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Acetone	ug/L	NE	7200	**4 J**	5 U	**7**	5 U	5 U	5 U	5 U	5 U
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	**19**	1 U	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Dibromochloromethane	ug/L	NE	0.521	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*	3 U*
	Dibutyl phthalate	ug/L	NE	1,600				--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-8B MW-8B_19910806 08/06/91	MW-9A MW-9A_19910410 04/10/91	MW-9A MW-9A_19910806 08/06/91	MW-11A MW-11A_19910411 04/11/91	MW-11A MW-11A_19910808 08/08/91	MW-12A MW-12A_19910410 04/10/91	MW-12A MW-12A_19910806 08/06/91	MW-20 MW-20_19910808 08/08/91
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.01 U	--	0.01 U	--	**0.07**	--	**0.02**	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	**12**	10 U	10 U	**44**	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**12**	--	**22**	--	**4**	--	**1**	**2**
	Conductivity	umhos/cm	NE	NE	**650**	**430**	**450**	**280**	**410**	**180**	**190**	**140**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--	0.005 U	--	**0.006**		--
	pH	SU	NE	NE	**7.2**	**7.4**	**7.1**	**7.3**	**7**	**7.3**	**7.6**	**7.2**
	Sulfate	mg/L	NE	NE	**16**	**17**	**5**	**11**	**11**	**13**	**10**	**4**
	Total Organic Carbon	mg/L	NE	NE	**8.3**	**4.4**	**8.4**	**4.4**	**13**	**3.3**	**2.5**	**1.5**
VOCs[8]	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	**4**	1 U	**2**	1 U	1 U	1 U	**1**	1 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	**3**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--	--	--	--
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Table C-5

Historical Groundwater Analytical Data 1992[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date									
					BEK BEK_19920625 06/25/92	BEK BEK_19921005 10/05/92	DCW DCW_19920625 06/25/92	FAV FAV_19920625 06/25/92	FOW FOW_19920625 06/25/92	FOW FOW_19921005 10/05/92	GES GES_19920625 06/25/92	MCWA MCWA_19920625 06/25/92	MW-1A MW-1A_19920624 06/24/92	MW-1A MW-1A_19921015 10/15/92
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	0.001 U	**0.08**
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	10 U	**44**
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	**61**	**49**
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	**1,600**	**1,500**
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	**6.7**	**6.9**
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	**46**	**46**
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	**11.7**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	**22**	--
Metals[4]	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	**340**	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	50 U	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	**90**	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	**8**	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**5.6**	**14**	0.03 U	0.03 U	**1.7**	**3.2**	0.03 U		**85**	**56**
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	**1.2**	**1.1**	--	--	0.07 U	0.07 U	--		**18**	**16**
	1,1-Dichloroethene	ug/L	NE	400	--	--	--	--	--	--	--	--	**18**	**11**
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	**2**	**2**
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	**2**	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	3 U	3 U
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	3 U	**5**
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	1 U	**1**
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	1 U	1 U
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	3 U	3 U
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	1 U	**2**
	Methylene Chloride	ug/L	5	NL	5 U	**6.2**	**8.9**	5 U	5 U	**6.2**	5 U	5 U	**420**	**330**
	Tetrachloroethene	ug/L	5	NL	**0.6**	0.03 U	0.03 U	0.03 U	--	--	0.03 U	--	**18**	**16**
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	**4**	**4**
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	**48**	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date					
					MW-3 MW-3_19920624 06/24/92	MW-5A MW-5A_19920623 06/23/92	MW-5A MW-5A_19921014 10/14/92	MW-8B MW-8B_19920624 06/24/92	MW-8B MW-8B_19921014 10/14/92	MW-9A MW-9A_19920624 06/24/92
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**0.05**	**0.03**	0.01 U	**0.1**	0.01 U	**0.07**
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**29**	**14**	**7**	**7**	**7**	**30**
	Conductivity	umhos/cm	NE	NE	**530**	**790**	**800**	**890**	**500**	**490**
	pH	SU	NE	NE	**6.1**	**6.9**	**6.8**	**6.9**	**7**	**7.1**
	Sulfate	mg/L	NE	NE	**17**	**18**	**15**	**14**	**9**	**13**
	Temperature	Deg C	NE	NE	--	**13.3**	**12.2**	**13.3**	**12.8**	**12.8**
	Total Organic Carbon	mg/L	NE	NE	**12**	**9**	**11**	**6**	**3.5**	**7.9**
Metals[4]	Barium	ug/L	NE	3,200	**190**	**250**	**260**	**150**	**140**	**450**
	Iron	ug/L	NE	11,200	50 U	50 U	50 U	50 U	50 U	50 U
	Manganese	ug/L	NE	2,240	**35**	**37**	**4**	**2**	**39**	**3**
	Zinc	ug/L	NE	4,800	**8**	**150**	**9**	**11**	**6**	**6**
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	**90**	**14**	**59**	**34**	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	**14**	**10**	**4**	**2**	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	**3**	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72		1 U	1 U	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	--	--	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	3 U	3 U	3 U	3 U	3 U	3 U
	Acetone	ug/L	NE	7,200	**69**	3 U	3 U	3 U	3 U	3 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	--		1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U
	Chloroform	ug/L	NE	1.41	1 U	--		1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	**240**	**19**	1 U	1 U	1 U	**2**
	Tetrachloroethene	ug/L	5	NL	**7**	**10**	**5**	**3**	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	**2**	**2**	1 U	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	--	**10**	--	1 U

Table C-6

Historical Groundwater Analytical Data 1993[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					BEK BEK_19930623 06/23/93	BEK BEK_19931007 10/07/93	DCW DCW_19930623 06/23/93	FAV FAV_19930623 06/23/93	FOW FOW_19930623 06/23/93	FOW FOW_19931007 10/07/93	GES GES_19930623 06/23/93	MCWA MCWA_19930623 06/23/93	MCWA MCWA_19931007 10/07/93
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					BEK BEK_19930623 06/23/93	BEK BEK_19931007 10/07/93	DCW DCW_19930623 06/23/93	FAV FAV_19930623 06/23/93	FOW FOW_19930623 06/23/93	FOW FOW_19931007 10/07/93	GES GES_19930623 06/23/93	MCWA MCWA_19930623 06/23/93	MCWA MCWA_19931007 10/07/93
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.03 U	**2.6**	0.03 U	0.03 U	**3.4**	**2.5**	0.03 U	--	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.07 U	**0.42**	--	--	**0.11**	**0.22**	--	--	--
	1,1-Dichloroethene	ug/L	NE	400	**0.85**	0.08 U	--	--	--		--	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.03 U	**1.4**	0.03 U	0.03 U	--	--	0.03 U	--	--
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--

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Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date							
					MW-1A MW-1A_19930622 06/22/93	MW-1A MW-1A_19931006 10/06/93	MW-3 MW-3_19930624 06/24/93	MW-3 MW-3_19931006 10/06/93	MW-8B MW-8B_19930622 06/22/93	MW-8B MW-8B_19931005 10/05/93	MW-9A MW-9A_19930621 06/21/93	MW-9A MW-9A_19931005 10/05/93
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.01 U	0.02	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	24	34	24	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	76	130	21	24	30	32	21	26
	Conductivity	umhos/cm	NE	NE	1,400	1,600	360	420	640	840	440	500
	pH	SU	NE	NE	6.7	6.7	6.7	6.6	7.1	6.9	6.9	7
	Sulfate	mg/L	NE	NE	45	55	27	10	17	31	20	7
	Temperature	Deg C	NE	NE	12.8	13.3	11.1	14.4	11.1	17.8	10.6	19.4
	Total Organic Carbon	mg/L	NE	NE	29	13	10	11	6.9	2.5	11	7.2
Metals[4]	Antimony	ug/L	NE	6.4	30 U*	--	6 U	--	6 U	--	6 U	--
	Arsenic	ug/L	5	NL	5 U	--	20	--	5 U	--	5 U	--
	Barium	ug/L	NE	3,200	330	380	200	210	140	160	37	20
	Beryllium	ug/L	NE	32	5 U	--	2	--	1 U	--	1 U	--
	Cadmium	ug/L	5	NL	5 U	--	1 U	--	1 U	--	1 U	--
	Chromium	ug/L	50	NL	15	--	5	--	6	--	2	--
	Copper	ug/L	NE	640	5 U	--	38	--	2	--	3	--
	Iron	ug/L	NE	11,200	50 U	50 U	15	50 U	10 U	50 U	12	50 U
	Lead	ug/L	15	NL	25 U*	--	5 U	--	5 U	--	5 U	--
	Manganese	ug/L	NE	2,240	240	200	5	9	1 U	5	1 U	4
	Mercury	mg/L	0.002	NL	0.0002 U	--	0.0002 U	--	0.0002 U	--	0.0002 U	--
	Nickel	ug/L	NE	320	10 U	--	16	--	2 U	--	2 U	--
	Selenium	ug/L	NE	80	5 U	--	5 U	--	5 U	--	5 U	--
	Silver	ug/L	NE	80	5 U	--	1 U	--	1 U	--	1 U	--
	Thallium	ug/L	NE	0.16	2 U*	--	2	--	2 U*	--	2 U*	--
	Zinc	ug/L	NE	4,800	10	35	4	6	3	13	3	6
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	6	--	2	--	1	--	3	--
	Dibutyl phthalate	ug/L	NE	1,600	1	--	1	--	1	--	1	--
	Total Phenols	mg/L	NE	NE	0.005 U	--	0.005 U	--	0.005 U	--	0.005 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date							
					MW-1A MW-1A_19930622 06/22/93	MW-1A MW-1A_19931006 10/06/93	MW-3 MW-3_19930624 06/24/93	MW-3 MW-3_19931006 10/06/93	MW-8B MW-8B_19930622 06/22/93	MW-8B MW-8B_19931005 10/05/93	MW-9A MW-9A_19930621 06/21/93	MW-9A MW-9A_19931005 10/05/93
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**44**	**14**	1 U	1 U	**5**	**5**	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	**11**	**5**	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	**8**	**2**	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	**3**	**1**	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	**7**	3 U	3 U	3 U	3 U	3 U	**6**	3 U
	Acetone	ug/L	NE	7,200	**7**	**11**	3 U	3 U	**12**	3 U	**6**	3 U
	Benzene	ug/L	5	NL	**1**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	**5**	1 U*	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	Chloroform	ug/L	NE	1.41	**1**	**1**	1 U	1 U	1 U	1 U	1 U	1 U
	Dibutyl phthalate	ug/L	NE	1,600	**1**	--	**1**	--	**1**	--	**1**	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	1000 U	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	**58**	**11**	1 U	**3**	**2**	**1**	**3**	1 U
	Tetrachloroethene	ug/L	5	NL	**14**	**7**	**1**	1 U	**1**	**2**	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	**4**	**2**	1 U	1 U	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**15**	**4**	--	--	**1**	**2**	--	--

Table C-7

Historical Groundwater Analytical Data 1994[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK BEK_19940126 01/26/94	BEK BEK_19940629 06/29/94	BEK BEK_19941214 12/14/94	DCW DCW_19940628 06/28/94	FAV FAV_19940628 06/28/94	FOW FOW_19940126 01/26/94	FOW FOW_19940628 06/28/94	FOW FOW_19941215 12/15/94	GES GES_19940628 06/28/94	MCWA MCWA_19940126 01/26/94
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.03 U	**0.65**	**1.3**	0.08 U	0.08 U	**4**	**3.4**	**2.8**	0.08 U	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.07 U	0.04 U	**0.16**	--	--	**0.7**	**0.7**	**0.42**	--	--
	1,1-Dichloroethene	ug/L	NE	400	**0.57**	0.2 U	0.5 U	--	--	--	**0.85**	0.08 U	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	**0.2**	0.07 U	0.07 U	--	--	**0.2**	0.07 U	0.07 U	--	**0.18**
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	--	--	--	--	--	**0.32**	--	--
	Methylene Chloride	ug/L	5	NL	5 U	4.2 U	4.2 U	4.2 U	4.2 U	5 U	4.2 U	4.2 U	4.2 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.03 U	**0.42**	**0.26**	0.1 U	0.1 U	--	--	--	0.1 U	--
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	5 U	0.09 U	**0.15**	0.09 U	0.09 U	5 U	**0.65**	**0.38**	0.09 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA MCWA_19940720 07/20/94	MCWA MCWA_19941215 12/15/94	MW-1A MW-1A_19940126 01/26/94	MW-1A MW-1A_19940705 07/05/94	MW-3 MW-3_19940125 01/25/94	MW-3 MW-3_19940629 06/29/94	MW-5A MW-5A_19940705 07/05/94	MW-5A MW-5A_19941215 12/15/94	MW-8B MW-8B_19940124 01/24/94
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	0.02	0.01 U	0.01 U	0.03	0.01 U	0.01 U	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	12	24	10 U	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	--	--	83	55	27	32	10	5	16
	Conductivity	umhos/cm	NE	NE	--	--	1,500	1,500	470	520	730	730	920
	pH	SU	NE	NE	--	--	6.8	6.9	6.9	6.9	6.9	7	7
	Sulfate	mg/L	NE	NE	--	--	64	60	10	15	24	16	32
	Temperature	Deg C	NE	NE	--	--	--	--	13.9	12.2	11.7	11.7	11.1
	Total Organic Carbon	mg/L	NE	NE	--	--	7	6.2		4.7	2.2	19	3.5
Metals[4]	Barium	ug/L	NE	3,200	--	--	330	360	43	54	190	190	240
	Iron	ug/L	NE	11,200	--	--	50 U	--	1,100	22	10 U	10 U	13
	Manganese	ug/L	NE	2,240	--	--	140	--	19	1	1 U	1 U	1 U
	Zinc	ug/L	NE	4,800	--	--	14	--	4	3	4	6	2
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	--	--	39	26	1 U	1 U	1 U	2	17
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	--	--	14	10	1 U	1 U	1 U	1 U	2
	1,1-Dichloroethene	ug/L	NE	400	--	--	10	7	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	1 U	2	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	3	3	--	--	1 U	1 U	1
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	2	1 U	1 U	1 U	--	--	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Acetone	ug/L	NE	7,200	--	--	4 U	4 U	4 U	4 U	4 U	4 U	4 U
	Benzene	ug/L	5	NL	--	--	1	1	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	--	4	1 U	1 U	1 U	--	--	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	1 U*	1 U*	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Chloroform	ug/L	NE	NE	--	--	2	1	1 U	1 U	--	--	1 U
	Chloromethane	ug/L	NE	NE	0.07 U	0.07 U	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	--	--	1 U	1 U	1 U	1 U	--
	Methylene Chloride	ug/L	5	NL	4.2 U	4.2 U	37	16	2 U	2 U	2 U	2 U	2 U
	Tetrachloroethene	ug/L	5	NL	--	--	17	15	1 U	1 U	4	4	3
	Toluene	ug/L	1,000	NL	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	--	5	4	1 U	1 U	1 U	1 U	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	0.44	24	10	1 U	1 U	1 U	1 U	6

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date			
					MW-8B MW-8B_19940629 06/29/94	MW-8B MW-8B_19941215 12/15/94	MW-9A MW-9A_19940124 01/24/94	MW-9A MW-9A_19940630 06/30/94
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.01 U	0.01 U	**0.02**	0.01 U
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	10 U	10 U	10 U
	Chloride	mg/L	NE	NE	**9.1**	**5**	**29**	**34**
	Conductivity	umhos/cm	NE	NE	**730**	**620**	**530**	**480**
	pH	SU	NE	NE	**7**	**7.2**	**7.1**	**7.3**
	Sulfate	mg/L	NE	NE	**22**	**16**	**16**	**11**
	Temperature	Deg C	NE	NE	**12.8**	**10**	**12.2**	**8.3**
	Total Organic Carbon	mg/L	NE	NE	1 U	1 U	**3.7**	**5.2**
Metals[4]	Barium	ug/L	NE	3,200	**180**	**570**	**51**	**61**
	Iron	ug/L	NE	11,200	**11**	**18**	**2,400**	**11**
	Manganese	ug/L	NE	2,240	1 U	**32**	**49**	1 U
	Zinc	ug/L	NE	4,800	**4**	**15**	**7**	**9.3**
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	**21**	**43**	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	**2**	**1**	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	1 U	1 U	1 U	1 U
	Acetone	ug/L	NE	7,200	4 U	4 U	4 U	4 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--
	Chloroethane	ug/L	NE	NE	2 U	2 U	2 U	2 U
	Chloroform	ug/L	NE	NE	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	**1**	--	--
	Methylene Chloride	ug/L	5	NL	2 U	2 U	2 U	2 U
	Tetrachloroethene	ug/L	5	NL	**3**	**2**	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	**3**	1 U	1 U

Table C-8

Historical Groundwater Analytical Data 1995[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					301 301_19950329 03/29/95	301 301_19950803 08/03/95	BEK BEK_19950329 03/29/95	BEK BEK_19950803 08/03/95	BEK BEK_19951006 10/06/95	BEK BEK_19951214 12/14/95	FAV FAV_19950329 03/29/95	FOW FOW_19950803 08/03/95	FOW FOW_19951006 10/06/95
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
Pesticides[5]	4,4'-DDD	ug/L	NE	0.365	--	--	--	--	--	--	--	--	--
	4,4'-DDE	ug/L	NE	0.257	--	--	--	--	--	--	--	--	--
	4,4'-DDT	ug/L	NE	0.257	--	--	--	--	--	--	--	--	--
	Aldrin	ug/L	NE	0.00257	--	--	--	--	--	--	--	--	--
	Alpha-BHC	ug/L	NE	0.0139	--	--	--	--	--	--	--	--	--
	Beta-BHC	ug/L	NE	0.0486	--	--	--	--	--	--	--	--	--
	Chlordane (Total)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Delta-BHC	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Dieldrin	ug/L	NE	0.00547	--	--	--	--	--	--	--	--	--
	Endosulfan I	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Endosulfan II	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Endosulfan Sulfate	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Endrin	ug/L	NE	4.8	--	--	--	--	--	--	--	--	--
	Heptachlor	ug/L	NE	0.0194	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					301 301_19950329 03/29/95	301 301_19950803 08/03/95	BEK BEK_19950329 03/29/95	BEK BEK_19950803 08/03/95	BEK BEK_19951006 10/06/95	BEK BEK_19951214 12/14/95	FAV FAV_19950329 03/29/95	FOW FOW_19950803 08/03/95	FOW FOW_19951006 10/06/95
Pesticides[5]	Heptachlor Epoxide	ug/L	NE	0.00481	--	--	--	--	--	--	--	--	--
	Lindane (Gamma-BHC)	ug/L	0.2	NL	--	--	--	--	--	--	--	--	--
	Methoxychlor	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Toxaphene	ug/L	NE	0.0795	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					301 301_19950329 03/29/95	301 301_19950803 08/03/95	BEK BEK_19950329 03/29/95	BEK BEK_19950803 08/03/95	BEK BEK_19951006 10/06/95	BEK BEK_19951214 12/14/95	FAV FAV_19950329 03/29/95	FOW FOW_19950803 08/03/95	FOW FOW_19951006 10/06/95
SVOCs (continued)	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--
	Carbazole	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.35 U	0.2 U	0.35 U	0.2 U	--	--	0.35 U	0.2 U	--
	1,1,1-Trichloroethane	ug/L	200	NL	**3.8**	**0.28 J**	**3.8**	**0.28 J**	0.5 U	1 U	0.4 U	**4.1**	**4.5**
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.95 U*	0.1 U	0.95 U*	0.1 U	--	--	0.95 U*	0.1 U	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.25 U	0.2 U	0.25 U	0.2 U	--	--	0.25 U	0.2 U	--
	1,1-Dichloroethane	ug/L	NE	7.68	**0.46**	**0.11 J**	**0.37**	**0.11 J**	0.5 U	1 U	0.2 U	**0.65**	**0.5**
	1,1-Dichloroethene	ug/L	NE	400	0.4 U	1 U	0.4 U	1 U	1 U	0.5 U	0.4 U	1 U	0.5 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1.1 U*	0.2 U*	1.1 U*	0.2 U*	--	--	1.1 U*	0.2 U*	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.6 U	0.2 U	0.6 U	0.2 U	--	--	0.6 U	--	--
	1,2-Dichloroethane	ug/L	5	NL	0.45 U	0.2 U	0.45 U	0.2 U	--	--	0.45 U	0.2 U	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	0.25 U	0.2 U	0.25 U	0.2 U	--	--	0.25 U	0.2 U	--
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.4 U	0.3 U	0.4 U	0.3 U	--	--	0.4 U	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.3 U	0.3 U	0.3 U	0.3 U	--	--	0.3 U	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	2-Chloroethyl vinyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	2-Hexanone	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					301 301_19950329 03/29/95	301 301_19950803 08/03/95	BEK BEK_19950329 03/29/95	BEK BEK_19950803 08/03/95	BEK BEK_19951006 10/06/95	BEK BEK_19951214 12/14/95	FAV FAV_19950329 03/29/95	FOW FOW_19950803 08/03/95	FOW FOW_19951006 10/06/95
VOCs (continued)	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--
	Acrolein	ug/L	NE	4	--	--	--	--	--	--	--	--	--
	Acrylonitrile	ug/L	NE	0.0810	--	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1.8 U	4 U	1.8 U	4 U	--	--	1.8 U	4 U	--
	Bromodichloromethane	ug/L	NE	0.706	0.15 U	0.4 U	0.15 U	0.4 U	--	--	0.15 U	0.4 U	--
	Bromoform (Tribromomethane)	ug/L	NE	5.54	0.4 U	0.2 U	0.4 U	0.2 U	--	--	0.4 U	0.2 U	--
	Bromomethane	ug/L	NE	11.2	0.3 U	2 U	0.3 U	2 U	--	--	0.3 U	2 U	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	0.3 U	0.4 U	0.3 U	0.4 U	--	--	0.3 U	0.4 U	--
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	--
	Chloroethane	ug/L	NE	NE	0.35 U	0.5 U	0.35 U	0.5 U	--	--	0.35 U	0.5 U	--
	Chloroform	ug/L	NE	1.41	0.95 U	**0.14 J**	0.95 U	**0.13 J**	--	--	0.95 U	0.4 U	--
	Chloromethane	ug/L	NE	NE	**0.1 J**	0.3 U	**0.07 J**	0.3 U	1 U	1 U	0.35 U	**0.07 J**	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.3 U	**0.08 J**	0.3 U	**0.08 J**	--	--	0.3 U	0.2 U	--
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.15 U	0.3 U	0.15 U	0.3 U	--	--	0.15 U	0.3 U	--
	Dibromochloromethane	ug/L	NE	0.521	0.4 U	0.2 U	0.4 U	0.2 U	--	--	0.4 U	0.2 U	--
	Dibromomethane	ug/L	NE	80	0.15 U	0.3 U	0.15 U	0.3 U	--	--	0.15 U	0.3 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	**0.3 J**	0.3 U	**0.42 J**	0.3 U	--	--	0.45 U	0.3 U	--
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	4.2 U	3 U	4.2 U	3 U	5 U	50 U*	4.2 U	3 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	**1.1**	**1**	**0.92**	**1.1**	**1.5**	1 U	0.5 U	0.3 U	--
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.35 U	0.4 U	0.35 U	0.4 U	--	--	0.35 U	0.4 U	--
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.15 U	0.2 U	0.15 U	0.2 U	--	--	0.15 U	0.2 U	--
	Trichloroethene	ug/L	5	NL	**0.21 J**	**0.26**	**0.2 J**	**0.19 J**	--	--	0.6 U	0.2 U	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.45 U	0.5 U	**0.8**	0.5 U	1 U	1 U	0.45 U	0.5 U	1 U
	Vinyl Acetate	ug/L	NE	8,000	--	--	--	--	--	--	--	--	--
	Vinyl Chloride	ug/L	0.2	NL	0.4 U*	0.4 U*	0.4 U*	0.4 U*	--	--	0.4 U*	0.4 U*	--
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--

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General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	10 U	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	**1,400**	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	0.005 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	**0.21**	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	**7**	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	**30**	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	**11**	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	30 U*	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	100 U*	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	**230**	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	5 U	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	5 U*	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	**18**	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	**22**	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	10 U	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	5 U	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	**310**	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	0.0002 U	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	**19**	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	100 U*	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	5 U	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	100 U*	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	**23**	--
Pesticides[5]	4,4'-DDD	ug/L	NE	0.365	--	--	--	--	--	--	--	0.01 U	--
	4,4'-DDE	ug/L	NE	0.257	--	--	--	--	--	--	--	0.01 U	--
	4,4'-DDT	ug/L	NE	0.257	--	--	--	--	--	--	--	0.01 U	--
	Aldrin	ug/L	NE	0.00257	--	--	--	--	--	--	--	0.01 U*	--
	Alpha-BHC	ug/L	NE	0.0139	--	--	--	--	--	--	--	0.01 U	--
	Beta-BHC	ug/L	NE	0.0486	--	--	--	--	--	--	--	0.01 U	--
	Chlordane (Total)	ug/L	NE	NE	--	--	--	--	--	--	--	0.05 U	--
	Delta-BHC	ug/L	NE	NE	--	--	--	--	--	--	--	0.01 U	--
	Dieldrin	ug/L	NE	0.00547	--	--	--	--	--	--	--	0.01 U*	--
	Endosulfan I	ug/L	NE	NE	--	--	--	--	--	--	--	0.01 U	--
	Endosulfan II	ug/L	NE	NE	--	--	--	--	--	--	--	0.01 U	--
	Endosulfan Sulfate	ug/L	NE	NE	--	--	--	--	--	--	--	0.01 U	--
	Endrin	ug/L	NE	4.8	--	--	--	--	--	--	--	0.04 U	--
	Heptachlor	ug/L	NE	0.0194	--	--	--	--	--	--	--	0.01 U	--

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Pesticides[5]	Heptachlor Epoxide	ug/L	NE	0.00481	--	--	--	--	--	--	--	0.01 U*	--
	Lindane (Gamma-BHC)	ug/L	0.2	NL	--	--	--	--	--	--	--	0.01 U	--
	Methoxychlor	ug/L	NE	80	--	--	--	--	--	--	--	0.1 U	--
	Toxaphene	ug/L	NE	0.0795	--	--	--	--	--	--	--	2 U*	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	0.5 U	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	0.5 U	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	0.5 U	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	0.5 U	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	0.5 U	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	0.5 U	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	0.5 U	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	0.5 U	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	1 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	1 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	1 U	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	2 U	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	2 U	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	2 U	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	1 U	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	10 U	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	2 U*	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	2 U*	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	1 U	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	1 U	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	1 U	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	2 U	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	2 U	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	10 U*	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	5 U	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	10 U	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	2 U	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	2 U	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	1 U*	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	--	--	--	--	--	1 U	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	2 U	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	10 U	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	1 U	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	5 U	--
	Anthracene	ug/L	NE	4,800	--	--	--	--	--	--	--	1 U	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	1 U*	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	1 U*	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	1 U*	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	1 U	--
	Benzoic Acid	ug/L	NE	64,000	--	--	--	--	--	--	--	25 U	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	1 U	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--

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SVOCs (continued)	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	1 U*	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	3	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	1 U	--
	Carbazole	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	1 U	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	1 U*	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	1 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	1 U	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	1 U	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	1 U	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	1 U	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	1 U	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	2 U*	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	1 U*	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	2 U	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	2 U*	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	1 U*	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	1 U	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	1 U	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	1 U	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	1 U*	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	1 U	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	1 U	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	10 U*	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	1 U	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	1 U	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	--	--	--	--	--	--	0.755 U	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	0.005 U	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	--	0.35 U		0.35 U	0.2 U	--	--	--	--
	1,1,1-Trichloroethane	ug/L	200	NL	**2.9**	**0.15 J**	1 U	0.4 U	0.3 U	--	--	**30**	**47**
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	--	0.95 U*	--	0.95 U*	0.1 U	--	--	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	0.25 U	--	0.25 U	0.2 U	--	--	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	0.2 U	--	0.2 U	0.2 U	--	--	**5**	**14**
	1,1-Dichloroethene	ug/L	NE	400	1 U	0.4 U	--	0.4 U	1 U	--	--	**10**	**18**
	1,2,3-Trichloropropane	ug/L	NE	0.00146	--	1.1 U*	--	1.1 U*	0.2 U*	--	--	--	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	--	--	--	--	--	1 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	0.6 U	--	0.6 U	0.2 U	--	--	1 U	--
	1,2-Dichloroethane	ug/L	5	NL	--	0.45 U	--	0.45 U	0.2 U	--	--	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	0.25 U	--	0.25 U	0.2 U	--	--	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	--	--	--	--	--	2 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	0.4 U	--	0.4 U	0.3 U	--	--	1 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	0.3 U	--	0.3 U	0.3 U	--	--	1 U	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	5 U	1 U
	2-Chloroethyl vinyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	1 U	1 U
	2-Hexanone	ug/L	NE	NE	--	--	--	--	--	--	--	3 U	2 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	3 U	2 U

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VOCs (continued)	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	5 U	2 U
	Acrolein	ug/L	NE	4	--	--	--	--	--	--	--	3 U	3 U
	Acrylonitrile	ug/L	NE	0.0810	--	--	--	--	--	--	--	2 U*	2 U*
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	5 U	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	**1**	1 U
	Benzidine	ug/L	NE	0.00038	--	--	--	--	--	--	--	25 U*	--
	Bromobenzene	ug/L	NE	NE	--	1.8 U	--	1.8 U	-- U	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	--	0.15 U	--	0.15 U	0.4 U	--	--	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	--	0.4 U	--	0.4 U	0.2 U	--	--	1 U	1 U
	Bromomethane	ug/L	NE	11.2	--	0.3 U	--	0.3 U	2 U	--	--	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	0.3 U	--	0.3 U	0.4 U	--	--	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	--	0.5 U	--	0.5 U	0.5 U	--	--	1 U	1 U
	Chloroethane	ug/L	NE	NE	--	0.35 U	--	0.35 U	0.5 U	--	--	2 U	1 U
	Chloroform	ug/L	NE	1.41	--	0.95 U	--	0.95 U	0.4 U	--	--	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	0.35 U	--	0.35 U	0.3 U	1 U	1 U	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	--	0.3 U	--	0.3 U	0.2 U	--	--	**1**	**2**
	cis-1,3-Dichloropropene	ug/L	NE	NE	--	0.15 U	--	0.15 U	0.3 U	--	--	1 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	--	0.4 U	--	0.4 U	0.2 U	--	--	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	--	0.15 U	--	0.15 U	0.3 U	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	1 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	0.45 U	--	0.45 U	0.3 U	--	--	3 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	1 U	1 U
	Methylene Chloride	ug/L	5	NL	50 U*	4.2 U	50 U*	4.2 U	3 U	5 U	50 U*	**8**	**19**
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	--	0.5 U	1 U	0.5 U	0.3 U	--	--	**10**	**16**
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	--	0.35 U	--	0.35 U	0.4 U	--	--	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	--	0.15 U	--	0.15 U	0.2 U	--	--	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	0.6 U	--	0.6 U	0.2 U	--	--	**3**	**4**
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	0.45 U	1 U	**0.63**	**0.12 J**	1 U	1 U	1 U	**34**
	Vinyl Acetate	ug/L	NE	8,000	--	--	--	--	--	--	--	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	--	0.4 U*	--	0.4 U*	0.4 U*	--	--	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date								
					MW-1A MW-1A_19951003 10/03/95	MW-1A MW-1A_19951212 12/12/95	MW-3 MW-3_19950328 03/28/95	MW-3 MW-3_19950725 07/25/95	MW-3 MW-3_19951003 10/03/95	MW-3 MW-3_19951212 12/12/95	MW-5 MW-5_19950329 03/29/95	MW-5A MW-5A_19950725 07/25/95	MW-5A MW-5A_19951213 12/13/95
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.2 U	0.05 U	--	--	0.2 U	0.05 U	--	--	0.05 U
	Chemical Oxygen Demand	mg/L	NE	NE	**27.8**	**18.6**	10 U	--	**14.5**	**12.2**	10 U	--	10 U
	Chloride	mg/L	NE	NE	**137**	**115**	--	--	**24.5**	**24**	--	--	**6**
	Conductivity	umhos/cm	NE	NE	**1,821**	**1,648**	**430**	--	**409**	**420**	**640**	--	**804**
	Cyanide	ug/L	NE	0.0096	--	--	0.005 U	--	--	--	0.005 U	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	0.005 U	--	--	--	0.005 U	--	--
	pH	SU	NE	NE	**6.6**	**6.9**	**6.8**	--	**6.86**	**7.2**	**7.2**	--	**6.9**
	Sulfate	mg/L	NE	NE	**57.7**	**66.6**	**39**	--	**21.4**	**16.5**	**38**	--	**31.4**
	Temperature	Deg C	NE	NE	**12.8**	**11.1**	--	--	**11.7**	**10**	--	--	**12.8**
	Total Organic Carbon	mg/L	NE	NE	1 U	**190**	**3.5**	--	**6.9**	**48**	**3.2**	--	**93**
Metals[4]	Antimony	ug/L	NE	6.4	--	--	6 U	--	--	--	6 U	--	--
	Arsenic	ug/L	5	NL	--	--	20 U*	--	--	--	20 U*	--	--
	Barium	ug/L	NE	3,200	**350**	**400**	**43**	--	**40**	**49**	**130**	--	**210**
	Beryllium	ug/L	NE	32	--	--	1 U	--	--	--	1 U	--	--
	Cadmium	ug/L	5	NL	--	--	1 U	--	--	--	1 U	--	--
	Chromium	ug/L	50	NL	--	--	**3**	--	--	--	**5**	--	--
	Copper	ug/L	NE	640	--	--	**5**	--	--	--	**3**	--	--
	Iron	ug/L	NE	11,200	--	**57**	**33**	--	--	**13**	10 U	--	**27**
	Lead	ug/L	15	NL	5 U		5 U	--	5 U	--	5 U	--	--
	Manganese	ug/L	NE	2,240	**57**	**84**	**2**	--	5 U	5 U	**1**	--	**14**
	Mercury	mg/L	0.002	NL	--	--	0.0002 U	--	--	--	0.0002 U	--	--
	Nickel	ug/L	NE	320	--	--	2 U	--	--	--	2 U	--	--
	Selenium	ug/L	NE	80	--	--	20 U	--	--	--	20 U	--	--
	Silver	ug/L	NE	80	--	--	1 U	--	--	--	1 U	--	--
	Thallium	ug/L	NE	0.16	--	--	20 U*	--	--	--	20 U*	--	--
	Zinc	ug/L	NE	4,800	**14**	**69**	**8**	--	5 U	**23**	**5**	--	**36**
Pesticides[5]	4,4'-DDD	ug/L	NE	0.365	--	--	0.01 U	--	--	--	0.01 U	--	--
	4,4'-DDE	ug/L	NE	0.257	--	--	0.01 U	--	--	--	0.01 U	--	--
	4,4'-DDT	ug/L	NE	0.257	--	--	0.01 U	--	--	--	0.01 U	--	--
	Aldrin	ug/L	NE	0.00257	--	--	0.01 U*	--	--	--	0.01 U*	--	--
	Alpha-BHC	ug/L	NE	0.0139	--	--	0.01 U	--	--	--	0.01 U	--	--
	Beta-BHC	ug/L	NE	0.0486	--	--	0.01 U	--	--	--	0.01 U	--	--
	Chlordane (Total)	ug/L	NE	NE	--	--	0.05 U	--	--	--	0.05 U	--	--
	Delta-BHC	ug/L	NE	NE	--	--	0.01 U	--	--	--	0.01 U	--	--
	Dieldrin	ug/L	NE	0.00547	--	--	0.01 U*	--	--	--	0.01 U*	--	--
	Endosulfan I	ug/L	NE	NE	--	--	0.01 U	--	--	--	0.01 U	--	--
	Endosulfan II	ug/L	NE	NE	--	--	0.01 U	--	--	--	0.01 U	--	--
	Endosulfan Sulfate	ug/L	NE	NE	--	--	0.01 U	--	--	--	0.01 U	--	--
	Endrin	ug/L	NE	4.8	--	--	0.04 U	--	--	--	0.04 U	--	--
	Heptachlor	ug/L	NE	0.0194	--	--	0.01 U	--	--	--	0.01 U	--	--

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Pesticides[5]	Heptachlor Epoxide	ug/L	NE	0.00481	--	--	0.01 U*	--	--	--	0.01 U*	--	--
	Lindane (Gamma-BHC)	ug/L	0.2	NL	--	--	0.01 U	--	--	--	0.01 U	--	--
	Methoxychlor	ug/L	NE	80	--	--	0.1 U	--	--	--	0.1 U	--	--
	Toxaphene	ug/L	NE	0.0795	--	--	2 U*	--	--	--	2 U*	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	0.5 U	--	--	--	0.5 U	--	--
	PCB-aroclor 1221	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
	PCB-aroclor 1232	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
	PCB-aroclor 1242	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
	PCB-aroclor 1248	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
	PCB-aroclor 1254	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
	PCB-aroclor 1260	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
	Total PCBs	ug/L			--	--	0.5 U	--	--	--	0.5 U	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	1 U	--	--	--	1 U	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	1 U	--	--	--	1 U	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	1 U	--	--	--	1 U	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	2 U	--	--	--	2 U	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	2 U	--	--	--	2 U	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	2 U	--	--	--	2 U	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	1 U	--	--	--	1 U	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	10 U	--	--	--	10 U	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	2 U*	--	--	--	2 U*	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	2 U*	--	--	--	2 U*	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	1 U	--	--	--	1 U	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	1 U	--	--	--	1 U	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	1 U	--	--	--	1 U	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	2 U	--	--	--	2 U	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	2 U	--	--	--	2 U	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	10 U*	--	--	--	10 U*	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	5 U	--	--	--	5 U	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	10 U	--	--	--	10 U	--	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	2 U	--	--	--	2 U	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	2 U	--	--	--	2 U	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	1 U*	--	--	--	1 U*	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	--	1 U	--	--	--	1 U	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	2 U	--	--	--	2 U	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	10 U	--	--	--	10 U	--	--
	Acenaphthene	ug/L	NE	960	--	--	1 U	--	--	--	1 U	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	Aniline	ug/L	NE	7.68	--	--	5 U	--	--	--	5 U	--	--
	Anthracene	ug/L	NE	4,800	--	--	1 U	--	--	--	1 U	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	1 U*	--	--	--	1 U*	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	1 U*	--	--	--	1 U*	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	1 U*	--	--	--	1 U*	--	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	1 U	--	--	--	1 U	--	--
	Benzoic Acid	ug/L	NE	64,000	--	--	25 U	--	--	--	25 U	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	1 U	--	--	--	1 U	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--

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SVOCs (continued)	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	1 U*	--	--	--	1 U*	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	**2**	--	--	--	**1**	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	1 U	--	--	--	1 U	--	--
	Carbazole	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	Chrysene	ug/L	NE	12.0	--	--	1 U	--	--	--	1 U	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	1 U*	--	--	--	1 U*	--	--
	Dibenzofuran	ug/L	NE	16	--	--	1 U	--	--	--	1 U	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	1 U	--	--	--	1 U	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	1 U	--	--	--	1 U	--	--
	Dimethyl phthalate	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	1 U	--	--	--	1 U	--	--
	Fluoranthene	ug/L	NE	640	--	--	1 U	--	--	--	1 U	--	--
	Fluorene	ug/L	NE	640	--	--	1 U	--	--	--	1 U	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	2 U*	--	--	--	2 U*	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	1 U*	--	--	--	1 U*	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	2 U	--	--	--	2 U	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	2 U*	--	--	--	2 U*	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	1 U*	--	--	--	1 U*	--	--
	Isophorone	ug/L	NE	46.1	--	--	1 U	--	--	--	1 U	--	--
	Naphthalene	ug/L	160	NL	--	--	1 U	--	--	--	1 U	--	--
	Nitrobenzene	ug/L	NE	16	--	--	1 U	--	--	--	1 U	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	1 U*	--	--	--	1 U*	--	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	1 U	--	--	--	1 U	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	1 U	--	--	--	1 U	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	10 U*	--	--	--	10 U*	--	--
	Phenanthrene	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	Phenol	ug/L	NE	2,400	--	--	1 U	--	--	--	1 U	--	--
	Pyrene	ug/L	NE	480	--	--	1 U	--	--	--	1 U	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	--	0.755 U	--	--	--	0.755 U	--	--
	Total Phenols	mg/L	NE	NE	--	--	0.005 U	--	--	--	0.005 U	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	--	--	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	ug/L	200	NL	**34**	**28**	1 U	1 U	5 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	--	--	1 U*	1 U*	--	--	1 U*	1 U*	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	5 U*	1 U*	1 U*	1 U*	5 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	**12**	**11**	1 U	1 U	5 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	**11**	**7.5**	1 U	1 U	5 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	--	--	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	--	1 U	--	--	--	1 U	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	1 U	--	--	--	1 U	--	--
	1,2-Dichloroethane	ug/L	5	NL	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	5 U	**2.1**	--	--	--	--	--	--	**1.2**
	1,2-Dichloropropane	ug/L	NE	1.22	5 U*	1 U	1 U	1 U	5 U*	1 U	1 U	1 U	--
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	--	2 U	--	--	--	2 U	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	1 U	--	--	--	1 U	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	1 U	--	--	--	1 U	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	20 U	20 U	5 U	1 U	20 U	20 U	5 U	1 U	20 U
	2-Chloroethyl vinyl ether	ug/L	NE	NE	--	--	1 U	1 U	--	--	1 U	1 U	--
	2-Hexanone	ug/L	NE	NE	--	--	3 U	2 U	--	--	3 U	2 U	--
	4-Methyl-2-Pentanone (Methyl isobutyl ketone	ug/L	NE	640	--	--	3 U	2 U	--	--	3 U	2 U	--

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VOCs (continued)	Acetone	ug/L	NE	7,200	20 U	20 U	5 U	2 U	20 U	20 U	5 U	2 U	20 U
	Acrolein	ug/L	NE	4	--	--	3 U	3 U	--	--	3 U	3 U	--
	Acrylonitrile	ug/L	NE	0.0810	--	--	2 U*	2 U*	--	--	2 U*	2 U*	--
	Aniline	ug/L	NE	7.68	--	--	5 U	--	--	--	5 U	--	--
	Benzene	ug/L	5	NL	5 U	**1.1**	1 U	1 U	5 U*	1 U	1 U	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	--	25 U*	--	--	--	25 U*	--	--
	Bromobenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	--	--	1 U*	1 U*	--	--	1 U*	1 U*	--
	Bromoform (Tribromomethane)	ug/L	NE	5.54	--	--	1 U	1 U	--	--	1 U	1 U	--
	Bromomethane	ug/L	NE	11.2	--	--	1 U	1 U	--	--	1 U	1 U	--
	Carbon Disulfide	ug/L	NE	800	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	--
	Carbon Tetrachloride	ug/L	NE	0.625	5 U*	1 U*	1 U*	1 U*	--	--	1 U*	1 U*	--
	Chlorobenzene	ug/L	NE	160	--	--	1 U	1 U	--	--	1 U	1 U	--
	Chloroethane	ug/L	NE	NE	5 U	1 U	2 U	1 U	5 U	1 U	2 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	5 U*	**1.2**	1 U	1 U	5 U*	1 U	1 U	1 U	--
	Chloromethane	ug/L	NE	NE	--	--	1 U	1 U	--	--	1 U	1 U	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	1 U	1 U	--	--	1 U	1 U	--
	cis-1,3-Dichloropropene	ug/L	NE	NE	--	--	1 U	1 U	--	--	1 U	1 U	--
	Dibromochloromethane	ug/L	NE	0.521	--	--	1 U*	1 U*	--	--	1 U*	1 U*	--
	Dibromomethane	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	1 U	--	--	--	1 U	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	**1.4**	3 U	1 U	5 U	1 U	3 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	1 U	1 U	--	--	1 U	1 U	--
	Methylene Chloride	ug/L	5	NL	50 U*	50 U*	2 U	1 U	50 U*	50 U*	2 U	1 U	50 U*
	Styrene	ug/L	NE	1,600	--	--	1 U	1 U	--	--	1 U	1 U	--
	Tetrachloroethene	ug/L	5	NL	**12**	**9.9**	**1**	1 U	5 U	1 U	**3**	**5**	**4.5**
	Toluene	ug/L	1,000	NL	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	--	--	1 U	1 U	--	--	1 U	1 U	--
	Trans-1,3-Dichloropropene	ug/L	NE	NE	--	--	1 U	1 U	--	--	1 U	1 U	--
	Trichloroethene	ug/L	5	NL	**3.5**	**3.3**	1 U	1 U	5 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**19**	**15**	1 U	1 U	5 U	2 U	1 U	1 U	2 U
	Vinyl Acetate	ug/L	NE	8,000	--	--	1 U	1 U	--	--	1 U	1 U	--
	Vinyl Chloride	ug/L	0.2	NL	--	--	1 U*	1 U*	--	--	1 U*	1 U*	--
	Xylene, m-,p-	ug/L	1,000	NL	--	--	1 U	1 U	--	--	1 U	1 U	--
	Xylene, o-	ug/L	1,000	NL	--	--	1 U	1 U	--	--	1 U	1 U	--

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General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	0.2 U	0.05 U	--	--	0.2 U	0.005 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	10 U	--	10 U	10 U	**12**	--	**12.4**	10 U	10 U
	Chloride	mg/L	NE	NE	--	--	**20.5**	**1**	--	--	**24**	**24**	--
	Conductivity	umhos/cm	NE	NE	**600**	--	**819**	**796**	**390**	--	**475**	**497**	**160**
	Cyanide	ug/L	NE	0.0096	0.005 U	--	--	--	0.005 U	--	--	--	0.005 U
	Nitrite-nitrogen	mg/L as N	NE	NE	0.005 U	--	--	--	0.005 U	--	--	--	0.005 U
	pH	SU	NE	NE	**7.1**	--	**7.01**	**7.1**	**7.1**	--	**6.9**	**7.1**	**7.6**
	Sulfate	mg/L	NE	NE	**30**	--	**29**	**27.6**	**31**	--	**10.6**	**28**	**8**
	Temperature	Deg C	NE	NE	--	--	**11.1**	**11.1**	--	--	**14.4**	**12.8**	--
	Total Organic Carbon	mg/L	NE	NE	**2.4**	--	**2**	**91**	**1.3**	--	**7.6**	**4.2**	**1.4**
Metals[4]	Antimony	ug/L	NE	6.4	6 U	--	--	--	6 U	--	--	--	6 U
	Arsenic	ug/L	5	NL	20 U*	--	--	--	20 U*	--	--	--	20 U*
	Barium	ug/L	NE	3,200	**140**	--	**210**	**190**	**33**	--	**47**	**42**	**8**
	Beryllium	ug/L	NE	32	1 U	--	--	--	1 U	--	--	--	1 U
	Cadmium	ug/L	5	NL	1 U	--	--	--	1 U	--	--	--	1 U
	Chromium	ug/L	50	NL	**6**	--	--	--	**2**	--	--	--	**3**
	Copper	ug/L	NE	640	**1**	--	--	--	**3**	--	--	--	1 U
	Iron	ug/L	NE	11,200	10 U	--	--	**30**	**15**	--	--	**13**	**13**
	Lead	ug/L	15	NL	5 U	--	5 U	--	5 U	--	5 U	--	5 U
	Manganese	ug/L	NE	2,240	1 U	--	**8**	5 U	1 U	--	5 U	5 U	**3**
	Mercury	mg/L	0.002	NL	0.0002 U	--	--	--	0.0002 U	--	--	--	0.0002 U
	Nickel	ug/L	NE	320	2 U	--	--	--	2 U	--	--	--	2 U
	Selenium	ug/L	NE	80	20 U	--	--	--	20 U	--	--	--	20 U
	Silver	ug/L	NE	80	1 U	--	--	--	1 U	--	--	--	1 U
	Thallium	ug/L	NE	0.16	20 U*	--	--	--	20 U*	--	--	--	20 U*
	Zinc	ug/L	NE	4,800	**6**	--	5 U	**24**	**19**	--	**29**	**28**	**4**
Pesticides[5]	4,4'-DDD	ug/L	NE	0.365	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	4,4'-DDE	ug/L	NE	0.257	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	4,4'-DDT	ug/L	NE	0.257	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Aldrin	ug/L	NE	0.00257	0.01 U*	--	--	--	0.01 U*	--	--	--	0.01 U*
	Alpha-BHC	ug/L	NE	0.0139	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Beta-BHC	ug/L	NE	0.0486	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Chlordane (Total)	ug/L	NE	NE	0.05 U	--	--	--	0.05 U	--	--	--	0.05 U
	Delta-BHC	ug/L	NE	NE	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Dieldrin	ug/L	NE	0.00547	0.01 U*	--	--	--	0.01 U*	--	--	--	0.01 U*
	Endosulfan I	ug/L	NE	NE	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Endosulfan II	ug/L	NE	NE	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Endosulfan Sulfate	ug/L	NE	NE	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Endrin	ug/L	NE	4.8	0.04 U	--	--	--	0.04 U	--	--	--	0.04 U
	Heptachlor	ug/L	NE	0.0194	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U

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Pesticides[5]	Heptachlor Epoxide	ug/L	NE	0.00481	0.01 U*	--	--	--	0.01 U*	--	--	--	0.01 U*
	Lindane (Gamma-BHC)	ug/L	0.2	NL	0.01 U	--	--	--	0.01 U	--	--	--	0.01 U
	Methoxychlor	ug/L	NE	80	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U
	Toxaphene	ug/L	NE	0.0795	2 U*	--	--	--	2 U*	--	--	--	2 U*
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	PCB-aroclor 1221	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	PCB-aroclor 1232	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	PCB-aroclor 1242	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	PCB-aroclor 1248	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	PCB-aroclor 1254	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	PCB-aroclor 1260	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
	Total PCBs	ug/L			0.5 U	--	--	--	0.5 U	--	--	--	0.5 U
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	--	--	--	1 U	--	--	--	1 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	--	--	--	1 U	--	--	--	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	--	--	--	1 U	--	--	--	1 U
	2,4,5-Trichlorophenol	ug/L	NE	800	2 U	--	--	--	2 U	--	--	--	2 U
	2,4,6-Trichlorophenol	ug/L	NE	3.98	2 U	--	--	--	2 U	--	--	--	2 U
	2,4-Dichlorophenol	ug/L	NE	24	2 U	--	--	--	2 U	--	--	--	2 U
	2,4-Dimethylphenol	ug/L	NE	160	1 U	--	--	--	1 U	--	--	--	1 U
	2,4-Dinitrophenol	ug/L	NE	32	10 U	--	--	--	10 U	--	--	--	10 U
	2,4-Dinitrotoluene	ug/L	NE	0.282	2 U*	--	--	--	2 U*	--	--	--	2 U*
	2,6-Dinitrotoluene	ug/L	NE	0.0583	2 U*	--	--	--	2 U*	--	--	--	2 U*
	2-Chloronaphthalene	ug/L	NE	640	1 U	--	--	--	1 U	--	--	--	1 U
	2-Chlorophenol	ug/L	NE	40	1 U	--	--	--	1 U	--	--	--	1 U
	2-Methylnaphthalene	ug/L	160	NL	1 U	--	--	--	1 U	--	--	--	1 U
	2-Nitroaniline	ug/L	NE	160	2 U	--	--	--	2 U	--	--	--	2 U
	2-Nitrophenol	ug/L	NE	NE	2 U	--	--	--	2 U	--	--	--	2 U
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	10 U*	--	--	--	10 U*	--	--	--	10 U*
	3-Nitroaniline	ug/L	NE	NE	5 U	--	--	--	5 U	--	--	--	5 U
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	10 U	--	--	--	10 U	--	--	--	10 U
	4-Bromophenyl phenyl ether	ug/L	NE	NE	2 U	--	--	--	2 U	--	--	--	2 U
	4-Chloro-3-Methylphenol	ug/L	NE	NE	2 U	--	--	--	2 U	--	--	--	2 U
	4-Chloroaniline	ug/L	NE	0.219	1 U*	--	--	--	1 U*	--	--	--	1 U*
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	4-methylphenol (p-Cresol)	ug/L	NE	800	1 U	--	--	--	1 U	--	--	--	1 U
	4-Nitroaniline	ug/L	NE	NE	2 U	--	--	--	2 U	--	--	--	2 U
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	10 U	--	--	--	10 U	--	--	--	10 U
	Acenaphthene	ug/L	NE	960	1 U	--	--	--	1 U	--	--	--	1 U
	Acenaphthylene	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	Aniline	ug/L	NE	7.68	5 U	--	--	--	5 U	--	--	--	5 U
	Anthracene	ug/L	NE	4,800	1 U	--	--	--	1 U	--	--	--	1 U
	Benzo(a)anthracene	ug/L	NE	0.120	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Benzo(a)pyrene	ug/L	0.1	NL	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Benzo(b)fluoranthene	ug/L	NE	0.120	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Benzo(ghi)perylene	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	Benzo(k)fluoranthene	ug/L	NE	1.20	1 U	--	--	--	1 U	--	--	--	1 U
	Benzoic Acid	ug/L	NE	64,000	25 U	--	--	--	25 U	--	--	--	25 U
	Benzyl Alcohol	ug/L	NE	800	1 U	--	--	--	1 U	--	--	--	1 U
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U

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SVOCs (continued)	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	**1**	--	--	--	**1**	--	--	--	**1**
	Butyl benzyl phthalate	ug/L	NE	46.1	1 U	--	--	--	1 U	--	--	--	1 U
	Carbazole	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	Chrysene	ug/L	NE	12.0	1 U	--	--	--	1 U	--	--	--	1 U
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Dibenzofuran	ug/L	NE	16	1 U	--	--	--	1 U	--	--	--	1 U
	Dibutyl phthalate	ug/L	NE	1,600	1 U	--	--	--	**1**	--	--	--	1 U
	Diethyl phthalate	ug/L	NE	12,800	1 U	--	--	--	1 U	--	--	--	1 U
	Dimethyl phthalate	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	Di-N-Octyl Phthalate	ug/L	NE	160	1 U	--	--	--	1 U	--	--	--	1 U
	Fluoranthene	ug/L	NE	640	1 U	--	--	--	1 U	--	--	--	1 U
	Fluorene	ug/L	NE	640	1 U	--	--	--	1 U	--	--	--	1 U
	Hexachlorobenzene	ug/L	NE	0.0547	2 U*	--	--	--	2 U*	--	--	--	2 U*
	Hexachlorobutadiene	ug/L	NE	0.561	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Hexachlorocyclopentadiene	ug/L	NE	48	2 U	--	--	--	2 U	--	--	--	2 U
	Hexachloroethane	ug/L	NE	1.09	2 U*	--	--	--	2 U*	--	--	--	2 U*
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	1 U*	--	--	--	1 U*	--	--	--	1 U*
	Isophorone	ug/L	NE	46.1	1 U	--	--	--	1 U	--	--	--	1 U
	Naphthalene	ug/L	160	NL	1 U	--	--	--	1 U	--	--	--	1 U
	Nitrobenzene	ug/L	NE	16	1 U	--	--	--	1 U	--	--	--	1 U
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	1 U*	--	--	--	1 U*	--	--	--	1 U*
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	1 U	--	--	--	1 U	--	--	--	1 U
	o-Cresol (2-methylphenol)	ug/L	NE	400	1 U	--	--	--	1 U	--	--	--	1 U
	Pentachlorophenol	ug/L	NE	0.219	10 U*	--	--	--	10 U*	--	--	--	10 U*
	Phenanthrene	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	Phenol	ug/L	NE	2,400	1 U	--	--	--	1 U	--	--	--	1 U
	Pyrene	ug/L	NE	480	1 U	--	--	--	1 U	--	--	--	1 U
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	0.755 U	--	--	--	0.755 U	--	--	--	0.755 U
	Total Phenols	mg/L	NE	NE	0.005 U	--	--	--	0.005 U	--	--	--	0.005 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	--	--	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	ug/L	200	NL	**2**	1 U	5 U	**1.5**	1 U	1 U	5 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	--	--	1 U*	1 U*	--	--	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	5 U*	1 U*	1 U*	1 U*	5 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	--	--	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	--	--	--	1 U	--	--	--	1 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	--	--	--	1 U	--	--	--	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	5 U	1 U	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	5 U*	1 U	1 U	1 U	5 U*	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	2 U	--	--	--	2 U	--	--	--	2 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	--	--	--	1 U	--	--	--	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	--	--	--	1 U	--	--	--	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	5 U	1 U	20 U	20 U	5 U	1 U	20 U	20 U	5 U
	2-Chloroethyl vinyl ether	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	2-Hexanone	ug/L	NE	NE	3 U	2 U	--	--	3 U	2 U	--	--	3 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone	ug/L	NE	640	3 U	2 U	--	--	3 U	2 U	--	--	3 U

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VOCs (continued)	Acetone	ug/L	NE	7,200	5 U	2 U	20 U	20 U	5 U	2 U	20 U	20 U	5 U
	Acrolein	ug/L	NE	4	3 U	3 U	--	--	3 U	3 U	--	--	3 U
	Acrylonitrile	ug/L	NE	0.0810	2 U*	2 U*	--	--	2 U*	2 U*	--	--	2 U*
	Aniline	ug/L	NE	7.68	5 U	--	--	--	5 U	--	--	--	5 U
	Benzene	ug/L	5	NL	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U
	Benzidine	ug/L	NE	0.00038	25 U*	--	--	--	25 U*	--	--	--	25 U*
	Bromobenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	--	--	1 U*	1 U*	--	--	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	--	--	1 U*	1 U*	--	--	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Chloroethane	ug/L	NE	NE	2 U	1 U	5 U	1 U	2 U	1 U	5 U	1 U	2 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	5 U*	1 U	1 U	1 U	5 U*	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	--	--	1 U*	1 U*	--	--	1 U*
	Dibromomethane	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	1 U	--	--	--	**1**	--	--	--	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	3 U	1 U	5 U	1 U	3 U	1 U	--	--	3 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Methylene Chloride	ug/L	5	NL	2 U	1 U	50 U*	50 U*	2 U	1 U	50 U*	50 U*	2 U
	Styrene	ug/L	NE	1,600	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Tetrachloroethene	ug/L	5	NL	**1**	**2**	1.5 U	**1.8**	1 U	1 U	5 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	5 U	2 U	1 U	1 U	5 U	2 U	1 U
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	--	--	1 U*	1 U*	--	--	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	--	--	1 U	1 U	--	--	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	--	--	1 U	1 U	--	--	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date		
					MW-12A MW-12A_19950726 07/26/95	MW-20 MW-20_19950329 03/29/95	MW-20 MW-20_19950726 07/26/95
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	10 U	--
	Chloride	mg/L	NE	NE	--	--	--
	Conductivity	umhos/cm	NE	NE	--	**640**	--
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.005 U	--
	pH	SU	NE	NE	--	**6.9**	--
	Sulfate	mg/L	NE	NE	--	**37**	--
	Temperature	Deg C	NE	NE	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	**1.9**	--
Metals[4]	Antimony	ug/L	NE	6.4	--	6 U	--
	Arsenic	ug/L	5	NL	--	20 U*	--
	Barium	ug/L	NE	3,200	--	**130**	--
	Beryllium	ug/L	NE	32	--	1 U	--
	Cadmium	ug/L	5	NL	--	1 U	--
	Chromium	ug/L	50	NL	--	**5**	--
	Copper	ug/L	NE	640	--	**3**	--
	Iron	ug/L	NE	11,200	--	--	--
	Lead	ug/L	15	NL	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--
	Mercury	mg/L	0.002	NL	--	0.0002 U	--
	Nickel	ug/L	NE	320	--	2 U	--
	Selenium	ug/L	NE	80	--	20 U	--
	Silver	ug/L	NE	80	--	1 U	--
	Thallium	ug/L	NE	0.16	--	20 U*	--
	Zinc	ug/L	NE	4,800	--	--	--
Pesticides[5]	4,4'-DDD	ug/L	NE	0.365	--	0.01 U	--
	4,4'-DDE	ug/L	NE	0.257	--	0.01 U	--
	4,4'-DDT	ug/L	NE	0.257	--	0.01 U	--
	Aldrin	ug/L	NE	0.00257	--	0.01 U*	--
	Alpha-BHC	ug/L	NE	0.0139	--	0.01 U	--
	Beta-BHC	ug/L	NE	0.0486	--	0.01 U	--
	Chlordane (Total)	ug/L	NE	NE	--	0.05 U	--
	Delta-BHC	ug/L	NE	NE	--	0.01 U	--
	Dieldrin	ug/L	NE	0.00547	--	0.01 U*	--
	Endosulfan I	ug/L	NE	NE	--	0.01 U	--
	Endosulfan II	ug/L	NE	NE	--	0.01 U	--
	Endosulfan Sulfate	ug/L	NE	NE	--	0.01 U	--
	Endrin	ug/L	NE	4.8	--	0.04 U	--
	Heptachlor	ug/L	NE	0.0194	--	0.01 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date		
					MW-12A MW-12A_19950726 07/26/95	MW-20 MW-20_19950329 03/29/95	MW-20 MW-20_19950726 07/26/95
Pesticides[5]	Heptachlor Epoxide	ug/L	NE	0.00481	--	0.01 U*	--
	Lindane (Gamma-BHC)	ug/L	0.2	NL	--	0.01 U	--
	Methoxychlor	ug/L	NE	80	--	0.1 U	--
	Toxaphene	ug/L	NE	0.0795	--	2 U*	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	0.5 U	--
	PCB-aroclor 1221	ug/L			--	0.5 U	--
	PCB-aroclor 1232	ug/L			--	0.5 U	--
	PCB-aroclor 1242	ug/L			--	0.5 U	--
	PCB-aroclor 1248	ug/L			--	0.5 U	--
	PCB-aroclor 1254	ug/L			--	0.5 U	--
	PCB-aroclor 1260	ug/L			--	0.5 U	--
	Total PCBs	ug/L			--	0.5 U	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	2 U	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	2 U	--
	2,4-Dichlorophenol	ug/L	NE	24	--	2 U	--
	2,4-Dimethylphenol	ug/L	NE	160	--	1 U	--
	2,4-Dinitrophenol	ug/L	NE	32	--	10 U	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	2 U*	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	2 U*	--
	2-Chloronaphthalene	ug/L	NE	640	--	1 U	--
	2-Chlorophenol	ug/L	NE	40	--	1 U	--
	2-Methylnaphthalene	ug/L	160	NL	--	1 U	--
	2-Nitroaniline	ug/L	NE	160	--	2 U	--
	2-Nitrophenol	ug/L	NE	NE	--	2 U	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	10 U*	--
	3-Nitroaniline	ug/L	NE	NE	--	5 U	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	10 U	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	2 U	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	2 U	--
	4-Chloroaniline	ug/L	NE	0.219	--	1 U*	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	1 U	--
	4-methylphenol (p-Cresol)	ug/L	NE	800	--	1 U	--
	4-Nitroaniline	ug/L	NE	NE	--	2 U	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	10 U	--
	Acenaphthene	ug/L	NE	960	--	1 U	--
	Acenaphthylene	ug/L	NE	NE	--	1 U	--
	Aniline	ug/L	NE	7.68	--	5 U	--
	Anthracene	ug/L	NE	4,800	--	1 U	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	1 U*	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	1 U*	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	1 U*	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	1 U	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	1 U	--
	Benzoic Acid	ug/L	NE	64,000	--	25 U	--
	Benzyl Alcohol	ug/L	NE	800	--	1 U	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	1 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date		
					MW-12A MW-12A_19950726 07/26/95	MW-20 MW-20_19950329 03/29/95	MW-20 MW-20_19950726 07/26/95
SVOCs (continued)	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	1 U*	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	1 U	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	2	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	1 U	--
	Carbazole	ug/L	NE	NE	--	1 U	--
	Chrysene	ug/L	NE	12.0	--	1 U	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	1 U*	--
	Dibenzofuran	ug/L	NE	16	--	1 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	1 U	--
	Diethyl phthalate	ug/L	NE	12,800	--	1 U	--
	Dimethyl phthalate	ug/L	NE	NE	--	1 U	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	1 U	--
	Fluoranthene	ug/L	NE	640	--	1 U	--
	Fluorene	ug/L	NE	640	--	1 U	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	2 U*	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	1 U*	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	2 U	--
	Hexachloroethane	ug/L	NE	1.09	--	2 U*	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	1 U*	--
	Isophorone	ug/L	NE	46.1	--	1 U	--
	Naphthalene	ug/L	160	NL	--	1 U	--
	Nitrobenzene	ug/L	NE	16	--	1 U	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	1 U*	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	1 U	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	1 U	--
	Pentachlorophenol	ug/L	NE	0.219	--	10 U*	--
	Phenanthrene	ug/L	NE	NE	--	1 U	--
	Phenol	ug/L	NE	2,400	--	1 U	--
	Pyrene	ug/L	NE	480	--	1 U	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	0.755 U	--
	Total Phenols	mg/L	NE	NE	--	0.005 U	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	--	--	--
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	--	--	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U
	1,2-Diphenylhydrazine	ug/L	NE	NE	--	2 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	--
	2-Butanone (MEK)	ug/L	NE	4,800	1 U	5 U	1 U
	2-Chloroethyl vinyl ether	ug/L	NE	NE	1 U	1 U	1 U
	2-Hexanone	ug/L	NE	NE	2 U	3 U	2 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	2 U	3 U	2 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Name, Location and Date		
					MW-12A MW-12A_19950726 07/26/95	MW-20 MW-20_19950329 03/29/95	MW-20 MW-20_19950726 07/26/95
VOCs (continued)	Acetone	ug/L	NE	7,200	2 U	5 U	2 U
	Acrolein	ug/L	NE	4	3 U	3 U	3 U
	Acrylonitrile	ug/L	NE	0.0810	2 U*	2 U*	2 U*
	Aniline	ug/L	NE	7.68	--	5 U	--
	Benzene	ug/L	5	NL	1 U	1 U	1 U
	Benzidine	ug/L	NE	0.00038	--	25 U*	--
	Bromobenzene	ug/L	NE	NE	--		--
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	2 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	**1**
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	1 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	3 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	1 U	2 U	1 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	**2**	**5**
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U
	Vinyl Acetate	ug/L	NE	8,000	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U

Table C-9

Historical Groundwater Analytical Data 1996[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK	BEK	BEK	DCW	FAV	FOW	FOW	FOW	GES	MCWA
					BEK_19960710	BEK_19960930	BEK_19961211	DCW_19961001	FAV_19960930	FOW_19960326	FOW_19960930	FOW_19961211	GES_19960930	MCWA_19960327
					07/10/96	09/30/96	12/11/96	10/01/96	09/30/96	03/26/96	09/30/96	12/11/96	09/30/96	03/27/96
General Chemistry[3]	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	0.5 U	1 U	1 U	**2**	1 U	**1.56**	1 U	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	0.5 U	--	--	1 U	1 U	0.5 U	--	--
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	2 U	0.5 U	--	--	1 U	1 U	0.5 U	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U			1 U	1 U	1 U		1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	1 U	--	--	--	--	1 U	--	--
	Methylene Chloride	ug/L	5	NL	50 U	5 U	5 U	5 U	5 U	50 U*	5 U	5 U	5 U	50 U*
	Tetrachloroethene	ug/L	5	NL	**1**	**1.5**	**0.768**	1 U	1 U				1 U	
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA	MCWA	MCWA	MW-1A	MW-1A	MW-1A	MW-1A	MW-3	MW-3
					MCWA_19960710	MCWA_19960930	MCWA_19961211	MW-1A_19960326	MW-1A_19960711	MW-1A_19961001	MW-1A_19961211	MW-3_19960326	MW-3_19961001
					07/10/96	09/30/96	12/11/96	03/26/96	07/11/96	10/01/96	12/11/96	03/26/96	10/01/96
General Chemistry[3]	pH	SU	NE	NE	--	--	--	6.3	6.4	6.8	7.6	6.6	7
	Sulfate	mg/L	NE	NE	--	--	--	58.2	100	49	47	21	18
	Temperature	Deg C	NE	NE	--	--	--	12.2	14.4	12.8	11.1	10.6	6.1
	Total Organic Carbon	mg/L	NE	NE	--	--	--	9	7.8	8.2	6.8	3	6.4
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	7	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	240	220	350	337	36	37
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	5
	Iron	ug/L	NE	11,200	--	--	--	38	27	65	100 U	15	17
	Manganese	ug/L	NE	2,240	--	--	--	270	180	98	55	5 U	--
	Nickel	ug/L	NE	320	--	--	--	--	--	6	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	53	46	14	18.3	39	11
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	5.4	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	--	--	--	25	8.2	34	39	--	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	1 U*	1 U*	--	1 U*	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	--	--	--	6.4	3.4	12	11.8		--
	1,1-Dichloroethene	ug/L	NE	400	--	--	--	8.9	2.6	14	12.9	1 U	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	1 U	1 U	--	1.31	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	1.4	1 U	1.9	1.55	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	1 U	1 U	--	1.1	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	20 U	20 U	--	25 U	--	--
	Acetone	ug/L	NE	7,200	--	--	--	20 U	20 U	--	25 U	20 U	--
	Benzene	ug/L	5	NL	--	--	--	1 U	1 U	1.2	1.09	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	1 U	1 U	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	1 U*	1 U*	--	1 U*	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	1 U	1 U	--	2 U	1 U	--
	Chloroform	ug/L	NE	1.41	--	--	--	1.3	1 U	1.2	1.24	--	--
	Chloromethane	ug/L	NE	NE	1 U	1 U	1 U	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	--	1 U	1 U	3.5	3.83	1 U	--
	Methylene Chloride	ug/L	5	NL	50 U*	5 U	5 U	50 U*	50 U*	--	11.6	--	--
	Tetrachloroethene	ug/L	5	NL	--	--	--	7.2	6.3	10	10.8	--	--
	Toluene	ug/L	1,000	NL	--	--	--	1 U	1 U	--	1 U	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	2	1.8	2.9	2.89	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	12	3.9	28	33.6	2 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A	MW-9A
					MW-5A_19960327	MW-5A_19960711	MW-5A_19961001	MW-5A_19961211	MW-8B_19960327	MW-8B_19961002	MW-9A_19960327	MW-9A_19961002
					03/27/96	07/11/96	10/01/96	12/11/96	03/27/96	10/02/96	03/27/96	10/02/96
General Chemistry[3]	pH	SU	NE	NE	**6.7**	**6.5**	**7.1**	**8**	**6.6**	**7.2**	**6.6**	7.2
	Sulfate	mg/L	NE	NE	**26.8**	**59**	**21**	**17.6**	**29.1**	**21**	5 U	22
	Temperature	Deg C	NE	NE	**11.1**	**12.2**	**12.8**	**11.1**	**11.1**	**11.7**	**3.9**	15.5
	Total Organic Carbon	mg/L	NE	NE	**3.4**	**3.6**	**1.2**	**8.95**	**2.4**	**8.7**	**8.1**	11
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	5
	Barium	ug/L	NE	3,200	**120**	**260**	**140**	**114**	**140**	**140**	**34**	48
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	**16**	**21**	100 U	--	**10**	--	--
	Manganese	ug/L	NE	2,240	--	5 U	--	10 U	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	**16**	--	**9.7**	--	--	--	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	--	0.5 U	1 U	--	1 U	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	--	0.5 U	1 U*	--	1 U*	--
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	--	0.5 U	1 U	--	1 U	--
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	--	0.5 U	1 U	--	1 U	--
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	--	0.5 U	1 U	--	1 U	--
	1,2-Dichloroethene	ug/L	NE	72	1 U	**1.9**	--	0.5 U	1 U	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	1 U	--	1 U	--
	2-Butanone (MEK)	ug/L	NE	4,800	20 U	20 U	--	25 U	20 U	--	20 U	--
	Acetone	ug/L	NE	7,200	20 U	20 U	--	25 U	20 U	--	20 U	--
	Benzene	ug/L	5	NL	1 U	1 U	--	0.5 U	1 U	--	1 U	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	1 U	--	1 U	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	1 U	1 U	--	1 U	1 U	--	1 U	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	1 U	--	1 U	--
	Chloromethane	ug/L	NE	NE	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	--	1 U	1 U	--	--	--
	Methylene Chloride	ug/L	5	NL	50 U*	50 U*	--	5 U	50 U*	--	50 U*	--
	Tetrachloroethene	ug/L	5	NL	**1.3**	**3.5**	**3.4**	**2.05**	1 U	--	1 U	--
	Toluene	ug/L	1,000	NL	1 U	1 U	--	0.5 U	1 U	--	1 U	--
	Trichloroethene	ug/L	5	NL	1 U	1 U	--	0.5 U	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	2 U	2 U	--	0.5 U	2 U	--	2 U	--

Table C-10

Historical Groundwater Analytical Data 1997[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK BEK_19970317 03/17/97	BEK BEK_19970610 06/10/97	BEK BEK_19970930 09/30/97	BEK BEK_19971204 12/04/97	FAV FAV_19970610 06/10/97	FOW FOW_19970318 03/18/97	FOW FOW_19970610 06/10/97	FOW FOW_19971204 12/04/97	GES GES_19970610 06/10/97	MCWA MCWA_19970317 03/17/97
General Chemsitry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Barium	ug/L	NE	3200	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2240	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4800	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	2 U	0.5 U	0.5 U	2 U	**1.53**	**2.05**	0.5 U	2 U	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	2 U	0.5 U	0.5 U	--	0.5 U	2 U	0.5 U	--	--
	1,1-Dichloroethene	ug/L	NE	400	--	0.5 U	0.5 U	0.5 U	--	0.5 U	2 U	0.5 U	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4800	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	1 U	4 U	1 U	1 U	--	1 U	4 U	1 U	--	1 U
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1600	1 U	4 U	1 U	1 U	--	1 U	4 U	1 U	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	2 U	0.5 U	**2.21**	2 U	--	--	--	2 U	--
	Toluene	ug/L	1000	NL	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	1 U	4 U	1 U	1 U	4 U	1 U	4 U	1 U	4 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA MCWA_19970610 06/10/97	MCWA MCWA_19970930 09/30/97	MCWA MCWA_19971203 12/03/97	MW-1A MW-1A_19970318 03/18/97	MW-1A MW-1A_19970610 06/10/97	MW-1A MW-1A_19971001 10/01/97	MW-1A MW-1A_19971204 12/04/97	MW-3 MW-3_19970318 03/18/97	MW-3 MW-3_19971001 10/01/97
General Chemsitry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	0.1 U	0.1 U	0.1 U	**0.101**	0.1 U	0.1 U
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	**8.38**	**15.2**	**25.3**	**11**	5 U	**11.6**
	Chloride	mg/L	NE	NE	--	--	--	**200**	**32.3**	**79.1**	**91.5**	**20.6**	**4.66**
	Conductivity	umhos/cm	NE	NE	--	--	--	**1,620**	**1,010**	**1,072**	**1,491**	**530**	**294**
	pH	SU	NE	NE	--	--	--	**6.98**	**6.96**	**6.8**	**6.8**	**7.02**	**6.9**
	Sulfate	mg/L	NE	NE	--	--	--	**54.8**	**43.8**	**41.7**	**58.6**	**34.9**	**15.9**
	Temperature	Deg C	NE	NE	--	--	--	**12.2**	**12.8**	**14.4**	**12.2**	**12.8**	**9.4**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	**4.24**	3 U	3 U	3 U	**5.3**	3 U
Metals[4]	Barium	ug/L	NE	3200	--	--	--	**249**	**186**	**201**	**302**	**40.5**	**25.3**
	Iron	ug/L	NE	11200	--	--	--	100 U	100 U	100 U	100 U	100 U	100 U
	Manganese	ug/L	NE	2240	--	--	--	**149**	**79**	**138**	**177**	10 U	10 U
	Zinc	ug/L	NE	4800	--	--	--	**21.6**	**157**	**6.6**	**10.5**	5 U	10 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	--	--	--	**5.01**	**4.71**	**7.96**	**20**	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	--	--	--	**1.77**	**1.21**	**2.54**	**6.36**	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	--	--	--	**1.23**	**1.37**	**2.29**	**7.09**	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	1 U	1 U	1 U	1 U	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4800	--	--	--	10 U	10 U	25 U	25 U	10 U	10 U
	Acetone	ug/L	NE	7200	--	--	--	10 U	10 U	25 U	25 U	10 U	10 U
	Benzene	ug/L	5	NL	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	1 U	1 U	--	--	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	1 U*	1 U*	1 U*	1 U*	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	1 U	1 U	10 U	10 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	4 U	1 U	1 U	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	**1.19**	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1600	--	--	--	1 U	1 U	10 U	10 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	**9.13**	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	--	--	--	**5.39**	**4.42**	**1.51**	**6.11**	1 U	1 U
	Toluene	ug/L	1000	NL	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	--	--	**1.43**	**1.11**	1 U	**1.78**	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	4 U	1 U	1 U	**1.2**	**1.75**	10 U	**15.9**	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-5A MW-5A_19970318 03/18/97	MW-5A MW-5A_19970610 06/10/97	MW-5A MW-5A_19971002 10/02/97	MW-5A MW-5A_19971204 12/04/97	MW-8B MW-8B_19970319 03/19/97	MW-8B MW-8B_19971001 10/01/97	MW-9A MW-9A_19970319 03/19/97	MW-9A MW-9A_19971001 10/01/97
General Chemsitry[3]	Ammonia	mg/L as N	NE	NE	0.1 U	0.1 U	0.1 U	0.1 U	**0.115**	0.1 U	0.1 U	0.1 U
	Chemical Oxygen Demand	mg/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**18.3**
	Chloride	mg/L	NE	NE	**13.1**	**13.1**	**5.4**	**4.28**	**10.6**	**7.34**	**17.4**	**15.1**
	Conductivity	umhos/cm	NE	NE	**530**	**421**	**416**	**364**	**570**	**489**	**480**	**328**
	pH	SU	NE	NE	**8.16**	**7.2**	**6.8**	**7.1**	**7.8**	**6.9**	**8.32**	**7.2**
	Sulfate	mg/L	NE	NE	**15.2**	**16.8**	**16.4**	**12.6**	**17.7**	**19.8**	**23.4**	**7.83**
	Temperature	Deg C	NE	NE	**11.1**	**10**	**9.4**	**11.1**	**11.1**	**11.7**	**2.8**	**7.2**
	Total Organic Carbon	mg/L	NE	NE	**1.89**	3 U	3 U	–	**1.82**	3 U	**8.68**	3 U
Metals[4]	Barium	ug/L	NE	3200	**108**	**105**	**88.6**	**90.6**	**128**	**137**	**35**	**35.3**
	Iron	ug/L	NE	11200	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
	Manganese	ug/L	NE	2240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Zinc	ug/L	NE	4800	5 U	5 U	10 U	**6**	**5.26**	**6.6**	**7.49**	5 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	1 U	1 U	1 U	–	–
	1,2-Dichloropropane	ug/L	NE	1.22	–	–	–	–	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4800	10 U	10 U	10 U	25 U	10 U	25 U	10 U	25 U
	Acetone	ug/L	NE	7200	10 U	10 U	10 U	25 U	10 U	25 U	10 U	25 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	1 U	--	1 U	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	10 U	1 U	10 U	1 U	10 U
	Chloroform	ug/L	NE	1.41	--	--	--	--	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	--	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1600	1 U	1 U	1 U	10 U	1 U	10 U	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	**1.46**	**1.65**	**1.2**	**1.67**	1 U	**1.37**	1 U	1 U
	Toluene	ug/L	1000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	1 U	1 U	1 U	10 U	1 U	10 U	1 U	10 U

Table C-11

Historical Groundwater Analytical Data 1998[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date										
					BEK BEK_19980324 03/24/98	BEK BEK_19980625 06/25/98	BEK BEK_19980922 09/22/98	BEK BEK_19981221 12/21/98	DCW DCW_19981221 12/21/98	FAV FAV_19981221 12/21/98	FOW FOW_19980323 03/23/98	FOW FOW_19980625 06/25/98	FOW FOW_19980922 09/22/98	FOW FOW_19981221 12/21/98	GES GES_19980324 03/24/98
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--	--	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date										
					BEK BEK_19980324 03/24/98	BEK BEK_19980625 06/25/98	BEK BEK_19980922 09/22/98	BEK BEK_19981221 12/21/98	DCW DCW_19981221 12/21/98	FAV FAV_19981221 12/21/98	FOW FOW_19980323 03/23/98	FOW FOW_19980625 06/25/98	FOW FOW_19980922 09/22/98	FOW FOW_19981221 12/21/98	GES GES_19980324 03/24/98
VOCs[6]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NL	--	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NL	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U	
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
	Methylene Chloride	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	**1.25**	**1.85**	**1.02**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date										
					GES GES_19981221 12/21/98	MCWA MCWA_19980324 03/24/98	MCWA MCWA_19980625 06/25/98	MCWA MCWA_19980922 09/22/98	MCWA MCWA_19981221 12/21/98	MW-1A MW-1A_19980325 03/25/98	MW-1A MW-1A_19980625 06/25/98	MW-1A MW-1A_19980922 09/22/98	MW-3 MW-3_19980324 03/24/98	MW-3 MW-3_19980922 09/22/98	MW-5A MW-5A_19980324 03/24/98
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	**0.132**	0.1 U	**0.257**	**0.138**	0.1 U	**0.12**
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	**44.8**	**22.5**	**15.4**	**14.2**	**14.7**	5 U
	Chloride	mg/L	NE	NE	--	--	--	--	--	**121**	**72**	**71.7**	**18.7**	**17.4**	**4.22**
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	**1,643**	**1,843**	**1,840**	**360**	**540**	**420**
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	0.01 U*	--	0.01 U*	--
	pH	SU	NE	NE	--	--	--	--	--	**7.2**	**6.93**	**6.9**	**7.4**	**7.1**	**7.5**
	Sulfate	mg/L	NE	NE	--	--	--	--	--	**38.6**	**40.7**	**41.3**	**13.1**	**12**	**11.7**
	Temperature	Deg C	NE	NE	--	--	--	--	--	**5**	**8.3**	**8.3**	**5.6**	**5.8**	**10**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	3 U	3 U	3 U	3 U	**8.13**	3 U
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	1 U	--	1 U	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	**2.5**	--	**1.9**	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	**286**	**320**	**419**	**43.2**	**45.8**	**101**
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	1 U	--	1 U	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	1 U	--	1 U	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	**7.1**	--	**6.3**	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	**12.4**	--	**10.7**	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	100 U	100 U	100 U	100 U	100 U	100 U
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	1 U	--	**1.3**	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	**62**	**48**	**95**	10 U	10 U	10 U
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	0.0002 U	--	**0.0003**	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	**311**	--	**8**	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	**2.7**	--	10 U	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	1 U	--	1 U	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	1 U*	--	1 U*	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	**14**	**13**	**23.4**	5 U	**120**	5 U
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	0.5 U*	--	0.5 U*	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	1 U*	--	1 U*	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	0.5 U*	--	0.5 U*	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	0.5 U*	--	0.5 U*	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	0.5 U*	--	0.5 U*	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	0.5 U*	--	0.5 U*	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	0.5 U*	--	0.5 U*	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	1 U*	--	1 U*	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	10 U*	--	10 U*	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	5 U	--	5 U	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	**0.435**	--	0.1 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date										
					GES GES_19981221 12/21/98	MCWA MCWA_19980324 03/24/98	MCWA MCWA_19980625 06/25/98	MCWA MCWA_19980922 09/22/98	MCWA MCWA_19981221 12/21/98	MW-1A MW-1A_19980325 03/25/98	MW-1A MW-1A_19980625 06/25/98	MW-1A MW-1A_19980922 09/22/98	MW-3 MW-3_19980324 03/24/98	MW-3 MW-3_19980922 09/22/98	MW-5A MW-5A_19980324 03/24/98
VOCs[6]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**41.4**	**63.8**	**55.9**	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**10.6**	**13.2**	**13.7**	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**15.9**	**25**	**20.7**	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	**1.35**	**1.26**	**1.23**	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	**1.3**	**1.15**	**1.41**	1 U	1 U	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U
	Acetone	ug/L	NE	7,200	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	1 U*	1 U*	2 U*		2 U*	--
	Chloroethane	ug/L	NE	NL	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	**1.33**	**1.99**	**1.69**	**1.43**	1 U	--
	Chloromethane	ug/L	NE	NL	5 U	1 U	1 U	5 U	5 U	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	**1.61**	**1.6**	**1.44**	--	1 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	5 U	--	5 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**8.87**	**8.8**	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**8.27**	**12**	**12.4**	2 U	1 U	2 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	**2.9**	**3.67**	**2.91**	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	**39.4**	**66.7**	**50.8**	5 U	5 U	5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date						
					MW-5A MW-5A_19980625 06/25/98	MW-5A MW-5A_19980922 09/22/98	MW-5A MW-5A_19981222 12/22/98	MW-8B MW-8B_19980324 03/24/98	MW-8B MW-8B_19980921 09/21/98	MW-9A MW-9A_19980324 03/24/98	MW-9A MW-9A_19980921 09/21/98
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.1 U	**0.132**	**0.151**	0.1 U	0.1 U	**0.174**	0.1 U
	Chemical Oxygen Demand	mg/L	NE	NE	**6.5**	5 U	5 U	**5.2**	**5.12**	**15.5**	**17.9**
	Chloride	mg/L	NE	NE	**16.3**	**5.22**	**4.73**	**5.66**	**7.3**	**14.9**	**19.3**
	Conductivity	umhos/cm	NE	NE	**650**	**690**	**540**	**416**	**620**	**420**	**570**
	Cyanide	ug/L	NE	0.0096	--	0.01 U*	--	--	0.01 U*	--	0.01 U*
	pH	SU	NE	NE	**7.5**	**7.4**	**7.6**	**7.5**	**7.3**	**7.5**	**7**
	Sulfate	mg/L	NE	NE	**25.3**	**19**	**16**	**12.2**	**19.3**	**18.4**	**4.02**
	Temperature	Deg C	NE	NE	**12.3**	**8.3**	**8.5**	**11.5**	**10.9**	**7.2**	**15.2**
	Total Organic Carbon	mg/L	NE	NE	3 U	3 U	1 U	3 U	**9.49**	**4.56**	**9.43**
Metals[4]	Antimony	ug/L	NE	6.4	--	1 U	--	--	1 U	--	1 U
	Arsenic	ug/L	5	NL	--	**1.5**	--	--	1 U	--	**2.8**
	Barium	ug/L	NE	3,200	**119**	**114**	**134**	**124**	**116**	**32.1**	**46.4**
	Beryllium	ug/L	NE	32	--	1 U	--	--	1 U	--	1 U
	Cadmium	ug/L	5	NL	--	1 U	--	--	1 U	--	1 U
	Chromium	ug/L	50	NL	--	**1.2**	--	--	1 U	--	1 U
	Copper	ug/L	NE	640	--	2 U	--	--	**2**	--	**6**
	Iron	ug/L	NE	11,200	100 U	100 U	100 U	100 U	100 U	100 U	100 U
	Lead	ug/L	15	NL	--	1 U	--	--	**1.8**	--	**1.6**
	Manganese	ug/L	NE	2,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Mercury	mg/L	0.002	NL	--	0.0002 U	--	--	0.0002 U	--	**0.0004**
	Nickel	ug/L	NE	320	--	**3.6**	--	--	2 U	--	**2.9**
	Selenium	ug/L	NE	80	--	10 U	--	--	1 U	--	1 U
	Silver	ug/L	NE	80	--	1 U	--	--	1 U	--	1 U
	Thallium	ug/L	NE	0.16	--	1 U*	--	--	1 U*	--	1 U*
	Zinc	ug/L	NE	4,800	**9**	**16.5**	5 U	5 U	**189**	5 U	**152**
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	0.5 U*	--	--	0.5 U*	--	0.5 U*
	PCB-aroclor 1221	ug/L			--	1 U*	--	--	1 U*	--	1 U*
	PCB-aroclor 1232	ug/L			--	0.5 U*	--	--	0.5 U*	--	0.5 U*
	PCB-aroclor 1242	ug/L			--	0.5 U*	--	--	0.5 U*	--	0.5 U*
	PCB-aroclor 1248	ug/L			--	0.5 U*	--	--	0.5 U*	--	0.5 U*
	PCB-aroclor 1254	ug/L			--	0.5 U*	--	--	0.5 U*	--	0.5 U*
	PCB-aroclor 1260	ug/L			--	0.5 U*	--	--	0.5 U*	--	0.5 U*
	Total PCBs	ug/L			--	1 U*	--	--	1 U*	--	1 U*
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	10 U*	--	--	10 U*	--	10 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	5 U	--	--	5 U	--	5 U
	Total Phenols	mg/L	NE	NE	--	0.1 U	--	--	**0.24**	--	0.1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date						
					MW-5A MW-5A_19980625 06/25/98	MW-5A MW-5A_19980922 09/22/98	MW-5A MW-5A_19981222 12/22/98	MW-8B MW-8B_19980324 03/24/98	MW-8B MW-8B_19980921 09/21/98	MW-9A MW-9A_19980324 03/24/98	MW-9A MW-9A_19980921 09/21/98
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	1 U	1 U	1 U	--	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	2 U*	1 U*	--	2 U*	--	2 U*
	Chloroethane	ug/L	NE	NL	5 U	5 U	1 U	5 U	5 U	5 U	5 U
	Chloroform	ug/L	NE	1.41	--	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NL	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	--	1 U	--	1 U
	Dibutyl phthalate	ug/L	NE	1,600	--	5 U	--	--	5 U	--	5 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	--	5 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	**1.34**	1 U	1 U	2 U	**1.05**	2 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	--	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	5 U	5 U	1 U	5 U	5 U	5 U	5 U

Table C-12

Historical Groundwater Analytical Data 1999[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK BEK_19990330 03/30/99	BEK BEK_19990622 06/22/99	BEK BEK_19990908 09/08/99	BEK BEK_19991228 12/28/99	FOW FOW_19990330 03/30/99	FOW FOW_19990908 09/08/99	FOW FOW_19991228 12/28/99	MCWA MCWA_19990330 03/30/99	MCWA MCWA_19990622 06/22/99	MCWA MCWA_19990908 09/08/99
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4800	--	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	--	--	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK BEK_19990330 03/30/99	BEK BEK_19990622 06/22/99	BEK BEK_19990908 09/08/99	BEK BEK_19991228 12/28/99	FOW FOW_19990330 03/30/99	FOW FOW_19990908 09/08/99	FOW FOW_19991228 12/28/99	MCWA MCWA_19990330 03/30/99	MCWA MCWA_19990622 06/22/99	MCWA MCWA_19990908 09/08/99
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	1 U	1 U	1 U	0.5 U	1 U	1 U	0.5 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	15 U*	10 U*	10 U*	10 U*	15 U*	10 U*	10 U*	15 U*	10 U*	10 U*
	Tetrachloroethene	ug/L	5	NL	0.5 U	**0.835**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					MCWA MCWA_19991228 12/28/99	MW-1A MW-1A_19990331 03/31/99	MW-1A MW-1A_19990622 06/22/99	MW-1A MW-1A_19991228 12/28/99	MW-3 MW-3_19990331 03/31/99	MW-3 MW-3_19990909 09/09/99	MW-5A MW-5A_19990330 03/30/99	MW-5A MW-5A_19990621 06/21/99	MW-5A MW-5A_19990909 09/09/99	MW-5A MW-5A_19991228 12/28/99
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	**0.183**	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**	0.1 U	0.1 U	0.1 U
	Chemical Oxygen Demand	mg/L	NE	NE	--	**32.9**	**16.8**	**12.3**	5 U	**13.2**	5 U	5 U	**6.01**	5 U
	Chloride	mg/L	NE	NE	--	**179**	**77.9**	**81.4**	**20.6**	**14.3**	**20.6**	**24.1**	**3.4**	**4.76**
	Conductivity	umhos/cm	NE	NE	--	**1,692**	**1,550**	**1,660**	**444**	**380**	**444**	**663**	**555**	**448**
	Cyanide	ug/L	NE	0.0096	--	--	--	0.01 U*	--	0.01 U*	--	--	0.01 U*	--
	pH	SU	NE	NE	--	**7.1**	**7.4**	**7.03**	**7.4**	**7.22**	**7.4**	**7.5**	**7.28**	**7.47**
	Sulfate	mg/L	NE	NE	--	**51.9**	**35.5**	**39.5**	**28.3**	**20.5**	**28.3**	**25.6**	**15.5**	**13**
	Temperature	Deg C	NE	NE	--	**2.2**	**13.3**	**10.2**	**7.4**	**12.3**	**7.4**	**10.3**	**12.2**	**11.1**
	Total Organic Carbon	mg/L	NE	NE	--	**17.9**	**17.1**	**6.23**	**5.86**	**5.88**	**5.86**	**4.88**	**3.44**	3 U
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	1 U	--	1 U	--	--	1 U	--
	Arsenic	ug/L	5	NL	--	--	--	**1.4**	--	**1.4**	--	--	1 U	--
	Barium	ug/L	NE	3,200	--	**315**	**277**	**351**	**47.4**	**27.6**	**47.4**	**248**	**110**	2 U
	Beryllium	ug/L	NE	32	--	--	--	1 U	--	1 U	--	--	1 U	--
	Cadmium	ug/L	5	NL	--	--	--	1 U	--	1 U	--	--	1 U	--
	Chromium	ug/L	50	NL	--	--	--	**3.5**	--	**1.1**	--	--	1 U	--
	Copper	ug/L	NE	640	--	--	--	**6.9**	--	**6.2**	--	--	**4.8**	--
	Iron	ug/L	NE	11,200	--	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
	Lead	ug/L	15	NL	--	--	--	1 U	--	1 U	--	--	1 U	--
	Manganese	ug/L	NE	2,240	--	**252**	**245**	**35**	10 U	10 U	10 U	10 U	10 U	10 U
	Mercury	mg/L	0.002	NL	--	--	--	**0.0018**	--	0.0002 U	--	--	**0.0003**	--
	Nickel	ug/L	NE	320	--	--	--	**6.8**	--	2 U	--	--	**2.4**	--
	Selenium	ug/L	NE	80	--	--	--	**4.8**	--	1 U	--	--	1 U	--
	Silver	ug/L	NE	80	--	--	--	1 U	--	1 U	--	--	1 U	--
	Thallium	ug/L	NE	0.16	--	--	--	1 U*	--	1 U*	--	--	1 U*	--
	Zinc	ug/L	NE	4800	--	**8.6**	**16.3**	**12.5**	**7.7**	5 U	**7.7**	**10.4**	5 U	5 U
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	0.5 U*	--	--	0.5 U*	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	1 U*	--	--	1 U*	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	0.5 U*	--	--	0.5 U*	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	0.5 U*	--	--	0.5 U*	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	0.5 U*	--	--	0.5 U*	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	0.5 U*	--	--	0.5 U*	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	0.5 U*	--	--	0.5 U*	--
	Total PCBs	ug/L			--	--	--	--	--	1 U*	--	--	1 U*	--
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	10 U*	--	--	10 U*	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	5 U	--	--	5 U	--
	Total Phenols	mg/L	NE	NE	--	--	--	0.1 U	--	0.1 U	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					MCWA MCWA_19991228 12/28/99	MW-1A MW-1A_19990331 03/31/99	MW-1A MW-1A_19990622 06/22/99	MW-1A MW-1A_19991228 12/28/99	MW-3 MW-3_19990331 03/31/99	MW-3 MW-3_19990909 09/09/99	MW-5A MW-5A_19990330 03/30/99	MW-5A MW-5A_19990621 06/21/99	MW-5A MW-5A_19990909 09/09/99	MW-5A MW-5A_19991228 12/28/99
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	**12.3**	**5.79**	**64.5**	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	**2.84**	**1.62**	**14.6**	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	**9.63**	**1.75**	**29.4**	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	--	1 U	1 U	**1.15**	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	--	1 U	1 U	**1.26**	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	25 U	25 U	10 U	25 U	25 U	25 U	25 U	25 U	10 U
	Acetone	ug/L	NE	7,200	--	25 U	25 U	10 U	25 U	25 U	25 U	25 U	25 U	10 U
	Benzene	ug/L	5	NL	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	1 U*	2 U*	2 U*	1 U*	2 U*	1 U*	2 U*	2 U*	2 U*
	Chloroethane	ug/L	NE	NE	--	5 U	2 U	1 U	5 U	2 U	5 U	2 U	2 U	1 U
	Chloroform	ug/L	NE	1.41	--	1 U	1 U	**1.82**	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	--	--	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	1 U	1 U	**1.67**	1 U	1 U	1 U	1 U	1 U	1 U
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	5 U	--	--	5 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	**5.14**	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	10 U*	5 U	5 U	**7.02**	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	**5.74**	**4.58**	**14.8**	1 U	1 U	1 U	1 U	1 U	**1.12**
	Toluene	ug/L	1,000	NL	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL		**1.32**	**1.17**	**3.08**	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	1 U	**2.84**	**69.8**	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date			
					MW-8B MW-8B_19990330 03/30/99	MW-8B MW-8B_19990909 09/09/99	MW-9A MW-9A_19990330 03/30/99	MW-9A MW-9A_19990909 09/09/99
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.1 U	0.1 U	0.1 U	0.1 U
	Chemical Oxygen Demand	mg/L	NE	NE	5 U	**5.77**	**13.3**	**15.6**
	Chloride	mg/L	NE	NE	**10.6**	**13.6**	**17.1**	**19**
	Conductivity	umhos/cm	NE	NE	**417**	**625**	**287**	**511**
	Cyanide	ug/L	NE	0.0096	--	0.01 U*	--	0.01 U*
	pH	SU	NE	NE	**7.4**	**7.27**	**7.6**	**7.49**
	Sulfate	mg/L	NE	NE	**15.1**	**19.8**	**21.5**	**13.3**
	Temperature	Deg C	NE	NE	**7.4**	**11.5**	**4.9**	**12.3**
	Total Organic Carbon	mg/L	NE	NE	**3.36**	**4.66**	**9.19**	**9.29**
Metals[4]	Antimony	ug/L	NE	6.4	--	1 U	--	1 U
	Arsenic	ug/L	5	NL	--	1 U	--	**2.4**
	Barium	ug/L	NE	3,200	**129**	**134**	**36.6**	**44.1**
	Beryllium	ug/L	NE	32	--	1 U	--	1 U
	Cadmium	ug/L	5	NL	--	1 U	--	1 U
	Chromium	ug/L	50	NL	--	1 U	--	**1**
	Copper	ug/L	NE	640	--	2 U	--	**4.6**
	Iron	ug/L	NE	11,200	100 U	100 U	100 U	100 U
	Lead	ug/L	15	NL	--	1 U	--	1 U
	Manganese	ug/L	NE	2,240	10 U	10 U	10 U	10 U
	Mercury	mg/L	0.002	NL	--	0.0002 U	--	**0.0003**
	Nickel	ug/L	NE	320	--	**2.3**	--	**2.4**
	Selenium	ug/L	NE	80	--	1 U	--	1 U
	Silver	ug/L	NE	80	--	1 U	--	1 U
	Thallium	ug/L	NE	0.16	--	1 U*	--	1 U*
	Zinc	ug/L	NE	4800	5 U	5 U	5 U	5 U
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	0.5 U*	--	0.5 U*
	PCB-aroclor 1221	ug/L			--	1 U*	--	1 U*
	PCB-aroclor 1232	ug/L			--	0.5 U*	--	0.5 U*
	PCB-aroclor 1242	ug/L			--	0.5 U*	--	0.5 U*
	PCB-aroclor 1248	ug/L			--	0.5 U*	--	0.5 U*
	PCB-aroclor 1254	ug/L			--	0.5 U*	--	0.5 U*
	PCB-aroclor 1260	ug/L			--	0.5 U*	--	0.5 U*
	Total PCBs	ug/L				1 U*	--	1 U*
SVOCs[7]	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	10 U*	--	10 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	5 U	--	5 U
	Total Phenols	mg/L	NE	NE	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date			
					MW-8B MW-8B_19990330 03/30/99	MW-8B MW-8B_19990909 09/09/99	MW-9A MW-9A_19990330 03/30/99	MW-9A MW-9A_19990909 09/09/99
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	--	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	--	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	--	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	--	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	--	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	25 U	25 U	--	25 U
	Acetone	ug/L	NE	7,200	25 U	25 U	--	25 U
	Benzene	ug/L	5	NL	1 U	1 U	--	1 U
	Carbon Disulfide	ug/L	NE	800	10 U	10 U	--	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	2 U*	--	2 U*
	Chloroethane	ug/L	NE	NE	5 U	2 U	--	2 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	--	1 U
	Chloromethane	ug/L	NE	NE	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	--	1 U
	Dibutyl phthalate	ug/L	NE	1,600	--	5 U	--	5 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	--	5 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U

Table C-13

Historical Groundwater Analytical Data 2000[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK	BEK	BEK	BEK	DCW	FAV	FOW	FOW	FOW	FOW
					BEK_20000305	BEK_20000620	BEK_20000924	BEK_20001211	DCW_20000305	FAV_20000305	FOW_20000305	FOW_20000620	FOW_20000924	FOW_20001211
					03/05/00	06/20/00	09/24/00	12/11/00	03/05/00	03/05/00	03/05/00	06/20/00	09/24/00	12/11/00
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	--	--	--	--	--
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	10 U*	10 U*	10 U*	10 U*	10 U*	10 U*	10 U*	10 U*	10 U*	10 U*
	Tetrachloroethene	ug/L	5	NL	**0.999**	**0.617**	0.5 U	**0.745**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					GES	MCWA	MCWA	MCWA	MCWA	MW-1A	MW-1A	MW-1A	MW-3
					GES_20000305	MCWA_20000305	MCWA_20000620	MCWA_20000924	MCWA_20001211	MW-1A_20000307	MW-1A_20000620	MW-1A_20000926	MW-3_20000307
					03/05/00	03/05/00	06/20/00	09/24/00	12/11/00	03/07/00	06/20/00	09/26/00	03/07/00
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	**7.69**	**31.7**	**14.3**	**10.8**
	Chloride	mg/L	NE	NE	--	--	--	--	--	**93.5**	**212**	**102**	**36.1**
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	**1,520**	**1,853**	**1,614**	**536**
	pH	SU	NE	NE	--	--	--	--	--	**7.1**	**6.8**	**6.9**	**7.35**
	Sulfate	mg/L	NE	NE	--	--	--	--	--	**39.3**	**45.8**	**38.8**	**26.2**
	Temperature	Deg C	NE	NE	--	--	--	--	--	**10.7**	**15**	**11.4**	**11.6**
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	3 U	**15.6**	**4.59**	3 U
Metals[4]	Barium	ug/L	NE	3,200	--	--	--	--	--	**334**	**432**	**338**	**44.7**
	Iron	ug/L	NE	11,200	--	--	--	--	--	100 U	100 U	**283**	100 U
	Manganese	ug/L	NE	2,240	--	--	--	--	--	**32**	**113**	**37**	10 U
	Zinc	ug/L	NE	4,800	--	--	--	--	--	**33.3**	**31.4**	**19.4**	5 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	**50.3**	**31.8**	**49.1**	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	--	--	--	--	1 U*	0.5 U	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**12.2**	**7.21**	**11.8**	1 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**25.5**	**15.8**	**26.5**	1 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	1 U	**0.63**	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	--	--	--	--	--	1 U	0.5 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	**1.04**	**0.76**	**1.19**	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	--	--	--	--	--	10 U	10 U	10 U	10 U
	Benzene	ug/L	5	NL	--	--	--	--	--	1 U	0.5 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	10 U	10 U	10 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	--	--	--	--	--	1 U*	1 U*	1 U*	1 U*
	Chloroethane	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	**1.42**	**0.92**	**1.53**	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	**1.81**	**1.21**	**1.62**	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	**5.39**	1 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	10 U*	10 U*	10 U*	10 U*	10 U*	5 U	5 U	**5.45**	5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**15.2**	**9.64**	**11.8**	1 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	1 U	0.5 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	**3.33**	**2.12**	**2.63**	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**56.3**	**39.4**	**59.5**	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3	MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A	MW-9A
					MW-3_20000926	MW-5A_20000307	MW-5A_20000620	MW-5A_20000926	MW-5A_20001211	MW-8B_20000307	MW-8B_20000926	MW-9A_20000307	MW-9A_20000926
					09/26/00	03/07/00	06/20/00	09/26/00	12/11/00	03/07/00	09/26/00	03/07/00	09/26/00
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.05 U	0.05 U	**0.063**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Chemical Oxygen Demand	mg/L	NE	NE	**15.5**	5 U	**13.2**	5 U	5 U	5 U	5 U	**14.2**	**19.7**
	Chloride	mg/L	NE	NE	**17.6**	**5.05**	**31.9**	**6.25**	**5.12**	**5.71**	**15.2**	**22**	**20.6**
	Conductivity	umhos/cm	NE	NE	**431**	**514**	**604**	**607**	**503**	**491**	**431**	**407**	**481**
	pH	SU	NE	NE	**7.3**	**7.6**	**7.4**	**7.3**	**7.5**	**7.57**	**7.3**	**7.58**	**7.2**
	Sulfate	mg/L	NE	NE	**16.8**	**13.4**	**25.4**	**16.6**	**14.6**	**13.9**	**22.2**	**22**	**9.85**
	Temperature	Deg C	NE	NE	**9.4**	**10.9**	**11**	**13**	**11**	**10.8**	**9.4**	**9.8**	**16**
	Total Organic Carbon	mg/L	NE	NE	**6.32**	3 U	**5.58**	**1.61**	1 U	3 U	**1.84**	**6.34**	**6.32**
Metals[4]	Barium	ug/L	NE	3,200	**40.2**	**104**	**138**	**147**	**106**	**115**	**157**	**34.5**	**48.1**
	Iron	ug/L	NE	11,200	**104**	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
	Manganese	ug/L	NE	2,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Zinc	ug/L	NE	4,800	10 U	5 U	5 U	10 U	5 U	5 U	10 U	5 U	10 U
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	0.5 U	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethene	ug/L	NE	72	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Benzene	ug/L	5	NL	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Disulfide	ug/L	NE	800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	1 U	**1.1**	**0.53**	1 U	1 U	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U

Table C-14

Historical Groundwater Analytical Data 2001[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK	BEK	BEK	BEK	DCW	DCW	FAV	FOW	FOW	FOW
					BEK_20010325	BEK_20010604	BEK_20011007	BEK_20011218	DCW_20010604	DCW_20011008	FAV_20010604	FOW_20010325	FOW_20010604	FOW_20011007
					03/25/01	06/04/01	10/07/01	12/18/01	06/04/01	10/08/01	06/04/01	03/25/01	06/04/01	10/07/01
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3200	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2240	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4800	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	**0.52**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	0.5 U	0.5 U	**0.52**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW	GES	MCWA	MCWA	MCWA	MCWA	MW-1A	MW-1A	MW-3
					FOW_20011218	GES_20010604	MCWA_20010325	MCWA_20010604	MCWA_20011007	MCWA_20011218	MW-1A_20010327	MW-1A_20010605	MW-3_20010326
					12/18/01	06/04/01	03/25/01	06/04/01	10/07/01	12/18/01	03/27/01	06/05/01	03/26/01
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	16.9	21.7	11.6
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	159	171	27.4
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	1,838	1,850	523
	pH	SU	NE	NE	--	--	--	--	--	--	7	7	7.2
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	49.4	52.5	14.7
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	12	12.5	14.6
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	5.71	5.78	5.06
Metals[4]	Arsenic	ug/L	5	NL	--	--	--	--	--	--	2.56	--	--
	Barium	ug/L	NE	3200	--	--	--	--	--	--	449	447	52.2
	Chromium	ug/L	50	NL	--	--	--	--	--	--	7.4	--	1.1
	Copper	ug/L	NE	640	--	--	--	--	--	--	11.4	--	8.89
	Iron	ug/L	NE	11200	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2240	--	--	--	--	--	--	54.6	47.7	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	6.9	--	2.4
	Selenium	ug/L	NE	80	--	--	--	--	--	--	3.24	--	1.18
	Zinc	ug/L	NE	4800	--	--	--	--	--	--	32.2	36	24.3
SVOCs[7]	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	29.7	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.11	--	--
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	15.2	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	0.9	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	1.02	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	0.5	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	1.18	--	--
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	1.74	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1600	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.61	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10.7	--	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	2.6	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	0.5 U	0.5 U	0.5 U	0.5 U	0.52	0.5 U	39.4	0.96	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-3	MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A
					MW-3_20011008	MW-5A_20010326	MW-5A_20010604	MW-5A_20011008	MW-5A_20011218	MW-8B_20010326	MW-8B_20011008	MW-9A_20010326
					10/08/01	03/26/01	06/04/01	10/08/01	12/18/01	03/26/01	10/08/01	03/26/01
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.087	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	7.41	--	--	--	6.08	--	--	8.73
	Chloride	mg/L	NE	NE	28.3	4.79	7.8	5.94	5.11	6.38	13.2	36.5
	Conductivity	umhos/cm	NE	NE	460	459	456	550	627	500	657	536
	pH	SU	NE	NE	7	7.5	7.7	7.5	7.3	7.3	7.3	7.3
	Sulfate	mg/L	NE	NE	18.8	13.6	15.6	14.1	13.5	14.9	17.8	23.6
	Temperature	Deg C	NE	NE	8.8	11.6	11.5	12	11	11.2	11.8	11
	Total Organic Carbon	mg/L	NE	NE	3.85	--	1.13	--	--	--	--	3.87
Metals[4]	Arsenic	ug/L	5	NL	--	2.01	--	--	--	--	--	2.78
	Barium	ug/L	NE	3200	132	101	114	125	137	124	156	48.6
	Chromium	ug/L	50	NL	--	1.1				1.06		1.3
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	3.71
	Iron	ug/L	NE	11200	959	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2240	9.52	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	2.25
	Selenium	ug/L	NE	80	--	--	--	--	--	1.56	--	3.15
	Zinc	ug/L	NE	4800	17.7	9.09	5.75	9.2	--	12.2	32.2	16.4
SVOCs[7]	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	0.123
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	--	--	--	--	--	--	1.86	--
	1,1-Dichloroethane	ug/L	NE	7.68	--	--	--	--	--	--	--	--
	1,1-Dichloroethene	ug/L	NE	400	--	--	--	--	--	--	--	--
	1,2-Dichloroethane	ug/L	5	NL	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--
	Chloroform	ug/L	NE	1.41	--	--	--	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	--	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1600	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	--	0.76			0.97		1.17	--
	Trichloroethene	ug/L	5	NL	--	--	--	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	--	--	--	--	--	--	0.9	--

Table C-15

Historical Groundwater Analytical Data 2002[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					BEK	BEK	BEK	BEK	FAV	FOW	FOW	FOW	FOW	GES
					BEK_20020319	BEK_20020603	BEK_20021008	BEK_20021230	FAV_20021008	FOW_20020318	FOW_20020603	FOW_20021008	FOW_20021230	GES_20021008
					03/19/02	06/03/02	10/08/02	12/30/02	10/08/02	03/18/02	06/03/02	10/08/02	12/30/02	10/08/02
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA	MCWA	MCWA	MCWA	MW-3	MW-3	MW-5A	MW-5A	MW-5A
					MCWA_20020318	MCWA_20020603	MCWA_20021007	MCWA_20021230	MW-3_20020319	MW-3_20021007	MW-5A_20020318	MW-5A_20020603	MW-5A_20021008
					03/18/02	06/03/02	10/07/02	12/30/02	03/19/02	10/07/02	03/18/02	06/03/02	10/08/02
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	13.8	15.8	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	31.6	25.1	24.5	36.2	36.7
	Conductivity	umhos/cm	NE	NE	--	--	--	--	510	451	550	777	922
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	0.0084	--	--	0.0056
	pH	SU	NE	NE	--	--	--	--	7.1	7.2	7.5	7.2	7
	Sulfate	mg/L	NE	NE	--	--	--	--	29.9	18.3	21.2	32.3	63.8
	Temperature	Deg C	NE	NE	--	--	--	--	9.8	9.4	12	13.3	14.4
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	3.85	5.33	1.96	2.83	2.45
Metals[4]	Arsenic	ug/L	5	NL	--	--	--	--	--	2.39	--	--	1.24
	Barium	ug/L	NE	3,200	--	--	--	--	57	42.3	144	187	212
	Chromium	ug/L	50	NL	--	--	--	--	--	1.36	--	--	1.05
	Copper	ug/L	NE	640	--	--	--	--	--	5.96	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	12	12	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	2.99	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	1.13	--	--	1.43
	Zinc	ug/L	NE	4,800	--	--	--	--	11.8	--	9.72	--	12.6
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**0.81**	0.5 U	**0.7**	0.5 U	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date				
					MW-5A	MW-8B	MW-8B	MW-9A	MW-9A
					MW-5A_20021230	MW-8B_20020318	MW-8B_20021008	MW-9A_20020318	MW-9A_20021008
					12/30/02	03/18/02	10/08/02	03/18/02	10/08/02
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.211	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	5.55	--	--	5.29	12.7
	Chloride	mg/L	NE	NE	6.8	7.99	23	25.7	30.1
	Conductivity	umhos/cm	NE	NE	824	657	711	536	539
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--
	pH	SU	NE	NE	7.1	7.3	7.3	7.3	7.2
	Sulfate	mg/L	NE	NE	20	15.1	24.7	30.3	14.4
	Temperature	Deg C	NE	NE	6.7	11.8	8.9	11	7.8
	Total Organic Carbon	mg/L	NE	NE	1.53		1.32	4.89	4.92
Metals[4]	Arsenic	ug/L	5	NL	--	--	--	--	2.68
	Barium	ug/L	NE	3,200	198	104	170	36.2	44.8
	Chromium	ug/L	50	NL	--	--	1.19	--	1.03
	Copper	ug/L	NE	640	--	--	--	--	3.35
	Iron	ug/L	NE	11,200	--	--	12		--
	Manganese	ug/L	NE	2,240	--	--	--	--	2
	Nickel	ug/L	NE	320	--	--	3.74	--	2.8
	Selenium	ug/L	NE	80	--	--	1.02	--	1.34
	Zinc	ug/L	NE	4,800	--	10.6	15.1	7.53	22.8
VOCs[8]	1,1,1-Trichloroethane	ug/L	200	NL	--	--	--	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	--	--	--	--	--
	1,1-Dichloroethene	ug/L	NE	400	--	--	--	--	--
	Chloromethane	ug/L	NE	NE	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	--	0.65	--	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	--	--	--	--

Table C-16

Historical Groundwater Analytical Data 2003[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	BEK	BEK	BEK	BEK	DCW	FAV	FOW	FOW
					301_20030930	301_20031218	BEK_20030304	BEK_20030602	BEK_20030930	BEK_20031218	DCW_20031218	FAV_20031218	FOW_20030304	FOW_20030602
					09/30/03	12/18/03	03/04/03	06/02/03	09/30/03	12/18/03	12/18/03	12/18/03	03/04/03	06/02/03
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	--	--	0.5 U*	0.5 U*	0.5 U*	0.5 U*	--	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	1 U	1 U	--	--
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	--	--	0.5 U*	0.5 U*	0.5 U*	0.5 U*	--	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	--	--	5 U	5 U	5 U	5 U	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	1 U	1 U	--	--
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	1 U	1 U	--	--
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	--	--	1 U	1 U	1 U	1 U	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	BEK	BEK	BEK	BEK	DCW	FAV	FOW	FOW
					301_20030930	301_20031218	BEK_20030304	BEK_20030602	BEK_20030930	BEK_20031218	DCW_20031218	FAV_20031218	FOW_20030304	FOW_20030602
					09/30/03	12/18/03	03/04/03	06/02/03	09/30/03	12/18/03	12/18/03	12/18/03	03/04/03	06/02/03
VOCs (continued)	Bromodichloromethane	ug/L	NE	0.706	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	--	--	1 U	1 U	1 U	1 U	--	--
	Bromomethane	ug/L	NE	11.2	5 U	5 U	--	--	5 U	5 U	5 U	5 U	--	--
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Chloroethane	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	--	--	1 U*	1 U*	1 U*	1 U*	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**0.508**	0.5 U	0.5 U	0.5 U	**0.541**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	--	--	0.5 U*	0.5 U*	0.5 U*	0.5 U*	--	--
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW	FOW	GES	HOUSE	HOUSE	MCWA	MCWA	MCWA	MCWA
					FOW_20030930	FOW_20031218	GES_20031218	HOUSE_20030930	HOUSE_20031218	MCWA_20030304	MCWA_20030602	MCWA_20030930	MCWA_20031218
					09/30/03	12/18/03	12/18/03	09/30/03	12/18/03	03/04/03	06/02/03	09/30/03	12/18/03
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Chloride	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	pH	SU	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Temperature	Deg C	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
Metals[4]	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	--	--	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	--	--	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	--	--	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW	FOW	GES	HOUSE	HOUSE	MCWA	MCWA	MCWA	MCWA
					FOW_20030930	FOW_20031218	GES_20031218	HOUSE_20030930	HOUSE_20031218	MCWA_20030304	MCWA_20030602	MCWA_20030930	MCWA_20031218
					09/30/03	12/18/03	12/18/03	09/30/03	12/18/03	03/04/03	06/02/03	09/30/03	12/18/03
VOCs (continued)													
	Bromodichloromethane	ug/L	NE	0.706	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	--	--	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	--	--	1 U*	1 U*
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	**0.573**	0.5 U	0.5 U	0.5 U	0.5 U	**0.83**	0.5 U	**1.24**	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	--	--	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A
					MW-3_20030303	MW-3_20030930	MW-5A_20030304	MW-5A_20030602	MW-5A_20031002	MW-5A_20031219	MW-8B_20030304	MW-8B_20031001	MW-9A_20030304
					03/03/03	09/30/03	03/04/03	06/02/03	10/02/03	12/19/03	03/04/03	10/01/03	03/04/03
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	**5.4**	--	--	0.5 U	0.5 U	--	0.5 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	**23.5**	**21**	--	**6.6**	2 U	2 U	**5.02**	2 U	**8.19**
	Chloride	mg/L	NE	NE	**34.1**	--	**5.66**	**37.7**	--	--	**10.2**	--	**31.5**
	Conductivity	umhos/cm	NE	NE	**516**	--	**655**	**740**	--	--	**681**	--	**540**
	Nitrite-nitrogen	mg/L as N	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	pH	SU	NE	NE	**7.4**	--	**7.3**	**7.4**	--	--	**7.5**	--	**7.4**
	Sulfate	mg/L	NE	NE	**23.8**	**14.3**	**14.9**	**24.1**	**29.9**	**13.9**	**17.1**	**42.9**	**28.4**
	Temperature	Deg C	NE	NE	**6.1**	--	**7.8**	**12.2**	--	--	**8.3**	--	**6.1**
	Total Organic Carbon	mg/L	NE	NE	**4.38**	**11.3**	--	**2.39**	**2.7**	**3.93**	--	1 U	**2.77**
Metals[4]	Barium	ug/L	NE	3,200	**48.5**	**49**	**153**	**188**	**237**	**201**	**162**	**168**	**47.3**
	Iron	ug/L	NE	11,200	--	10 U	--	--	10 U	10 U	--	**23.9**	--
	Manganese	ug/L	NE	2,240	--	10 U	--	--	10 U	10 U	--	10 U	--
	Zinc	ug/L	NE	4,800	**6.44**	10 U	--	--	**19**	10 U	**6.7**	10 U	**5.77**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--	--	1 U	1 U	--	1 U	--
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	1 U	--	--	1 U	1 U	--	1 U	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,1,1-Trichloroethane	ug/L	200	NL	--	1 U			1 U	1 U	--	1 U	--
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	--	0.5 U*	--	--	0.5 U*	1 U*	--	0.5 U*	--
	1,1,2-Trichloroethane	ug/L	NE	0.768	--	0.5 U	--	--	0.5 U	1 U*	--	0.5 U	--
	1,1-Dichloroethane	ug/L	NE	7.68	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,1-Dichloroethene	ug/L	NE	400	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,1-Dichloropropene	ug/L	NE	NE	--	1 U	--	--	1 U	1 U	--	1 U	--
	1,2,3-Trichlorobenzene	ug/L	NE	NE	--	1 U	--	--	1 U	1 U	--	1 U	--
	1,2,3-Trichloropropane	ug/L	NE	0.00146	--	0.5 U*	--	--	0.5 U*	1 U*	--	0.5 U*	--
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	--	--	1 U	1 U	--	1 U	--
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	1 U	--	--	1 U	1 U	--	1 U	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	--	5 U	--	--	5 U	5 U	--	5 U	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,2-Dichloroethane	ug/L	5	NL	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,2-Dichloropropane	ug/L	NE	1.22	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,3-Dichloropropane	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	2,2-Dichloropropane	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	2-Butanone (MEK)	ug/L	NE	4,800	--	10 U	--	--	10 U	10 U	--	10 U	--
	2-Chlorotoluene	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	4-Chlorotoluene	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	5 U	--	--	5 U	10 U	--	5 U	--
	Acetone	ug/L	NE	7,200	--	25 U	--	--	25 U	25 U	--	25 U	--
	Benzene	ug/L	5	NL	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Bromobenzene	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Bromochloromethane	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A
					MW-3_20030303	MW-3_20030930	MW-5A_20030304	MW-5A_20030602	MW-5A_20031002	MW-5A_20031219	MW-8B_20030304	MW-8B_20031001	MW-9A_20030304
					03/03/03	09/30/03	03/04/03	06/02/03	10/02/03	12/19/03	03/04/03	10/01/03	03/04/03
VOCs (continued)													
	Bromodichloromethane	ug/L	NE	0.706	--	1 U*	--	--	1 U*	1 U*	--	1 U*	--
	Bromoform (Tribromomethane)	ug/L	NE	5.54	--	1 U	--	--	1 U	1 U	--	1 U	--
	Bromomethane	ug/L	NE	11.2	--	5 U	--	--	5 U	2 U	--	5 U	--
	Carbon Disulfide	ug/L	NE	800	--	10 U	--	--	10 U	1 U	--	10 U	--
	Carbon Tetrachloride	ug/L	NE	0.625	--	1 U*	--	--	1 U*	1 U*	--	1 U*	--
	Chlorobenzene	ug/L	NE	160	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Chloroethane	ug/L	NE	NE	--	1 U	--	--	1 U	1 U	--	1 U	--
	Chloroform	ug/L	NE	1.41	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Chloromethane	ug/L	NE	NE		5 U	--	--	5 U	5 U	--	5 U	--
	cis-1,2-Dichloroethene	ug/L	NE	16	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	cis-1,3-Dichloropropene	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Dibromochloromethane	ug/L	NE	0.521	--	1 U*	--	--	1 U*	1 U*	--	1 U*	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600		5 U	--	--	5 U	1 U	--	5 U	--
	Ethylbenzene	ug/L	700	NL	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	2 U	--	--	2 U	1 U	--	2 U	--
	Methylene Chloride	ug/L	5	NL		5 U	--	--	5 U	5 U	--	5 U	--
	Styrene	ug/L	NE	1,600	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Tetrachloroethene	ug/L	5	NL		0.5 U	--	--	**1.58**	**1.24**	**0.8**	**0.658**	--
	Toluene	ug/L	1,000	NL	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Trans-1,3-Dichloropropene	ug/L	NE	NE	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Trichloroethene	ug/L	5	NL	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	--	0.5 U	--	--	0.5 U	1 U	--	**0.798**	--
	Vinyl Chloride	ug/L	0.2	NL	--	0.5 U*	--	--	0.5 U*	1 U*	--	0.5 U*	--
	Xylene, m-,p-	ug/L	1,000	NL	--	1 U	--	--	1 U	2 U	--	1 U	--
	Xylene, o-	ug/L	1,000	NL	--	0.5 U	--	--	0.5 U	1 U	--	0.5 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date				
					MW-9A	MW-13	MW-13	MW-20	MW-20
					MW-9A_20031001	MW-13_20031001	MW-13_20031219	MW-20_20031002	MW-20_20031219
					10/01/03	10/01/03	12/19/03	10/02/03	12/19/03
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chemical Oxygen Demand	mg/L	NE	NE	**11**	**10**	2 U	2 U	2 U
	Chloride	mg/L	NE	NE	--	--	--	--	--
	Conductivity	umhos/cm	NE	NE	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	1 U
	pH	SU	NE	NE	--	--	--	--	--
	Sulfate	mg/L	NE	NE	**18.3**	0.5 U	0.5 U	**62.9**	**18.9**
	Temperature	Deg C	NE	NE	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	**4.39**	1 U	1 U	**2.8**	**3.54**
Metals[4]	Barium	ug/L	NE	3,200	**53.5**	8.49 U	8.49 U	**242**	**199**
	Iron	ug/L	NE	11,200	10 U	10 U	**32**	10 U	10 U
	Manganese	ug/L	NE	2,240	10 U	10 U	10 U	10 U	10 U
	Zinc	ug/L	NE	4,800	**145**	10 U	10 U	**20**	10 U
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	1 U*	0.5 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	1 U*	0.5 U	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	1 U*	0.5 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	1 U	0.5 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	5 U	5 U	10 U	5 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.5 U	0.5 U	1 U	0.5 U	1 U
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	Bromochloromethane	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date				
					MW-9A	MW-13	MW-13	MW-20	MW-20
					MW-9A_20031001	MW-13_20031001	MW-13_20031219	MW-20_20031002	MW-20_20031219
					10/01/03	10/01/03	12/19/03	10/02/03	12/19/03
VOCs (continued)									
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	2 U	5 U	2 U
	Carbon Disulfide	ug/L	NE	800	10 U	10 U	1 U	10 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	1 U	0.5 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	0.5 U	**3.68**	**6.48**	0.5 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	1 U	0.5 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	1 U	5 U	1 U
	Ethylbenzene	ug/L	700	NL	0.5 U	0.5 U	1 U	0.5 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	2 U	2 U	1 U	2 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	0.5 U	0.5 U	1 U	0.5 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	1 U	**1.63**	**1.44**
	Toluene	ug/L	1,000	NL	0.5 U	0.5 U	1 U	0.5 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	1 U	0.5 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	1 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	1 U	0.5 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	1 U	0.5 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	1 U*	0.5 U*	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	2 U	1 U	2 U
	Xylene, o-	ug/L	1,000	NL	0.5 U	0.5 U	1 U	0.5 U	1 U

Table C-17

Historical Groundwater Analytical Data 2004[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	301	301	BEK	BEK	BEK	BEK	FOW	FOW
					301_20040323	301_20040624	301_20040927	301_20041220	BEK_20040323	BEK_20040624	BEK_20040927	BEK_20041220	FOW_20040323	FOW_20040624
					03/23/04	06/24/04	09/27/04	12/20/04	03/23/04	06/24/04	09/27/04	12/20/04	03/23/04	06/24/04
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Barium	mg/L	NE	3.2	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	mg/L	NE	11.2	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--	--
	Manganese	mg/L	NE	2.24	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--	--
	Zinc	mg/L	NE	4.8	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	1 U*	0.5 U*	0.5 U*	0.5 U*	1 U*	0.5 U*	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	301	301	BEK	BEK	BEK	BEK	FOW	FOW
					301_20040323	301_20040624	301_20040927	301_20041220	BEK_20040323	BEK_20040624	BEK_20040927	BEK_20041220	FOW_20040323	FOW_20040624
					03/23/04	06/24/04	09/27/04	12/20/04	03/23/04	06/24/04	09/27/04	12/20/04	03/23/04	06/24/04
VOCs (continued)	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	1 U*	0.5 U*	0.5 U*	0.5 U*	1 U*	0.5 U*	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	2 U	5 U	5 U	5 U	2 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	--	--	1 U	--	--	--	1 U	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	1 U	--	--	--	1 U	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.2 U	0.5 U*	0.5 U*	0.5 U*	0.2 U	0.5 U*	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW	HOUSE	House	House	HOUSE	MCWA	MCWA	MCWA	MCWA
					FOW_20040927	HOUSE_20040323	House_20040624	House_20040927	HOUSE_20041220	MCWA_20040323	MCWA_20040624	MCWA_20040927	MCWA_20041220
					09/27/04	03/23/04	06/24/04	09/27/04	12/20/04	03/23/04	06/24/04	09/27/04	12/20/04
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Barium	mg/L	NE	3.2	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Iron	mg/L	NE	11.2	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--
	Manganese	mg/L	NE	2.24	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--
	Zinc	mg/L	NE	4.8	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--
	Total PCBs	ug/L			--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	0.5 U*	0.5 U*	1 U*	0.5 U*	0.5 U*	0.5 U*	1 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U	1 U*	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW	HOUSE	House	House	HOUSE	MCWA	MCWA	MCWA	MCWA
					FOW_20040927	HOUSE_20040323	House_20040624	House_20040927	HOUSE_20041220	MCWA_20040323	MCWA_20040624	MCWA_20040927	MCWA_20041220
					09/27/04	03/23/04	06/24/04	09/27/04	12/20/04	03/23/04	06/24/04	09/27/04	12/20/04
VOCs (continued)	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	0.5 U*	0.5 U*	1 U*	0.5 U*	0.5 U*	0.5 U*	1 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U	1 U*	0.5 U
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	2 U	5 U	5 U	2 U	5 U	5 U	5 U	2 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	0.5 U	0.5 U	1 U*	0.5 U	0.5 U	0.5 U	1 U*	0.5 U
	Chlorobenzene	ug/L	NE	160	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Chloroethane	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Chloroform	ug/L	NE	1.41	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	--	--	1 U	--	--	--	1 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Toluene	ug/L	1,000	NL	1 U	--	--	1 U	--	--	--	1 U	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Trichloroethene	ug/L	5	NL	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	1 U	0.5 U	0.5 U	1 U	0.5 U	**1.09**	0.5 U	1 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.5 U*	0.5 U*	0.2 U	0.5 U*	0.5 U*	0.5 U*	0.2 U	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A
					MW-3_20040324	MW-3_20040928	MW-5A_20040324	MW-5A_20040624	MW-5A_20040928	MW-5A_20041221	MW-8B_20040324	MW-8B_20040928	MW-9A_20040324
					03/24/04	09/28/04	03/24/04	06/24/04	09/28/04	12/21/04	03/24/04	09/28/04	03/24/04
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	**1.12**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chemical Oxygen Demand	mg/L	NE	NE	2 U	**11**	2 U	2 U	**5**	2 U	2 U	2 U	2 U
	Cyanide	ug/L	NE	0.0096	5 U*	--	5 U*	--	--	--	5 U*	--	5 U*
	Nitrite-nitrogen	mg/L	NE	NE	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	**2.21**	**0.570**	0.500 U	0.500 U
	Sulfate	mg/L	NE	NE	**25**	**18**	**17.4**	**38.3**	**25**	**23.1**	**17.9**	**13.4**	**23.3**
	Total Organic Carbon	mg/L	NE	NE	**4.29**	**4.32**	**1.63**	**2.06**	**1.31**	**1.35**	**1.24**	1 U	**3.22**
Metals[4]	Antimony	ug/L	NE	6.4	3 U	--	3 U	--	--	--	3 U	--	3 U
	Arsenic	ug/L	5	NL	**2.3**	--	1 U	--	--	--	1 U	--	**2.3**
	Barium	mg/L	NE	3.2	--	**0.143**	--	--	**0.237**	**0.189**	--	**0.187**	--
	Barium	ug/L	NE	3,200	**55.4**	**143**	**156**	**260**	**237**	**189**	**160**	**187**	**56.2**
	Beryllium	ug/L	NE	32	3 U	--	3 U	--	--	--	3 U	--	3 U
	Cadmium	ug/L	5	NL	2 U	--	2 U	--	--	--	2 U	--	2 U
	Chromium	ug/L	50	NL	8.5 U	--	8.5 U	--	--	--	8.5 U	--	8.5 U
	Copper	ug/L	NE	640	**9.51**	--	7.45 U	--	--	--	7.45 U	--	7.45 U
	Iron	mg/L	NE	11.2	--	**0.0143**	--	--	0.0105 U	0.0105 U	--	0.0105 U	--
	Iron	ug/L	NE	11,200	**65.4**	**14.3**	10 U	**19**	10 U	10 U	10 U	10 U	10 U
	Lead	ug/L	15	NL	1 U	--	1 U	--	--	--	1 U	--	1 U
	Manganese	mg/L	NE	2.24		0.0105 U			0.0105 U	0.0105 U		0.0105 U	--
	Manganese	ug/L	NE	2,240	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Nickel	ug/L	NE	320	30 U	--	30 U	--	--	--	30 U	--	30 U
	Selenium	ug/L	NE	80	1 U	--	1 U	--	--	--	1 U	--	1 U
	Silver	ug/L	NE	80	10 U	--	10 U	--	--	--	10 U	--	10 U
	Thallium	ug/L	NE	0.16	2 U*	--	2 U*	--	--	--	2 U*	--	2 U*
	Zinc	mg/L	NE	4.8	--	0.0105 U	--	--	0.0105 U	0.0105 U	--	0.0105 U	--
	Zinc	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	PCB-aroclor 1221	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	PCB-aroclor 1232	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	PCB-aroclor 1242	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	PCB-aroclor 1248	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	PCB-aroclor 1254	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	PCB-aroclor 1260	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
	Total PCBs	ug/L			0.05 U	--	0.05 U	--	--	--	0.05 U	--	0.05 U
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.36**	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	0.5 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	0.5 U	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A	MW-8B	MW-8B	MW-9A
					MW-3_20040324	MW-3_20040928	MW-5A_20040324	MW-5A_20040624	MW-5A_20040928	MW-5A_20041221	MW-8B_20040324	MW-8B_20040928	MW-9A_20040324
					03/24/04	09/28/04	03/24/04	06/24/04	09/28/04	12/21/04	03/24/04	09/28/04	03/24/04
VOCs (continued)	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	0.5 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	2 U	2 U	2 U	2 U	2 U	5 U	2 U	2 U	2 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	10 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	**1.24**	**1.04**	**1.2**	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	0.2 U	1 U*	1 U*	0.2 U	0.5 U*	1 U*	0.2 U	1 U*
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-13	MW-13	MW-13	MW-13	MW-20	MW-20	MW-20	MW-20
					MW-13_20040324	MW-13_20040624	MW-13_20040928	MW-13_20041221	MW-20_20040324	MW-20_20040624	MW-20_20040928	MW-20_20041221
					03/24/04	06/24/04	09/28/04	12/21/04	03/24/04	06/24/04	09/28/04	12/21/04
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chemical Oxygen Demand	mg/L	NE	NE	2 U	2 U	2 U	2 U	2 U	2 U	**6**	2 U
	Cyanide	ug/L	NE	0.0096	5 U*	--	--	--	5 U*	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	**1.95**
	Sulfate	mg/L	NE	NE	**1.26**	**1.61**	**0.69**	**1.16**	**16.2**	**37.8**	**26.1**	**23.5**
	Total Organic Carbon	mg/L	NE	NE	1 U	1 U	1 U	1 U	**1.4**	**2.21**	**1.33**	1 U
Metals[4]	Antimony	ug/L	NE	6.4	3 U	--	--	--	3 U	--	--	--
	Arsenic	ug/L	5	NL	**2.6**	--	--	--	1 U	--	--	--
	Barium	mg/L	NE	3.2	--	--	0.01 U	0.01 U	--	--	**0.236**	**0.182**
	Barium	ug/L	NE	3,200	8.49 U	8.49 U	--	--	**158**	**260**	**236**	**182**
	Beryllium	ug/L	NE	32	3 U	--	--	--	3 U	--	--	--
	Cadmium	ug/L	5	NL	2 U	--	--	--	2 U	--	--	--
	Chromium	ug/L	50	NL	8.5 U	--	--	--	8.5 U	--	--	--
	Copper	ug/L	NE	640	7.45 U	--	--	--	7.45 U	--	--	--
	Iron	mg/L	NE	11.2	--	--	0.0105 U	0.0105 U	--	--	**0.0254**	0.0105 U
	Iron	ug/L	NE	11,200	10 U	10 U	--	--	10 U	**19.9**	**25.4**	10 U
	Lead	ug/L	15	NL	1 U	--	--	--	1 U	--	--	--
	Manganese	mg/L	NE	2.24	--	--	0.0105 U	0.0105 U			0.0105 U	0.0105 U
	Manganese	ug/L	NE	2,240	10 U	10 U	--	--	10 U	10 U	10 U	10 U
	Nickel	ug/L	NE	320	30 U	--	--	--	30 U	--	--	--
	Selenium	ug/L	NE	80	1 U	--	--	--	1 U	--	--	--
	Silver	ug/L	NE	80	10 U	--	--	--	10 U	--	--	--
	Thallium	ug/L	NE	0.16	2 U*	--	--	--	2 U*	--	--	--
	Zinc	mg/L	NE	4.8	--	--	0.0105 U	0.0105 U	--	--	0.0105 U	0.0105 U
	Zinc	ug/L	NE	4,800	**12.3**	10 U	--	--	10 U	10 U	10 U	10 U
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	0.05 U	--	--	--	0.05 U	--	--	--
	PCB-aroclor 1221	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
	PCB-aroclor 1232	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
	PCB-aroclor 1242	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
	PCB-aroclor 1248	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
	PCB-aroclor 1254	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
	PCB-aroclor 1260	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
	Total PCBs	ug/L			0.05 U	--	--	--	0.05 U	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	0.5 U*	1 U*	1 U*	1 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	0.5 U	1 U*	1 U*	1 U*	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-13	MW-13	MW-13	MW-13	MW-20	MW-20	MW-20	MW-20
					MW-13_20040324	MW-13_20040624	MW-13_20040928	MW-13_20041221	MW-20_20040324	MW-20_20040624	MW-20_20040928	MW-20_20041221
					03/24/04	06/24/04	09/28/04	12/21/04	03/24/04	06/24/04	09/28/04	12/21/04
VOCs (continued)	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	0.5 U*	1 U*	1 U*	1 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	2 U	2 U	2 U	5 U	2 U	2 U	2 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	10 U	1 U	1 U	1 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	--	1 U	1 U	1 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	0.5 U	1 U	**1.33**	**1.09**	**1.64**
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2400	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	1 U*	1 U*	0.2 U	0.5 U*	1 U*	1 U*	0.2 U	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	1 U	2 U	2 U	2 U	1 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U

Table C-18

Historical Groundwater Analytical Data 2005[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	301	301	BEK	BEK	BEK	BEK	DCW	FAV
					301_20050315	301_20050623	301_20050828	301_20051220	BEK_20050315	BEK_20050623	BEK_20050828	BEK_20051220	DCW_20050315	FAV_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Barium	mg/L	NE	3.2	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	mg/L	NE	11.2	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--	--
	Manganese	mg/L	NE	2.24	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--	--
	Zinc	mg/L	NE	4.8	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--	--
	Totals PCBs	ug/L			--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	301	301	BEK	BEK	BEK	BEK	DCW	FAV
					301_20050315	301_20050623	301_20050828	301_20051220	BEK_20050315	BEK_20050623	BEK_20050828	BEK_20051220	DCW_20050315	FAV_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--	--
	1-Methylnaphthalene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	3 & 4 Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4800	--	--	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64000	--	--	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--	--
	Carbazole	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	301	301	BEK	BEK	BEK	BEK	DCW	FAV
					301_20050315	301_20050623	301_20050828	301_20051220	BEK_20050315	BEK_20050623	BEK_20050828	BEK_20051220	DCW_20050315	FAV_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05
SVOCs (continued)	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--	--	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301	301	301	301	BEK	BEK	BEK	BEK	DCW	FAV
					301_20050315	301_20050623	301_20050828	301_20051220	BEK_20050315	BEK_20050623	BEK_20050828	BEK_20051220	DCW_20050315	FAV_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05
VOCs (continued)	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					FOW	FOW	FOW	FOW	GES	House	HOUSE	HOUSE	House	MCWA
					FOW_20050315	FOW_20050623	FOW_20050828	FOW_20051220	GES_20050315	House_20050315	HOUSE_20050623	HOUSE_20050828	House_20051220	MCWA_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Cyanide	ug/L	NE	0.0096	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	--	--	--	--	--	--
	Arsenic	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Barium	mg/L	NE	3.2	--	--	--	--	--	--	--	--	--	--
	Barium	ug/L	NE	3,200	--	--	--	--	--	--	--	--	--	--
	Beryllium	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--
	Cadmium	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Chromium	ug/L	50	NL	--	--	--	--	--	--	--	--	--	--
	Copper	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Iron	mg/L	NE	11.2	--	--	--	--	--	--	--	--	--	--
	Iron	ug/L	NE	11,200	--	--	--	--	--	--	--	--	--	--
	Lead	ug/L	15	NL	--	--	--	--	--	--	--	--	--	--
	Manganese	mg/L	NE	2.24	--	--	--	--	--	--	--	--	--	--
	Manganese	ug/L	NE	2,240	--	--	--	--	--	--	--	--	--	--
	Mercury	mg/L	0.002	NL	--	--	--	--	--	--	--	--	--	--
	Nickel	ug/L	NE	320	--	--	--	--	--	--	--	--	--	--
	Selenium	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Silver	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Thallium	ug/L	NE	0.16	--	--	--	--	--	--	--	--	--	--
	Zinc	mg/L	NE	4.8	--	--	--	--	--	--	--	--	--	--
	Zinc	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1221	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1232	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1242	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1248	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1254	ug/L			--	--	--	--	--	--	--	--	--	--
	PCB-aroclor 1260	ug/L			--	--	--	--	--	--	--	--	--	--
	Totals PCBs	ug/L			--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					FOW	FOW	FOW	FOW	GES	House	HOUSE	HOUSE	House	MCWA
					FOW_20050315	FOW_20050623	FOW_20050828	FOW_20051220	GES_20050315	House_20050315	HOUSE_20050623	HOUSE_20050828	House_20051220	MCWA_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	--	--	--	--	--	--
	1-Methylnaphthalene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	--	--	--	--	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	--	--	--	--	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	--	--	--	--	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	--	--	--	--	--	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	3 & 4 Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	--	--	--	--	--	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Aniline	ug/L	NE	7.68	--	--	--	--	--	--	--	--	--	--
	Anthracene	ug/L	NE	4800	--	--	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	--	--	--	--	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	--	--	--	--	--	--
	Benzoic Acid	ug/L	NE	64000	--	--	--	--	--	--	--	--	--	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	--	--	--	--	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	--	--	--	--	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--	--
	Carbazole	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	--	--	--	--	--	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					FOW	FOW	FOW	FOW	GES	House	HOUSE	HOUSE	House	MCWA
					FOW_20050315	FOW_20050623	FOW_20050828	FOW_20051220	GES_20050315	House_20050315	HOUSE_20050623	HOUSE_20050828	House_20051220	MCWA_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05
SVOCs (continued)	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Fluorene	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	--	--	--	--	--	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	--	--	--	--	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	--	--	--	--	--	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	--	--	--	--	--	--
	Naphthalene	ug/L	160	NL	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	--	--	--	--	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	--	--	--	--	--	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	--	--	--	--	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	--	--	--	--	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Phenol	ug/L	NE	2,400	--	--	--	--	--	--	--	--	--	--
	Pyrene	ug/L	NE	480	--	--	--	--	--	--	--	--	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					FOW	FOW	FOW	FOW	GES	House	HOUSE	HOUSE	House	MCWA
					FOW_20050315	FOW_20050623	FOW_20050828	FOW_20051220	GES_20050315	House_20050315	HOUSE_20050623	HOUSE_20050828	House_20051220	MCWA_20050315
					03/15/05	06/23/05	08/28/05	12/20/05	03/15/05	03/15/05	06/23/05	08/28/05	12/20/05	03/15/05
VOCs (continued)	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA	MCWA	MCWA	MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A
					MCWA_20050623	MCWA_20050828	MCWA_20051220	MW-3_20050316	MW-3_20050830	MW-5A_20050316	MW-5A_20050624	MW-5A_20050830	MW-5A_20051221
					06/23/05	08/28/05	12/20/05	03/16/05	08/30/05	03/16/05	06/24/05	08/30/05	12/21/05
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U
	Cyanide	ug/L	NE	0.0096	--	--	--	--	0.005 U	--	--	0.005 U	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	0.500 U	--	0.500 U	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--	5 U	--	5 U	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	**67**	**15.6**	**31.9**	**43.3**	**52**	--
	Total Organic Carbon	mg/L	NE	NE	--	--	--	**4.1**	**7.8**	**1.52**	**21.4**	**10.8**	--
Metals[4]	Antimony	ug/L	NE	6.4	--	--	--	--	3 U	--	--	3 U	--
	Arsenic	ug/L	5	NL	--	--	--	--	1 U	--	--	1 U	--
	Barium	mg/L	NE	3.2	--	--	--	**0.146**	--	**0.22**	**0.23**	--	**0.244**
	Barium	ug/L	NE	3,200	--	--	--	**146**	**70.4**	**220**	**230**	**268**	--
	Beryllium	ug/L	NE	32	--	--	--	--	3 U	--	--	3 U	--
	Cadmium	ug/L	5	NL	--	--	--	--	2 U	--	--	2 U	--
	Chromium	ug/L	50	NL	--	--	--	--	8.5 U	--	--	8.5 U	--
	Copper	ug/L	NE	640	--	--	--	--	7.45 U	--	--	7.45 U	--
	Iron	mg/L	NE	11.2	--	--	--	**0.0501**	--	0.01 U	0.01 U	--	0.0107 U
	Iron	ug/L	NE	11,200	--	--	--	**50.1**	10 U	10 U	10 U	10 U	--
	Lead	ug/L	15	NL	--	--	--	--	1 U	--	--	1 U	--
	Manganese	mg/L	NE	2.24	--	--	--	0.01 U	--	0.01 U	0.01 U	--	0.0107 U
	Manganese	ug/L	NE	2,240	--	--	--	10 U	10 U	10 U	10 U	10 U	--
	Mercury	mg/L	0.002	NL	--	--	--	--	0.0005 U	--	--	0.0005 U	--
	Nickel	ug/L	NE	320	--	--	--	--	30 U	--	--	30 U	--
	Selenium	ug/L	NE	80	--	--	--	--	1 U	--	--	1 U	--
	Silver	ug/L	NE	80	--	--	--	--	10 U	--	--	10 U	--
	Thallium	ug/L	NE	0.16	--	--	--	--	2 U*	--	--	2 U*	--
	Zinc	mg/L	NE	4.8	--	--	--	**0.0114**	--	0.01 U	0.01 U	--	0.0107 U
	Zinc	ug/L	NE	4,800	--	--	--	**11.4**	10 U	10 U	10 U	10 U	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	--	--	--	0.1 U	--	--	0.1 U	--
	PCB-aroclor 1221	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--
	PCB-aroclor 1232	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--
	PCB-aroclor 1242	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--
	PCB-aroclor 1248	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--
	PCB-aroclor 1254	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--
	PCB-aroclor 1260	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--
	Totals PCBs	ug/L			--	--	--	--	0.1 U	--	--	0.1 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA	MCWA	MCWA	MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A
					MCWA_20050623	MCWA_20050828	MCWA_20051220	MW-3_20050316	MW-3_20050830	MW-5A_20050316	MW-5A_20050624	MW-5A_20050830	MW-5A_20051221
					06/23/05	08/28/05	12/20/05	03/16/05	08/30/05	03/16/05	06/24/05	08/30/05	12/21/05
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	--	--	--	10 U	--	--	10 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	--	--	--	10 U*	--	--	10 U*	--
	1-Methylnaphthalene	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	--	--	--	10 U	--	--	10 U	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	--	--	--	10 U*	--	--	10 U*	--
	2,4-Dichlorophenol	ug/L	NE	24	--	--	--	--	10 U	--	--	10 U	--
	2,4-Dimethylphenol	ug/L	NE	160	--	--	--	--	10 U	--	--	10 U	--
	2,4-Dinitrophenol	ug/L	NE	32	--	--	--	--	20 U	--	--	20 U	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	--	--	--	10 U*	--	--	10 U*	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	--	--	--	10 U*	--	--	10 U*	--
	2-Chloronaphthalene	ug/L	NE	640	--	--	--	--	10 U	--	--	10 U	--
	2-Chlorophenol	ug/L	NE	40	--	--	--	--	10 U	--	--	10 U	--
	2-Methylnaphthalene	ug/L	160	NL	--	--	--	--	10 U	--	--	10 U	--
	2-Nitroaniline	ug/L	NE	160	--	--	--	--	10 U	--	--	10 U	--
	2-Nitrophenol	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	3 & 4 Methylphenol	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	--	--	--	10 U*	--	--	10 U*	--
	3-Nitroaniline	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	4-Chloroaniline	ug/L	NE	0.219	--	--	--	--	10 U*	--	--	10 U*	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	4-Nitroaniline	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Acenaphthene	ug/L	NE	960	--	--	--	--	10 U	--	--	10 U	--
	Acenaphthylene	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Aniline	ug/L	NE	7.68	--	--	--	--	10 U*	--	--	10 U*	--
	Anthracene	ug/L	NE	4800	--	--	--	--	10 U	--	--	10 U	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	--	--	--	10 U*	--	--	10 U*	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	--	--	--	10 U*	--	--	10 U*	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	--	--	--	10 U*	--	--	10 U*	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	--	--	--	10 U*	--	--	10 U*	--
	Benzoic Acid	ug/L	NE	64000	--	--	--	--	20 U	--	--	20 U	--
	Benzyl Alcohol	ug/L	NE	800	--	--	--	--	10 U	--	--	10 U	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	--	--	--	10 U*	--	--	10 U*	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	--	--	--	50 U*	--	--	50 U*	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	--	--	--	10 U	--	--	10 U	--
	Carbazole	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Chrysene	ug/L	NE	12.0	--	--	--	--	10 U	--	--	10 U	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	--	--	--	10 U*	--	--	10 U*	--
	Dibenzofuran	ug/L	NE	16	--	--	--	--	10 U	--	--	10 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	10 U	--	--	10 U	--
	Diethyl phthalate	ug/L	NE	12,800	--	--	--	--	10 U	--	--	10 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MCWA	MCWA	MCWA	MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A
					MCWA_20050623	MCWA_20050828	MCWA_20051220	MW-3_20050316	MW-3_20050830	MW-5A_20050316	MW-5A_20050624	MW-5A_20050830	MW-5A_20051221
					06/23/05	08/28/05	12/20/05	03/16/05	08/30/05	03/16/05	06/24/05	08/30/05	12/21/05
SVOCs (continued)	Dimethyl phthalate	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	--	--	--	10 U	--	--	10 U	--
	Fluoranthene	ug/L	NE	640	--	--	--	--	10 U	--	--	10 U	--
	Fluorene	ug/L	NE	640	--	--	--	--	10 U	--	--	10 U	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	--	--	--	10 U*	--	--	10 U*	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	--	--	--	10 U*	--	--	10 U*	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	--	--	--	10 U	--	--	10 U	--
	Hexachloroethane	ug/L	NE	1.09	--	--	--	--	10 U*	--	--	10 U*	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	--	--	--	10 U*	--	--	10 U*	--
	Isophorone	ug/L	NE	46.1	--	--	--	--	10 U	--	--	10 U	--
	Naphthalene	ug/L	160	NL	--	--	--	--	10 U	--	--	10 U	--
	Nitrobenzene	ug/L	NE	16	--	--	--	--	10 U	--	--	10 U	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	--	--	--	10 U*	--	--	10 U*	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	--	--	--	10 U	--	--	10 U	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	--	--	--	10 U	--	--	10 U	--
	Pentachlorophenol	ug/L	NE	0.219	--	--	--	--	10 U*	--	--	10 U*	--
	Phenanthrene	ug/L	NE	NE	--	--	--	--	10 U	--	--	10 U	--
	Phenol	ug/L	NE	2,400	--	--	--	--	10 U	--	--	10 U	--
	Pyrene	ug/L	NE	480	--	--	--	--	10 U	--	--	10 U	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	--	--	--	7.55 U	--	--	7.55 U	--
	Total Phenols	mg/L	NE	NE	--	--	--	--	0.02 U	--	--	0.02 U	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	10 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U
	Acetone	ug/L	NE	7,200	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromodichloromethane	ug/L	NE	0.706	0.5 U	0.5 U	0.862	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*

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					MCWA	MCWA	MCWA	MW-3	MW-3	MW-5A	MW-5A	MW-5A	MW-5A
					MCWA_20050623	MCWA_20050828	MCWA_20051220	MW-3_20050316	MW-3_20050830	MW-5A_20050316	MW-5A_20050624	MW-5A_20050830	MW-5A_20051221
					06/23/05	08/28/05	12/20/05	03/16/05	08/30/05	03/16/05	06/24/05	08/30/05	12/21/05
VOCs (continued)	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	0.5 U	0.5 U	0.5 U	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	**0.801**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	--	--	--	10 U	--	--	10 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Tetrachloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.17**	**0.841**	**1.16**	**1.5**
	Toluene	ug/L	1,000	NL	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	**1.06**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-8B	MW-8B	MW-9A	MW-9A	MW-13	MW-13	MW-13	MW-13	MW-20
					MW-8B_20050316	MW-8B_20050829	MW-9A_20050316	MW-9A_20050829	MW-13_20050316	MW-13_20050624	MW-13_20050829	MW-13_20051221	MW-20_20050316
					03/16/05	08/29/05	03/16/05	08/29/05	03/16/05	06/24/05	08/29/05	12/21/05	03/16/05
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
	Chemical Oxygen Demand	mg/L	NE	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--	0.005 U	--	--	0.005 U	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	0.500 U	--	0.500 U	--	0.500 U	0.500 U	0.500 U	--
	Nitrite-nitrogen	mg/L as N	NE	NE	5 U	--	5 U	--	1 U	--	--	--	5 U
	Sulfate	mg/L	NE	NE	**17.8**	**20**	**32.8**	**9.6**	**2.12**	**14.8**	0.5 U	**1.36**	**32.9**
	Total Organic Carbon	mg/L	NE	NE	1 U	**5**	**2.59**	**9.3**	1 U	**3.76**	2 U	--	**1.32**
Metals[4]	Antimony	ug/L	NE	6.4	--	3 U	--	3 U	--	--	3 U	--	--
	Arsenic	ug/L	5	NL	--	1 U	--	**2**	--	--	1 U	--	--
	Barium	mg/L	NE	3.2	**0.152**	--	**0.0628**	--	0.01 U	0.01 U	--	0.01 U	**0.225**
	Barium	ug/L	NE	3,200	**152**	**154**	**62.8**	**65.2**	--	--	8.49 U	--	**225**
	Beryllium	ug/L	NE	32	--	3 U	--	3 U	--	--	3 U	--	--
	Cadmium	ug/L	5	NL	--	2 U	--	2 U	--	--	2 U	--	--
	Chromium	ug/L	50	NL	--	8.5 U	--	8.5 U	--	--	8.5 U	--	--
	Copper	ug/L	NE	640	--	7.45 U	--	7.45 U	--	--	7.45 U	--	--
	Iron	mg/L	NE	11.2	0.01 U	--	**0.0124**	--	0.01 U	0.01 U	--	0.0107 U	0.01 U
	Iron	ug/L	NE	11,200	10 U	10 U	**12.4**	10 U	--	--	10 U	--	10 U
	Lead	ug/L	15	NL	--	1 U	--	1 U	--	--	1 U	--	--
	Manganese	mg/L	NE	2.24	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	0.0107 U	0.01 U
	Manganese	ug/L	NE	2,240	10 U	10 U	10 U	10 U	--	--	10 U	--	10 U
	Mercury	mg/L	0.002	NL	--	0.0005 U	--	0.0005 U	--	--	0.0005 U	--	--
	Nickel	ug/L	NE	320	--	30 U	--	30 U	--	--	30 U	--	--
	Selenium	ug/L	NE	80	--	1 U	--	1 U	--	--	1 U	--	--
	Silver	ug/L	NE	80	--	10 U	--	10 U	--	--	10 U	--	--
	Thallium	ug/L	NE	0.16	--	2 U*	--	2 U*	--	--	2 U*	--	--
	Zinc	mg/L	NE	4.8	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	0.0107 U	0.01 U
	Zinc	ug/L	NE	4,800	10 U	10 U	10 U	10 U	--	--	10 U	--	10 U
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	PCB-aroclor 1221	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	PCB-aroclor 1232	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	PCB-aroclor 1242	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	PCB-aroclor 1248	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	PCB-aroclor 1254	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	PCB-aroclor 1260	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--
	Totals PCBs	ug/L			--	0.1 U	--	0.1 U	--	--	0.143 U*	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-8B	MW-8B	MW-9A	MW-9A	MW-13	MW-13	MW-13	MW-13	MW-20
					MW-8B_20050316	MW-8B_20050829	MW-9A_20050316	MW-9A_20050829	MW-13_20050316	MW-13_20050624	MW-13_20050829	MW-13_20051221	MW-20_20050316
					03/16/05	08/29/05	03/16/05	08/29/05	03/16/05	06/24/05	08/29/05	12/21/05	03/16/05
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	10 U	--	10 U	--	--	10 U	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	10 U*	--	10 U*	--	--	10 U*	--	--
	1-Methylnaphthalene	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	10 U	--	10 U	--	--	10 U	--	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	10 U*	--	10 U*	--	--	10 U*	--	--
	2,4-Dichlorophenol	ug/L	NE	24	--	10 U	--	10 U	--	--	10 U	--	--
	2,4-Dimethylphenol	ug/L	NE	160	--	10 U	--	10 U	--	--	10 U	--	--
	2,4-Dinitrophenol	ug/L	NE	32	--	20 U	--	20 U	--	--	20 U	--	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	10 U*	--	10 U*	--	--	10 U*	--	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	10 U*	--	10 U*	--	--	10 U*	--	--
	2-Chloronaphthalene	ug/L	NE	640	--	10 U	--	10 U	--	--	10 U	--	--
	2-Chlorophenol	ug/L	NE	40	--	10 U	--	10 U	--	--	10 U	--	--
	2-Methylnaphthalene	ug/L	160	NL	--	10 U	--	10 U	--	--	10 U	--	--
	2-Nitroaniline	ug/L	NE	160	--	10 U	--	10 U	--	--	10 U	--	--
	2-Nitrophenol	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	3 & 4 Methylphenol	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	10 U*	--	10 U*	--	--	10 U*	--	--
	3-Nitroaniline	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	4-Chloroaniline	ug/L	NE	0.219	--	10 U*	--	10 U*	--	--	10 U*	--	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	4-Nitroaniline	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Acenaphthene	ug/L	NE	960	--	10 U	--	10 U	--	--	10 U	--	--
	Acenaphthylene	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Aniline	ug/L	NE	7.68	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Anthracene	ug/L	NE	4800	--	10 U	--	10 U	--	--	10 U	--	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Benzoic Acid	ug/L	NE	64000	--	20 U	--	20 U	--	--	20 U	--	--
	Benzyl Alcohol	ug/L	NE	800	--	10 U	--	10 U	--	--	10 U	--	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	50 U*	--	50 U*	--	--	50 U*	--	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	10 U	--	10 U	--	--	10 U	--	--
	Carbazole	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Chrysene	ug/L	NE	12.0	--	10 U	--	10 U	--	--	10 U	--	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Dibenzofuran	ug/L	NE	16	--	10 U	--	10 U	--	--	10 U	--	--
	Dibutyl phthalate	ug/L	NE	1,600	--	10 U	--	10 U	--	--	10 U	--	--
	Diethyl phthalate	ug/L	NE	12,800	--	10 U	--	10 U	--	--	10 U	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-8B	MW-8B	MW-9A	MW-9A	MW-13	MW-13	MW-13	MW-13	MW-20
					MW-8B_20050316	MW-8B_20050829	MW-9A_20050316	MW-9A_20050829	MW-13_20050316	MW-13_20050624	MW-13_20050829	MW-13_20051221	MW-20_20050316
					03/16/05	08/29/05	03/16/05	08/29/05	03/16/05	06/24/05	08/29/05	12/21/05	03/16/05
SVOCs (continued)	Dimethyl phthalate	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	10 U	--	10 U	--	--	10 U	--	--
	Fluoranthene	ug/L	NE	640	--	10 U	--	10 U	--	--	10 U	--	--
	Fluorene	ug/L	NE	640	--	10 U	--	10 U	--	--	10 U	--	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	10 U	--	10 U	--	--	10 U	--	--
	Hexachloroethane	ug/L	NE	1.09	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Isophorone	ug/L	NE	46.1	--	10 U	--	10 U	--	--	10 U	--	--
	Naphthalene	ug/L	160	NL	--	10 U	--	10 U	--	--	10 U	--	--
	Nitrobenzene	ug/L	NE	16	--	10 U	--	10 U	--	--	10 U	--	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	10 U*	--	10 U*	--	--	10 U*	--	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	10 U	--	10 U	--	--	10 U	--	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	10 U	--	10 U	--	--	10 U	--	--
	Pentachlorophenol	ug/L	NE	0.219	--	10 U*	--	10 U*	--	--	10 U*	--	--
	Phenanthrene	ug/L	NE	NE	--	10 U	--	10 U	--	--	10 U	--	--
	Phenol	ug/L	NE	2,400	--	10 U	--	10 U	--	--	10 U	--	--
	Pyrene	ug/L	NE	480	--	10 U	--	10 U	--	--	10 U	--	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	7.55 U	--	7.55 U	--	--	7.55 U	--	--
	Total Phenols	mg/L	NE	NE	--	0.02 U	--	0.02 U	--	--	0.02 U	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	**1.02**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	10 U	0.5 U	10 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4-Chlorotoluene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*

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					MW-8B	MW-8B	MW-9A	MW-9A	MW-13	MW-13	MW-13	MW-13	MW-20
					MW-8B_20050316	MW-8B_20050829	MW-9A_20050316	MW-9A_20050829	MW-13_20050316	MW-13_20050624	MW-13_20050829	MW-13_20051221	MW-20_20050316
					03/16/05	08/29/05	03/16/05	08/29/05	03/16/05	06/24/05	08/29/05	12/21/05	03/16/05
VOCs (continued)	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	10 U	--	10 U	--	--	10 U	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Tetrachloroethene	ug/L	5	NL	**0.765**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.19**
	Toluene	ug/L	1,000	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date		
					MW-20	MW-20	MW-20
					MW-20_20050624	MW-20_20050830	MW-20_20051221
					06/24/05	08/30/05	12/21/05
General Chemistry[3]	Ammonia	mg/L as N	NE	NE	0.5 U	0.5 U	--
	Chemical Oxygen Demand	mg/L	NE	NE	2 U	2 U	2 U
	Cyanide	ug/L	NE	0.0096	--	0.005 U	--
	Nitrite-nitrogen	mg/L	NE	NE	0.500 U	--	--
	Nitrite-nitrogen	mg/L as N	NE	NE	--	--	--
	Sulfate	mg/L	NE	NE	**8.9**	**56**	--
	Total Organic Carbon	mg/L	NE	NE	**20.7**	**11.5**	--
Metals[4]	Antimony	ug/L	NE	6.4	--	3 U	--
	Arsenic	ug/L	5	NL	--	1 U	--
	Barium	mg/L	NE	3.2	**0.226**	--	**0.245**
	Barium	ug/L	NE	3,200	**226**	**284**	--
	Beryllium	ug/L	NE	32	--	3 U	--
	Cadmium	ug/L	5	NL	--	2 U	--
	Chromium	ug/L	50	NL	--	8.5 U	--
	Copper	ug/L	NE	640	--	7.45 U	--
	Iron	mg/L	NE	11.2	0.01 U	--	0.0107 U
	Iron	ug/L	NE	11,200	10 U	10 U	--
	Lead	ug/L	15	NL	--	1 U	--
	Manganese	mg/L	NE	2.24	0.01 U	--	0.0107 U
	Manganese	ug/L	NE	2,240	10 U	10 U	--
	Mercury	mg/L	0.002	NL	--	0.0005 U	--
	Nickel	ug/L	NE	320	--	30 U	--
	Selenium	ug/L	NE	80	--	1 U	--
	Silver	ug/L	NE	80	--	10 U	--
	Thallium	ug/L	NE	0.16	--	2 U*	--
	Zinc	mg/L	NE	4.8	0.01 U	--	0.0107 U
	Zinc	ug/L	NE	4,800	10 U	10 U	--
PCBs[6]	PCB-aroclor 1016	ug/L	0.1	NL	--	0.1 U	--
	PCB-aroclor 1221	ug/L			--	0.1 U	--
	PCB-aroclor 1232	ug/L			--	0.1 U	--
	PCB-aroclor 1242	ug/L			--	0.1 U	--
	PCB-aroclor 1248	ug/L			--	0.1 U	--
	PCB-aroclor 1254	ug/L			--	0.1 U	--
	PCB-aroclor 1260	ug/L			--	0.1 U	--
	Totals PCBs	ug/L			--	0.1 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date		
					MW-20	MW-20	MW-20
					MW-20_20050624	MW-20_20050830	MW-20_20051221
					06/24/05	08/30/05	12/21/05
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	10 U	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	10 U	--
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	10 U*	--
	1-Methylnaphthalene	ug/L	NE	NE	--	10 U	--
	2,4,5-Trichlorophenol	ug/L	NE	800	--	10 U	--
	2,4,6-Trichlorophenol	ug/L	NE	3.98	--	10 U*	--
	2,4-Dichlorophenol	ug/L	NE	24	--	10 U	--
	2,4-Dimethylphenol	ug/L	NE	160	--	10 U	--
	2,4-Dinitrophenol	ug/L	NE	32	--	20 U	--
	2,4-Dinitrotoluene	ug/L	NE	0.282	--	10 U*	--
	2,6-Dinitrotoluene	ug/L	NE	0.0583	--	10 U*	--
	2-Chloronaphthalene	ug/L	NE	640	--	10 U	--
	2-Chlorophenol	ug/L	NE	40	--	10 U	--
	2-Methylnaphthalene	ug/L	160	NL	--	10 U	--
	2-Nitroaniline	ug/L	NE	160	--	10 U	--
	2-Nitrophenol	ug/L	NE	NE	--	10 U	--
	3 & 4 Methylphenol	ug/L	NE	NE	--	10 U	--
	3,3'-Dichlorobenzidine	ug/L	NE	0.194	--	10 U*	--
	3-Nitroaniline	ug/L	NE	NE	--	10 U	--
	4,6-Dinitro-2-Methylphenol	ug/L	NE	NE	--	10 U	--
	4-Bromophenyl phenyl ether	ug/L	NE	NE	--	10 U	--
	4-Chloro-3-Methylphenol	ug/L	NE	NE	--	10 U	--
	4-Chloroaniline	ug/L	NE	0.219	--	10 U*	--
	4-Chlorophenyl-Phenylether	ug/L	NE	NE	--	10 U	--
	4-Nitroaniline	ug/L	NE	NE	--	10 U	--
	4-Nitrophenol (p-Nitrophenol)	ug/L	NE	NE	--	10 U	--
	Acenaphthene	ug/L	NE	960	--	10 U	--
	Acenaphthylene	ug/L	NE	NE	--	10 U	--
	Aniline	ug/L	NE	7.68	--	10 U*	--
	Anthracene	ug/L	NE	4800	--	10 U	--
	Benzo(a)anthracene	ug/L	NE	0.120	--	10 U*	--
	Benzo(a)pyrene	ug/L	0.1	NL	--	10 U*	--
	Benzo(b)fluoranthene	ug/L	NE	0.120	--	10 U*	--
	Benzo(ghi)perylene	ug/L	NE	NE	--	10 U	--
	Benzo(k)fluoranthene	ug/L	NE	1.20	--	10 U*	--
	Benzoic Acid	ug/L	NE	64000	--	20 U	--
	Benzyl Alcohol	ug/L	NE	800	--	10 U	--
	Bis(2-Chloroethoxy)Methane	ug/L	NE	NE	--	10 U	--
	Bis(2-Chloroethyl)Ether	ug/L	NE	0.0398	--	10 U*	--
	Bis(2-chloroisopropyl) ether	ug/L	NE	NE	--	10 U	--
	Bis(2-Ethylhexyl) Phthalate	ug/L	NE	6.25	--	50 U*	--
	Butyl benzyl phthalate	ug/L	NE	46.1	--	10 U	--
	Carbazole	ug/L	NE	NE	--	10 U	--
	Chrysene	ug/L	NE	12.0	--	10 U	--
	Dibenzo(a,h)anthracene	ug/L	NE	0.0120	--	10 U*	--
	Dibenzofuran	ug/L	NE	16	--	10 U	--
	Dibutyl phthalate	ug/L	NE	1,600	--	10 U	--
	Diethyl phthalate	ug/L	NE	12,800	--	10 U	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date		
					MW-20	MW-20	MW-20
					MW-20_20050624	MW-20_20050830	MW-20_20051221
					06/24/05	08/30/05	12/21/05
SVOCs (continued)	Dimethyl phthalate	ug/L	NE	NE	--	10 U	--
	Di-N-Octyl Phthalate	ug/L	NE	160	--	10 U	--
	Fluoranthene	ug/L	NE	640	--	10 U	--
	Fluorene	ug/L	NE	640	--	10 U	--
	Hexachlorobenzene	ug/L	NE	0.0547	--	10 U*	--
	Hexachlorobutadiene	ug/L	NE	0.561	--	10 U*	--
	Hexachlorocyclopentadiene	ug/L	NE	48	--	10 U	--
	Hexachloroethane	ug/L	NE	1.09	--	10 U*	--
	Indeno(1,2,3-cd)pyrene	ug/L	NE	0.120	--	10 U*	--
	Isophorone	ug/L	NE	46.1	--	10 U	--
	Naphthalene	ug/L	160	NL	--	10 U	--
	Nitrobenzene	ug/L	NE	16	--	10 U	--
	N-Nitrosodi-n-propylamine	ug/L	NE	0.0125	--	10 U*	--
	N-Nitrosodiphenylamine (as diphenylamine)	ug/L	NE	17.9	--	10 U	--
	o-Cresol (2-methylphenol)	ug/L	NE	400	--	10 U	--
	Pentachlorophenol	ug/L	NE	0.219	--	10 U*	--
	Phenanthrene	ug/L	NE	NE	--	10 U	--
	Phenol	ug/L	NE	2,400	--	10 U	--
	Pyrene	ug/L	NE	480	--	10 U	--
	Total cPAH TEQ (ND=0.5RL)	ug/L	NE	NE	--	7.55 U	--
	Total Phenols	mg/L	NE	NE	--	0.02 U	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	0.5 U	0.5 U	0.5 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	0.5 U*	0.5 U*	0.5 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethane	ug/L	NE	7.68	0.5 U	0.5 U	0.5 U
	1,1-Dichloroethene	ug/L	NE	400	0.5 U	0.5 U	0.5 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	0.5 U*	0.5 U*	0.5 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	0.5 U	10 U	0.5 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	0.5 U	0.5 U	0.5 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	1,3-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	0.5 U	0.5 U	0.5 U
	2,2-Dichloropropane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	4-Chlorotoluene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	5 U	5 U	5 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.5 U	0.5 U	0.5 U
	Bromobenzene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	Bromochloromethane	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date		
					MW-20	MW-20	MW-20
					MW-20_20050624	MW-20_20050830	MW-20_20051221
					06/24/05	08/30/05	12/21/05
VOCs (continued)	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	10 U	10 U	10 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	0.5 U	0.5 U	0.5 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	0.5 U	0.5 U	0.5 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	0.5 U	0.5 U	0.5 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*
	Dibutyl phthalate	ug/L	NE	1,600	--	10 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	5 U	5 U	5 U
	Ethylbenzene	ug/L	700	NL	0.5 U	0.5 U	0.5 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	2 U	2 U	2 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	0.5 U	0.5 U	0.5 U
	Tetrachloroethene	ug/L	5	NL	**0.799**	**1.23**	**1.23**
	Toluene	ug/L	1,000	NL	0.5 U	0.5 U	0.5 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	0.5 U	0.5 U	0.5 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	0.5 U	0.5 U	0.5 U
	Trichloroethene	ug/L	5	NL	0.5 U	0.5 U	0.5 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	0.5 U	0.5 U	0.5 U
	Vinyl Chloride	ug/L	0.2	NL	0.5 U*	0.5 U*	0.5 U*
	Xylene, m-,p-	ug/L	1,000	NL	**1.01**	1 U	1 U
	Xylene, o-	ug/L	1,000	NL	0.5 U	0.5 U	0.5 U

Table C-19

Historical Groundwater Analytical Data 2006[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20060322 03/22/06	301 301_20060825 08/25/06	BEK BEK_20060322 03/22/06	BEK BEK_20060825 08/25/06	FOW FOW_20060322 03/22/06	FOW FOW_20060825 08/25/06	House HOUSE_20060322 03/22/06	HOUSE HOUSE_20060825 08/25/06	MCWA MCWA_20060322 03/22/06	MCWA MCWA_20060825 08/25/06
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
Metals[4]	Barium	mg/L	NE	3.2	--	--	--	--	--	--	--	--	--	--
	Iron	mg/L	NE	11.2	--	--	--	--	--	--	--	--	--	--
	Manganese	mg/L	NE	2.24	--	--	--	--	--	--	--	--	--	--
	Zinc	mg/L	NE	4.8	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20060322 03/22/06	301 301_20060825 08/25/06	BEK BEK_20060322 03/22/06	BEK BEK_20060825 08/25/06	FOW FOW_20060322 03/22/06	FOW FOW_20060825 08/25/06	House HOUSE_20060322 03/22/06	HOUSE HOUSE_20060825 08/25/06	MCWA MCWA_20060322 03/22/06	MCWA MCWA_20060825 08/25/06
VOCs (continued)	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.25**	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					MW-3 MW-3_20060323 03/23/06	MW-3 MW-3_20060824 08/24/06	MW-5A MW-5A_20060323 03/23/06	MW-5A MW-5A_20060621 06/21/06	MW-5A MW-5A_20061221 12/21/06	MW-5B MW-5B_20060824 08/24/06	MW-8B MW-8B_20060323 03/23/06	MW-8B MW-8B_20060824 08/24/06	MW-9A MW-9A_20060323 03/23/06	MW-9A MW-9A_20060824 08/24/06
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	**44**	**30**	**25**	**25**	**5**	**24**	**13**	**24**	**39**	**30**
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	--	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	--	**11**	--	--	--	**95.9**	--	**49.4**	--	**7.21**
Metals[4]	Barium	mg/L	NE	3.2	**0.0406**	**0.0459**	**0.204**	**0.135**	--	**0.161**	**0.164**	**0.191**	**0.0411**	**0.0503**
	Iron	mg/L	NE	11.2	0.0107 U	**0.0524**	0.0107 U	0.01 U	--	0.01 U	0.0107 U	0.01 U	0.0107 U	0.01 U
	Manganese	mg/L	NE	2.24	0.0107 U	0.01 U	0.0107 U	0.01 U	--	0.01 U	0.0107 U	0.01 U	0.0107 U	0.01 U
	Zinc	mg/L	NE	4.8	0.0107 U	0.01 U	0.0107 U	0.01 U	--	0.01 U	0.0107 U	0.01 U	0.0107 U	0.01 U
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	--	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					MW-3 MW-3_20060323 03/23/06	MW-3 MW-3_20060824 08/24/06	MW-5A MW-5A_20060323 03/23/06	MW-5A MW-5A_20060621 06/21/06	MW-5A MW-5A_20061221 12/21/06	MW-5B MW-5B_20060824 08/24/06	MW-8B MW-8B_20060323 03/23/06	MW-8B MW-8B_20060824 08/24/06	MW-9A MW-9A_20060323 03/23/06	MW-9A MW-9A_20060824 08/24/06
VOCs (continued)	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	--	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	**1.36**	--	**1.66**	**1.25**	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U*	0.2 U*	0.2 U*	--	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*	0.2 U*
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-13 MW-13_20060323 03/23/06	MW-13 MW-13_20060621 06/21/06	MW-13 MW-13_20060824 08/24/06	MW-13 MW-13_20061221 12/21/06	MW-20 MW-20_20060323 03/23/06	MW-20 MW-20_20060621 06/21/06	MW-20 MW-20_20060824 08/24/06	MW-20 MW-20_20061221 12/21/06
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	**16**	**10**	**5**	2 U	**25**	**15**	**17**	**4**
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	**1.35**	**1.34**	0.5 U	0.5 U	--	--	**118**	**24.6**
Metals[4]	Barium	mg/L	NE	3.2	0.01 U	0.01 U	0.01 U	--	**0.207**	**0.132**	**0.164**	--
	Iron	mg/L	NE	11.2	0.0107 U	0.01 U	0.01 U	--	0.0107 U	0.01 U	0.01 U	--
	Manganese	mg/L	NE	2.24	0.0107 U	0.01 U	0.01 U	--	0.0107 U	0.01 U	0.01 U	--
	Zinc	mg/L	NE	4.8	0.0107 U	0.01 U	0.01 U	--	0.0107 U	0.01 U	0.01 U	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	--	1 U*	1 U*	1 U*	--	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	--	1 U*	1 U*	1 U*	--	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	--	1 U*	1 U*	1 U*	--	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	--	5 U	5 U	5 U	--	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	--	10 U	10 U	10 U	--	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	--	10 U	10 U	10 U	--	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	--	25 U	25 U	25 U	--	25 U	25 U
	Benzene	ug/L	5	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Bromobenzene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	--	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	--	5 U	5 U	5 U	--	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	--	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	--	1 U	1 U	1 U	--	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-13 MW-13_20060323 03/23/06	MW-13 MW-13_20060621 06/21/06	MW-13 MW-13_20060824 08/24/06	MW-13 MW-13_20061221 12/21/06	MW-20 MW-20_20060323 03/23/06	MW-20 MW-20_20060621 06/21/06	MW-20 MW-20_20060824 08/24/06	MW-20 MW-20_20061221 12/21/06
VOCs (continued)	Chloroethane	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	--	5 U	5 U	5 U	--	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Dibromochloromethane	ug/L	NE	0.521	1 U*	--	1 U*	1 U*	1 U*	--	1 U*	1 U*
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	--	5 U	5 U	5 U	--	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	--	1 U	1 U	**1.36**	--	**1.31**	**1.78**
	Toluene	ug/L	1,000	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	--	1 U	1 U	1 U	--	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U*	--	0.2 U*	0.2 U*	0.2 U*	--	0.2 U*	0.2 U*
	Xylene, m-,p-	ug/L	1,000	NL	2 U	--	2 U	2 U	2 U	--	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	--	1 U	1 U	1 U	--	1 U	1 U

Table C-20

Historical Groundwater Analytical Data 2008[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20080616 06/16/08	301 301_20080922 09/22/08	301 301_20081215 12/15/08	BEK BEK_20080616 06/16/08	BEK BEK_20080922 09/22/08	BEK BEK_20081215 12/15/08	DCW DCW_20080922 09/22/08	FAV FAV_20080923 09/23/08	Fawler Fawler_20080616 06/16/08	FOW FOW_20080922 09/22/08
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	0.6 U	1 U	1 U	0.6 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	0.5 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20080616 06/16/08	301 301_20080922 09/22/08	301 301_20081215 12/15/08	BEK BEK_20080616 06/16/08	BEK BEK_20080922 09/22/08	BEK BEK_20081215 12/15/08	DCW DCW_20080922 09/22/08	FAV FAV_20080923 09/23/08	Fawler Fawler_20080616 06/16/08	FOW FOW_20080922 09/22/08
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	10 U*	10 U*	5 U	10 U*	10 U*	5 U	10 U*	10 U*	10 U*	10 U*
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	0.8 U	1 U	1 U	0.8 U	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW FOW_20081215 12/15/08	GES GES_20080922 09/22/08	Home Home_20080616 06/16/08	HOUSE HOUSE_20080922 09/22/08	House House_20081215 12/15/08	MCWA MCWA_20080616 06/16/08	MCWA MCWA_20080922 09/22/08	MCWA MCWA_20081215 12/15/08	MW-3 MW-3_20080311 03/11/08
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	**7**
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	0.200 U
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	**14.2**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	1 U	1 U	1 U	0.6 U	1 U	1 U	0.6 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	1 U	1 U	1 U	0.5 U	1 U	1 U	0.5 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	10 U
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	25 U
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	**0.433**
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					FOW FOW_20081215 12/15/08	GES GES_20080922 09/22/08	Home Home_20080616 06/16/08	HOUSE HOUSE_20080922 09/22/08	House House_20081215 12/15/08	MCWA MCWA_20080616 06/16/08	MCWA MCWA_20080922 09/22/08	MCWA MCWA_20081215 12/15/08	MW-3 MW-3_20080311 03/11/08
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	--	--	--	--	--	--	--	--	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	1 U
	Methylene Chloride	ug/L	5	NL	5 U	10 U*	10 U*	10 U*	5 U	10 U*	10 U*	5 U	10 U*
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	1 U	1 U	1 U	0.8 U	1 U	1 U	0.8 U	1 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	2 U
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3 MW-3_20080922 09/22/08	MW-5A MW-5A_20080311 03/11/08	MW-5A MW5A_20080616 06/16/08	MW-5A MW-5A_20080923 09/23/08	MW-5A MW-5A_20081215 12/15/08	MW-8B MW-8B_20080311 03/11/08	MW-8B MW-8B_20080922 09/22/08	MW-9A MW-9A_20080311 03/11/08	MW-9A MW-9A_20080922 09/22/08
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	**8**	5 U	**12**	5 U	5 U	5 U	**52**	**8**	**24**
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	**13.8**	**14.4**	**26**	**71.3**	**21**	**15.6**	**41.9**	**22.6**	**6.76**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	0.6 U	1 U	1 U	1 U	1 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	5 U	5 U	3 U	3 U	5 U	3 U	5 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-3 MW-3_20080922 09/22/08	MW-5A MW-5A_20080311 03/11/08	MW-5A MW5A_20080616 06/16/08	MW-5A MW-5A_20080923 09/23/08	MW-5A MW-5A_20081215 12/15/08	MW-8B MW-8B_20080311 03/11/08	MW-8B MW-8B_20080922 09/22/08	MW-9A MW-9A_20080311 03/11/08	MW-9A MW-9A_20080922 09/22/08
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	10 U*	10 U*	10 U*	10 U*	5 U	10 U*	10 U*	10 U*	10 U*
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	**1.03**	1 U	**1.24**	**1.09**	1 U	1 U	1 U	1 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-13 MW-13_20080311 03/11/08	MW-13 MW13_20080616 06/16/08	MW-13 MW-13_20080922 09/22/08	MW-13 MW-13_20081215 12/15/08	MW-20 MW-20_20080311 03/11/08	MW-20 MW20_20080616 06/16/08	MW-20 MW-20_20080923 09/23/08	MW-20 MW-20_20081215 12/15/08
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	**5**	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	0.5 U	0.5 U	0.5 U	**5.58**	**14.5**	**24.1**	**65.2**	**22.1**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	0.6 U	1 U	1 U	1 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	**8.32**	**2.05**	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	5 U	3 U	3 U	5 U	5 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-13 MW-13_20080311 03/11/08	MW-13 MW13_20080616 06/16/08	MW-13 MW-13_20080922 09/22/08	MW-13 MW-13_20081215 12/15/08	MW-20 MW-20_20080311 03/11/08	MW-20 MW20_20080616 06/16/08	MW-20 MW-20_20080923 09/23/08	MW-20 MW-20_20081215 12/15/08
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	10 U*	10 U*	10 U*	5 U	10 U*	10 U*	10 U*	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	1 U	1 U	1 U	0.8 U	**1.03**	1 U	**1.17**	**0.95**
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Table C-21

Historical Groundwater Analytical Data 2009[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20090322 03/22/09	301 301_20090614 06/14/09	301 301_20090913 09/13/09	BEK BEK_20090322 03/22/09	BEK BEK_20090614 06/14/09	BEK BEK_20090913 09/13/09	FOW FOW_20090322 03/22/09	FOW FOW_20090614 06/14/09	FOW FOW_20090913 09/13/09	House House_20090322 03/22/09
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	5 U	3 U	3 U	5 U	3 U	3 U	5 U	3 U	3 U	5 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20090322 03/22/09	301 301_20090614 06/14/09	301 301_20090913 09/13/09	BEK BEK_20090322 03/22/09	BEK BEK_20090614 06/14/09	BEK BEK_20090913 09/13/09	FOW FOW_20090322 03/22/09	FOW FOW_20090614 06/14/09	FOW FOW_20090913 09/13/09	House House_20090322 03/22/09
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	--	1 U	1 U	--	1 U	1 U	--	1 U	1 U	--
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					House House_20090614 06/14/09	HOUSE HOUSE_20090913 09/13/09	MCWA MCWA_20090322 03/22/09	MCWA MCWA_20090614 06/14/09	MCWA MCWA_20090913 09/13/09	MW-3 MW-3_20090323 03/23/09	MW-5A MW-5A_20090323 03/23/09	MW-5A MW5A_20090615 06/15/09	MW-5A MW-5A_20091207 12/07/09
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	**22**	5 U	5 U	5 U
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	--	--	--	--	--	**25.8**	**11.8**	**27.9**	**18.5**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	--	--	--	--	--	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	5 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					House House_20090614 06/14/09	HOUSE HOUSE_20090913 09/13/09	MCWA MCWA_20090322 03/22/09	MCWA MCWA_20090614 06/14/09	MCWA MCWA_20090913 09/13/09	MW-3 MW-3_20090323 03/23/09	MW-5A MW-5A_20090323 03/23/09	MW-5A MW5A_20090615 06/15/09	MW-5A MW-5A_20091207 12/07/09
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	**0.94**
	Toluene	ug/L	1,000	NL	--	--	--	--	--	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	**1.24**	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-8A MW-8A_20090323 03/23/09	MW-9A MW-9A_20090323 03/23/09	MW-13 MW 13_20090615 06/15/09	MW-13 MW-13_20090323 03/23/09	MW-13 MW-13_20091207 12/07/09	MW-20 MW 20_20090615 06/15/09	MW-20 MW-20_20090323 03/23/09	MW-20 MW-20_20091207 12/07/09
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	5 U	**12**	5 U	5 U	5 U	5 U	**12**	**7**
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	**15.6**	**23.2**	0.5 U	0.5 U	0.5 U	**27.4**	**13.7**	**18.5**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	**6.92**	1 U	**2.15**	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date							
					MW-8A MW-8A_20090323 03/23/09	MW-9A MW-9A_20090323 03/23/09	MW-13 MW 13_20090615 06/15/09	MW-13 MW-13_20090323 03/23/09	MW-13 MW-13_20091207 12/07/09	MW-20 MW 20_20090615 06/15/09	MW-20 MW-20_20090323 03/23/09	MW-20 MW-20_20091207 12/07/09
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	**0.95**
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Table C-22

Historical Groundwater Analytical Data 2010[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20100328 03/28/10	301 301_20100919 09/19/10	301 301_20101128 11/28/10	BEC BEC_20100328 03/28/10	BEK BEK_20100919 09/19/10	BEK BEK_20101128 11/28/10	FOW FOW_20100328 03/28/10	FOW FOW_20100919 09/19/10	FOW FOW_20101128 11/28/10	House HOUSE_20100328 03/28/10
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20100328 03/28/10	301 301_20100919 09/19/10	301 301_20101128 11/28/10	BEC BEC_20100328 03/28/10	BEK BEK_20100919 09/19/10	BEK BEK_20101128 11/28/10	FOW FOW_20100328 03/28/10	FOW FOW_20100919 09/19/10	FOW FOW_20101128 11/28/10	House HOUSE_20100328 03/28/10
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Toluene	ug/L	1000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					HOUSE HOUSE_20100919 09/19/10	HOUSE HOUSE_20101128 11/28/10	MCWA MCWA_20100328 03/28/10	MCWA MCWA_20100919 09/19/10	MCWA MCWA_20101128 11/28/10	MW-3 MW-3_20100329 03/29/10	MW-3 MW-3_20100920 09/20/10	MW-5A MW-5A_20100329 03/29/10	MW-5A MW-5A_20100920 09/20/10
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	**7**	5 U	5 U	5 U
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	**7.53**	**16.8**	**21.7**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	--	--	--	--	--	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					HOUSE HOUSE_20100919 09/19/10	HOUSE HOUSE_20101128 11/28/10	MCWA MCWA_20100328 03/28/10	MCWA MCWA_20100919 09/19/10	MCWA MCWA_20101128 11/28/10	MW-3 MW-3_20100329 03/29/10	MW-3 MW-3_20100920 09/20/10	MW-5A MW-5A_20100329 03/29/10	MW-5A MW-5A_20100920 09/20/10
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	--	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	**1.03**
	Toluene	ug/L	1000	NL	--	--	--	--	--	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	**1.93**	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-5A MW-5A_20101129 11/29/10	MW-8B MW-8B_20100329 03/29/10	MW-8B MW-8B_20100920 09/20/10	MW-9 MW-9_20100329 03/29/10	MW-9A MW-9_20100920 09/20/10	MW-13 MW-13_20100329 03/29/10	MW-13 MW-13_20100920 09/20/10	MW-13 MW-13_20101129 11/29/10	MW-20 MW-20_20100329 03/29/10
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	**16.2**	**15.3**	**15.4**	--	**5.57**	0.5 U	0.5 U	0.5 U	
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	**1**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					MW-5A MW-5A_20101129 11/29/10	MW-8B MW-8B_20100329 03/29/10	MW-8B MW-8B_20100920 09/20/10	MW-9 MW-9_20100329 03/29/10	MW-9A MW-9_20100920 09/20/10	MW-13 MW-13_20100329 03/29/10	MW-13 MW-13_20100920 09/20/10	MW-13 MW-13_20101129 11/29/10	MW-20 MW-20_20100329 03/29/10
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Toluene	ug/L	1000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	MW-20 MW-20_20100920 09/20/10	MW-20 MW-20_20101129 11/29/10
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	5 U	**5.33**
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	**31.4**	**16.1**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U
	Benzene	ug/L	5	NL	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	1 U	**1.25**
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	MW-20 MW-20_20100920 09/20/10	MW-20 MW-20_20101129 11/29/10
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	**1.02**	**0.86**
	Toluene	ug/L	1000	NL	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U

Table C-23

Historical Groundwater Analytical Data 2011[1] - Data Not Validated

Marshall Landfill

Spokane County, Washington

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20110925 09/25/11	301 301_20111210 12/10/11	BEK BEK_20110619 06/19/11	BEK BEK_20110925 09/25/11	BEK BEK_20111210 12/10/11	FOW FOW_20110619 06/19/11	FOW FOW_20110925 09/25/11	FOW FOW_20111210 12/10/11	HOUSE HOUSE_20110619 06/19/11	HOUSE HOUSE_20110925 09/25/11
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Sulfate	mg/L	NE	NE	--	--	--	--	--	--	--	--	--	--
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NL	--	--	--	--	--	--	--	--	--	--
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	--	--	--	--	--	--
	Acetone	ug/L	NE	7,200	--	--	--	--	--	--	--	--	--	--
	Benzene	ug/L	5	NL	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date									
					301 301_20110925 09/25/11	301 301_20111210 12/10/11	BEK BEK_20110619 06/19/11	BEK BEK_20110925 09/25/11	BEK BEK_20111210 12/10/11	FOW FOW_20110619 06/19/11	FOW FOW_20110925 09/25/11	FOW FOW_20111210 12/10/11	HOUSE HOUSE_20110619 06/19/11	HOUSE HOUSE_20110925 09/25/11
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--		--	--	--	--	--	--	--
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Toluene	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	--	--	--	--	--	--

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					HOUSE HOUSE_20111210 12/10/11	MCWA MCWA_20110619 06/19/11	MCWA MCWA_20110925 09/25/11	MCWA MCWA_20111210 12/10/11	MW-3 MW-3_20110926 09/26/11	MW-5A MW-5A_20110620 06/20/11	MW-5A MW-5A_20110926 09/26/11	MW-5A MW-5A_20111211 12/11/11	MW-8B MW-8B_20110926 09/26/11
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	--	--	--	--	**30**	**23**	**6**	**21**	**10**
	Nitrite-nitrogen	mg/L	NE	NE	--	--	--	--	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	--	--	--	--	**15.4**	**25.3**	**33**	**18**	**27.8**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NL	--	--	--	--	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	--	--	--	--	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	--	--	--	--	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	--	--	--	--	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date								
					HOUSE HOUSE_20111210 12/10/11	MCWA MCWA_20110619 06/19/11	MCWA MCWA_20110925 09/25/11	MCWA MCWA_20111210 12/10/11	MW-3 MW-3_20110926 09/26/11	MW-5A MW-5A_20110620 06/20/11	MW-5A MW-5A_20110926 09/26/11	MW-5A MW-5A_20111211 12/11/11	MW-8B MW-8B_20110926 09/26/11
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	**1.05**	0.8 U	0.8 U
	Toluene	ug/L	1,000	NL	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	**1.22**	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	--	--	--	--	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	--	--	--	--	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date						
					MW-9A MW-9A_20110926 09/26/11	MW-13 MW-13_20110620 06/20/11	MW-13 MW-13_20110926 09/26/11	MW-13 MW-13_20111211 12/11/11	MW-20 MW-20_20110620 06/20/11	MW-20 MW-20_20110926 09/26/11	MW-20 MW-20_20111211 12/11/11
General Chemistry[3]	Chemical Oxygen Demand	mg/L	NE	NE	**29**	**15**	**8**	**26**	**28**	**11**	**15**
	Nitrite-nitrogen	mg/L	NE	NE	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
	Sulfate	mg/L	NE	NE	**1.83**	0.5 U	0.5 U	0.5 U	**24.7**	**35.9**	**18**
SVOCs[7]	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs[8]	1,1,1,2-Tetrachloroethane	ug/L	NE	1.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,1-Trichloroethane	ug/L	200	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1,2,2-Tetrachloroethane	ug/L	NE	0.219	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1,2-Trichloroethane	ug/L	NE	0.768	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,1-Dichloroethane	ug/L	NE	7.68	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloroethene	ug/L	NE	400	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,1-Dichloropropene	ug/L	NE	NE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
	1,2,3-Trichlorobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,3-Trichloropropane	ug/L	NE	0.00146	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	1,2,4-Trichlorobenzene	ug/L	NE	1.51	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2,4-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dibromo-3-Chloropropane	ug/L	NE	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	NE	720	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,2-Dichloroethane	ug/L	5	NL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
	1,2-Dichloropropane	ug/L	NE	1.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3,5-Trimethylbenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,3-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)	ug/L	NE	8.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2,2-Dichloropropane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	2-Butanone (MEK)	ug/L	NE	4,800	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	2-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Chlorotoluene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)	ug/L	NE	640	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	Acetone	ug/L	NE	7,200	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	Benzene	ug/L	5	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Bromobenzene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromochloromethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromodichloromethane	ug/L	NE	0.706	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Bromoform (Tribromomethane)	ug/L	NE	5.54	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Bromomethane	ug/L	NE	11.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Carbon Disulfide	ug/L	NE	800	**3.01**	1 U	1 U	1 U	1 U	1 U	1 U
	Carbon Tetrachloride	ug/L	NE	0.625	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Chlorobenzene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroethane	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Chloroform	ug/L	NE	1.41	1 U	1 U	1 U	**2.34**	1 U	1 U	1 U
	Chloromethane	ug/L	NE	NE	3 U	3 U	3 U	3 U	3 U	3 U	3 U
	cis-1,2-Dichloroethene	ug/L	NE	16	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	cis-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Analytical Group	Analyte	Units	MTCA Method A CUL[2]	MTCA Method B CUL[2]	Sample Location, Name and Date						
					MW-9A MW-9A_20110926 09/26/11	MW-13 MW-13_20110620 06/20/11	MW-13 MW-13_20110926 09/26/11	MW-13 MW-13_20111211 12/11/11	MW-20 MW-20_20110620 06/20/11	MW-20 MW-20_20110926 09/26/11	MW-20 MW-20_20111211 12/11/11
VOCs (continued)	Dibromochloromethane	ug/L	NE	0.521	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*	1 U*
	Dibromomethane	ug/L	NE	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Dichlorodifluoromethane (CFC-12)	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Ethylbenzene	ug/L	700	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Isopropylbenzene (Cumene)	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Methylene Chloride	ug/L	5	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Styrene	ug/L	NE	1,600	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Tetrachloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	**1.04**	0.8 U
	Toluene	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,2-Dichloroethene	ug/L	NE	160	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trans-1,3-Dichloropropene	ug/L	NE	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Trichloroethene	ug/L	5	NL	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
	Trichlorofluoromethane (CFC-11)	ug/L	NE	2,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Vinyl Chloride	ug/L	0.2	NL	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Xylene, m-,p-	ug/L	1,000	NL	2 U	2 U	2 U	2 U	2 U	2 U	2 U
	Xylene, o-	ug/L	1,000	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Table C-24

Historical Analytical Results Tables Notes

Marshall Landfill

Spokane County, Washington

Notes:

[1]Location of analyses is unknown.

[2]Current Model Toxics Control Act (MTCA) Method A and B cleanup levels. Method B cleanup levels are referenced from Ecology's CLARC Master Spreadsheet. When compounds have multiple cleanup levels referenced in CLARC (carcinogenic and non-carcinogenic), the most conservative value is displayed.

[3]General Chemistry analyzed by Enironmental Protection Agency (EPA) methods 300.0, 335.2, 335.3, 350.1, 350.2, 350.3, 354.1, 410.4, 415.1 and UNKNOWN.

[4]Metals analyzed by EPA Methods 200.7, 204.2, 206.2, 239.2, 245.1, 270.2, 279.2, 6010, 6010B, 6010C, 6020, 7061, 7470, 7741 and UNKNOWN.

[5]Organochlorine Pesticides analyzed by EPA Method 8080.

[6]Polychlorinated biphenyls analyzed by EPA Methods 8080, 8082 and UNKNOWN.

[7]Semi-volatile organic compounds analyzed by EPA Method 8270C and UNKNOWN.

[8]Volatile organic compounds analyzed by EPA Methods 8010, 8240, 8260, 8260B, 8270C and UNKNOWN.

-- = not tested

J = estimated result

NE = not established

NL = indicates that a value (Method A or Method B) is available, but was not selected as the project cleanup level

mg/L = milligrams per liter

Deg C = degrees celcius

mg/L as N = milligrams per liter as nitrogen

SU = standard unit; umhos/cm = micromhos per centimeter

U = analyte was not detected above the reporting limit

µg/L= micrograms per liter

PCBs = polychlorinated biphenyls

SVOCs = semi-volatile organic compounds

VOCs = volatile organic compounds

Bold indicates that the analyte was detected greater than the laboratory reporting limit.

Bold and shading indicates analyte was detected greater than the applicable cleanup level.

Blue shading indicates the reporting limit for this specific compound is greater than the applicable cleanup level.

APPENDIX D
Potential Receptor Evaluation

APPENDIX D
POTENTIAL RECEPTOR EVALUATION

INTRODUCTION

Marshall Landfill (herein designated the Site) is situated northwest of Cheney-Spokane Road about one mile southwest of the town of Marshall, Washington and seven miles southwest of the city of Spokane, Washington. The Site is located within portions of Sections 21 and 28 of Township 24 North, Range 42 East, approximately shown in the Vicinity Map, Figure D-1. The Site is bounded on the east by South Cheney-Spokane Road, on the south by a former landfill property owned by Spokane County, and on the west and north by vacant land. The general Site layout, and the locations of monitoring wells described in this report, are presented in the Site Plan and Groundwater Monitoring Well Map, Figure D-2.

The objective of this potential receptor evaluation is to identify receptors (people and sensitive ecological receptors) that could possibly come into contact with site-related contamination. This potential receptor evaluation contains four primary components, including:

- An evaluation of potential exposure pathways and receptors.
- Discussion of land use within and immediately surrounding the Site.
- Identification of sensitive ecological receptors.
- Discussion of potential users of water in proximity to the Site.

POTENTIAL EXPOSURE PATHWAYS AND RECEPTORS

Conceptual Site Model

GeoEngineers prepared a conceptual site model (CSM) to describe surface and subsurface site conditions, define the nature and extent of known contamination, and to identify potential exposure pathways to Site contaminants of concern and potential receptors. The CSM is graphically depicted in Conceptual Site Model, Figure D-3, and expanded upon in the below discussion.

Potential Contaminant Sources

Exposure Pathways

The source of contamination at the Site is the landfilled waste. Potentially complete exposure pathways, including release mechanisms, exposure points, and exposure routes for contamination contained within the landfill generally are:

- Direct contact with soil impacted by waste and/or leachate from the landfill (dermal contact and inhalation/incidental ingestion of dust and contaminants).
- Inhalation of landfill gases emanating from the landfill.
- Direct contact and/or ingestion of groundwater and/or surface water impacted by leachate from the landfill.

Exposed Landfill Waste

The Site consists of two waste disposal areas: the approximate 25-acre "Main Landfill," which operated from 1970 through 1990, and an approximate 5-acre area known as the "Five-Acre Landfill," which operated from 1980 through 1984. Both the Five-Acre and the Main Landfills currently have earthen covers: the Five-Acre Landfill has a clay (loess) cap and the Main Landfill has a fine to medium sand cover. However, landfill waste is exposed in portions of the Main Landfill cover. Also, the as-built thickness of the clay cap on the Five-Acre Landfill appears to be discontinuous and waste is variably exposed at surface. Both conditions allow for potential direct contact with wastes contained in the landfill areas. Potential exposure pathways include dermal contact, inhalation of dusts and vapors, and ingestion of dust.

Landfill Gas

Landfill gas consists of volatile organic compound (VOC) vapors from industrial and other waste disposed in the landfills and methane generated from bacterial decomposition of landfilled wastes. Landfill gas migration from the Five-Acre Landfill to ambient air is likely minimal because the competent portions of the clay cap limit this exposure pathway.

The Main Landfill is capped with a relatively high-permeability fine to medium-grained sand cover that minimally restricts vapor migration from the landfill area, allowing landfill gas to migrate to ambient air.

A primarily concern associated with VOC and methane landfill gas concentrations is the potential for vapor intrusion into overlying or nearby buildings. Buildings are not present on either landfill and are not expected to be constructed on either landfill in the future. The only buildings near either landfill that may be subject to vapor intrusion are the Action Materials' buildings between the gravel pit and the Main Landfill.

Leachate

Leachate consists of liquid wastes directly disposed into the landfills and precipitation infiltration through the landfills that extracts solutes as it contacts solid and liquid wastes. Observations of the clay cap over the Five-Acre Landfill during recent Site visits indicate that the cap is not intact over the entire area of the landfill and some waste is exposed. Precipitation likely infiltrates through the cover and into the landfilled waste at these exposed points as well as through vegetation penetrations and animal burrows. Precipitation over the Five-Acre Landfill that does not infiltrate likely evapotranspirates or forms surface water runoff.

Infiltration through the Main Landfill is only minimally restricted by the permeable sand cover and will continue to generate leachate as precipitation migrates through the cover, the landfill, and eventually to groundwater. Contaminants in the leachate will sorb onto unsaturated soil in the migration path, leaving a zone of residual contamination. Closer to the smear zone of water table fluctuation, the residual contamination will be periodically flushed into groundwater continuing a cycle of continuous groundwater contamination.

Potential exposure locations for leachate-impacted groundwater include drinking water wells and downgradient surface water bodies hydraulically connected to groundwater. People are the most likely potential receptors of leachate-impacted groundwater through drinking water wells, although livestock and pets also could be potential receptors. Minnie Creek, located east of the Site across Cheney-Spokane Road, is the closest surface water body. Minnie Creek is an ephemeral stream and losing when flowing; therefore,

the potential for impact to Minnie Creek is minimal. Minnie Creek flows into Marshall Creek over half a mile down-gradient (northeast) of the Site.

Other Contaminant Sources

Spokane County operated a separate landfill on the adjacent property to the south of the Main Landfill. Reportedly the Spokane County Landfill was a "daily burn" landfill where waste was burned each day for disposal. Incomplete combustion (like burning waste at lower temperatures) generates carcinogenic polycyclic aromatic hydrocarbons (cPAH) and dioxins and furans as byproducts. There is a potential that buried waste and contaminants associated from daily burn activities (products of incomplete combustion) at the Spokane County Landfill have contaminated surrounding soil and/or groundwater beneath the Site.

LAND USE AND ACCESS

Based on the Generalized Zoning Map produced by Spokane County Building and Planning, the Marshall Landfill Site is in an area zoned as Rural Conservation (RCV). According to Spokane County Zoning Code (adopted 2004), the RCV zone applies to "environmentally sensitive areas, including critical areas and wildlife corridors." The RCV "encourages low-impact uses and utilizes rural clustering to protect sensitive areas and preserve open space." Other land uses in the Site vicinity include Rural Traditional (RT) and Mineral Lands (MZ or M). Rural Traditional zone "includes large-lot residential uses and resource-based industries, including ranching, farming and wood lot operations." Agricultural, residential and business uses are allowed, with some restrictions, in the Rural Conservation and Rural Traditional Zones. Mineral Lands zone "is provided to allow for the quarrying, blasting, reduction, processing and mining of minerals or materials;" commercial and residential uses are prohibited. The Mineral Lands zone applies to an area with gravel pits north of the City of Marshall, approximately three-quarters of a mile northeast of the Site.

The area north of the Main Landfill and east of the Five-Acre Landfill currently is a gravel pit operated by Action Materials. The property adjacent to the southern boundary of the Main Landfill was operated by Spokane County as a daily-burn landfill from the 1950s until 1970. The remaining land within a mile of the Site includes limited residential, several agricultural areas and open space.

The primary access to both the Action Materials facility and the Main and Five-Acre Landfills is a gravel roadway originating along the east portion of the Site at Cheney-Spokane Road. The gravel roadway travels through the Site and continues west, where it intersects South Spotted Road. Access to the gravel roadway is restricted by Action Materials through a gate located at Cheney-Spokane Road, which is closed and locked outside of Action Material's business hours. During business hours, the gate is left open.

Where the Site borders private property, it appears that the adjacent landowners have variably erected barb-wire fencing. However, there is no fencing system around the property that is designed to limit human and/or wildlife access. As such, the Site can be accessed by foot or by wildlife.

ECOLOGICAL RECEPTORS

According to the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) website (www.wdfw.wa.gov/conservation/phs/), there are no endangered, threatened, sensitive or candidate wildlife species identified in the Site vicinity. The PHS does indicate that the Site is in an area

used by the Rocky Mountain Elk (*Cervus ellaphus nelson*). However, multiple factors indicate that if the Rocky Mountain Elk were to use the Site, the amount of time on-site and subsequent exposure to landfill materials would be minimal. These factors include the size of the Site relative to the elk's home range (30 acres versus 2,500 to 10,000 acres), the disturbed nature of the Site, the presence of people nearby (residents, gravel pit, vehicle traffic, etc.) and the presence of superior habitats in the area, including the Turnbull National Wildlife Refuge and multiple conservation areas. In addition, the Washington Department of Natural Resources' Natural Heritage Program (www.dnr.wa.gov/natural-heritage-program) does not identify any endangered, threatened or sensitive plant species in Township 24N, Range 42E, Section 21, which includes the Marshall Landfill Site.

WATER USE

Water Rights

Surface water and groundwater use in Washington State is administered by the Washington State Department of Ecology (Ecology) through water right allocations. Ecology tabulates water rights within the state through their Water Resources Explorer database. On January 4, 2017, GeoEngineers conducted a search of the Water Resources Explorer database within a one-mile radius of the approximate center of the Main Landfill (herein termed the water resources inventory area). Search results are compiled in Table D-1.

The water rights inventory area contains totals of three surface water rights and 25 groundwater rights. Of these, 20 are water right claims, seven are water right certificates, and one is a water right change. The total annual water use claimed and/or allocated within the water rights inventory area is 722.72 acre-feet.

Water Wells

Water use within Washington State that is external to the water rights permitting system generally occurs through the Groundwater Permit Exemption (Chapter 90.44.050 of the Revised Code of Washington). The Groundwater Permit Exemption allows for uses of small groundwater quantities (generally less than 5,000 gallons per day) for specific uses. Within the area surrounding Marshall Landfill, this permit-exempt water use generally is for single-home domestic use through small-diameter water supply wells. Numerous single-home domestic wells are located in proximity to Marshall Landfill.

Water well construction within Washington State is reported to Ecology, who tabulate Water Well Reports (WWRs) within their Washington State Well Log Viewer database. GeoEngineers compiled WWRs from Ecology's Washington State Well Log Viewer database within the following Water Well Report inventory area:

- The southwest (SW) quarter of Section 15, Township (T) 24 North (N), Range (R) 42 East (E).
- The southeast (SE) and SW quarters of Section 16, T24N, R42E.
- The SE quarter of Section 17, T24N, R42E.
- The SE and northeast (NE) quarters of Section 20, T24N, R42E.
- Section 21, T24N, R42E.
- The SW and northwest (NW) quarters of Section 22, T24N, R42E.

- The NW quarter of Section 27, T24N, R42E.
- The NE and NW quarters of Section 28, T24N, R42E.
- The NE quarter of Section 29, T24N, R42E.

The boundaries of the Water Well Report inventory area are shown in Figure D-4, and search results are tabulated in Table D-2. We compiled a total of 168 WWRs, completed in the following hydrostratigraphic units:

- Six wells are completed within the glaciofluvial unit.
- 98 wells are completed within the Columbia River Basalt Group (CRBG) unit.
- 51 wells are completed within the basement rock unit.
- 11 wells are completed within both the CRBG and basement rock units.
- Two wells are completed within uncertain hydrostratigraphic units.

WWR's are provided in Attachment A. Approximate WWR locations are shown in Figure D-4. These locations are based on the location information provided in the WWRs, and should be considered approximate.

REFERENCE

Pacific Groundwater Group. 2005. "Marshall Landfill 2005 Hydrogeologic Summary." Prepared for the Spokane Regional Health District, Spokane, Washington. December 23.

Table D-1

Water Right Summary [1]

Marshall Landfill

Spokane County, Washington

Record / Document Number	Water Right Document ID	Person or Organization	Priority Date	Type of Water Right	Purpose	Status	Metered	Application Number	Permit Number	Certificate Number	Phase	Instantaneous Quantity (Qi)	Annual Quantity (Qa) (acre-feet)	Quarter-Quarter Section	Quarter Section	Township-Range-Section
G3-153402CL	2097376	Geschke, Ernest W	--	Groundwater	Irrigation; Domestic General	Active	No	--	--	--	Claim	450 GPM	2	--	NE	T24N-R42E-S21
S3-146755CL	2099083	Bodewitz, Jake	--	Surface Water	Irrigation	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S22
G3-146756CL	2099084	Bodewitz, Jake	--	Groundwater	Domestic General	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S22
G3-140735CL	2099781	Gillson, Glenn E	10/01/1971	Groundwater	Irrigation; Domestic General; Stockwater	Active	No	--	--	--	Claim	10 GPM	1	--	--	T24N-R42E-S21
S3-138119CL	2100564	Cupp, M E	--	Surface Water	Irrigation; Domestic General; Stockwater	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S28
G3-124195CL	2103289	Folsom, Mike	07/01/1973	Groundwater	Irrigation; Domestic General	Active	No	--	--	--	Claim	10 GPM	6	NW	SE	T24N-R42E-S20
G3-124196CL	2103290	Hanes, Kit	03/01/1974	Groundwater	Irrigation; Domestic General	Active	No	--	--	--	Claim	10 GPM	6	NW	SE	T24N-R42E-S20
G3-122065CL	2103737	Burlington Northern Inc,	01/01/1925	Groundwater	Domestic General	Active	No	--	--	--	Claim	8 GPM	12.9		SE	T24N-R42E-S21
G3-086747CL	2111263	Richards, Roger D	06/01/1967	Groundwater	Domestic General	Active	No	--	--	--	Claim	2.5 GPM	--	--	--	T24N-R42E-S20
G3-081429CL	2112259	Prasky, Arnold A	--	Groundwater	Domestic General; Stockwater	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S28
G3-076634CL	2113115	Hanes, Kit	--	Groundwater	Domestic General	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S20
G3-076173CL	2113401	Hinrichs, Merval W	--	Groundwater	Domestic General	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S22
G3-056227CL	2117449	Reetz, Alfred L	--	Groundwater	Domestic General; Stockwater	Active	No	--	--	--	Claim	--	--	--	--	T24N-R42E-S20
G3-031217CL	2122840	Marshall Community Church,	11/01/1964	Groundwater	Domestic General	Active	No	--	--	--	Claim	25 GPM	46.32	--	--	T24N-R42E-S22
S3-031022CL	2123211	Peters, Albert A	01/01/1862	Surface Water	Irrigation; Domestic General	Active	No	--	--	--	Claim	3.5 CFS	400	--	--	T24N-R42E-S22
G3-022439CL	2124693	Reetz, Alfred L	11/06/1968	Groundwater	Irrigation; Domestic General; Stockwater	Active	No	--	--	--	Claim	60 GPM	20	NE	NE	T24N-R42E-S20
G3-015108CL	2126027	Johns, Jerry E	05/01/1961	Groundwater	Domestic General	Active	No	--	--	--	Claim	20 GPM	0.5	SW	SW	T24N-R42E-S16
G3-013550CL	2126162	Poole, John W	01/01/1937	Groundwater	Irrigation; Domestic General	Active	No	--	--	--	Claim	60 GPM	72	NW	NE	T24N-R42E-S21
G3-000162CL	2129387	Chase, Alfred H	09/01/1954	Groundwater	Domestic General	Active	No	--	--	--	Claim	15 GPM	2	NW	NW	T24N-R42E-S22
G3-26315GWRIS	2137902	Vernon Joseph A,	07/25/1979	Groundwater	Irrigation; Domestic Multiple; Stockwater	Active	No	--	--	G3-26315 G	Certificate	20 GPM	16	NE	NE	T24N-R42E-S20
G3-24828CWRIS	2138117	Rodriguez J W & S D,	03/15/1976	Groundwater	Irrigation; Domestic Multiple; Stockwater	Active	No	--	--	G3-24828 C	Certificate	25 GPM	22	SE	NE	T24N-R42E-S20
G3-23063CWRIS	2138610	Western Poultry Inc,	04/19/1974	Groundwater	Domestic Single; Commercial and Industrial	Active	Yes	--	--	G3-23063 C	Certificate	19 GPM	30	NW	NW	T24N-R42E-S21
G3-22270CWRIS	2138742	Ort Charles W,	12/17/1973	Groundwater	Irrigation	Active	No	--	--	G3-22270 C	Certificate	40 GPM	13	SE	SE	T24N-R42E-S17
G3-21282CWRIS	2138887	Gonia Edward,	06/15/1973	Groundwater	Irrigation; Domestic Multiple	Active	No	--	--	G3-21282 C	Certificate	40 GPM	11	SW	SW	T24N-R42E-S15
G3-*10736CWRIS	2140435	Marshall Comm Wtr,	03/30/1970	Groundwater	Domestic Multiple	Active	No	10736	10033	7146-A	Certificate	50 GPM	36	--	--	T24N-R42E-S21
G3-*05037CWRIS	2141591	Smick H,	10/06/1958	Groundwater	Irrigation	Active	No	5037	4821	3381-A	Certificate	60 GPM	24	NW	NE	T24N-R42E-S21
G3-300549CL	2146787	Countryman, David	01/01/1915	Groundwater	Irrigation; Domestic General; Stockwater	Active	No	--	--	--	Claim	25 GPM	2	--	--	T24N-R42E-S21
CS3-031022CL@1	5484611	Key Rock Construction Inc,	11/09/2012	Groundwater	Instream Flow	Active	No	--	--	--	Change-ROE	--	--	--	--	T24N-R42E-S15
												Total	722.72			

Notes:

[1]Water right data were obtained on January 4, 2017 from a database administered by the Washington State Department of Ecology (Ecology).

[2]Water right data were obtained for a search of the Ecology database for a one-mile radius of the approximate center of the Main Landfill at the Marshall Landfill site.

ID = Identification; ROE = Report of Examination; GPM = gallons per minute; CFS = cubic feet per second -- = not available; NE = northeast; SE = southeast; SW = southwest; NW = northwest; T = township; R = Range; S = section.

Table D-2

Water Well Report Summary [1]

Marshall Landfill

Spokane County, Washington

Water Well Designation [2]	Ecology Well ID	Owner	Well Address	Quarter-Quarter Section	Quarter Section	Township-Range-Section	Interpreted Hydrogeologic Unit	Well Diameter (inches)	Well Depth (feet bgs)	Screen/ Perforation Depth (feet bgs)	Open/Lined Borehole Depth (feet bgs)	Static Depth to Groundwater (feet bgs)	Date of Groundwater Measurement
WWR1	AKM029	Al Layton	9609 S. McKenzie Road	SE	SW	T24N-R42E-S15	CRBG	6	186	181 to 186	--	135	10/1/2004
WWR2	APC713	Annette Jenkins	9215 S. Cheney Spokane Road	--	--	T24N-R42E-S15	CRBG	6	100	70 to 100	--	17	5/11/2007
WWR3	--	Jerry Geschke	McKenzie Road	SE	SW	T24N-R42E-S15	CRBG/Basement	6	480	--	85 to 480	200	5/30/1992
WWR4	AKT962	Keri Peterson	9228 S. Spokane Cheney Road	SE	SW	T24N-R42E-S15	CRBG	6	130	70 to 130	--	35	4/28/2004
WWR5	ABZ851	Keri Peterson	--	SE	SW	T24N-R42E-S15	CRBG	6	140	100 to 140	--	80	2/24/1995
WWR6	--	Marcel Oriard	--	SE	SW	T24N-R42E-S15	CRBG	6	260	--	99 to 260	120	1973
WWR7	BIU573	Richard McDonell	9236 Cheney-Spokane Road	SE	SW	T24N-R42E-S15	CRBG	6	200	148 to 188	--	140	12/3/2015
WWR8	ABZ024	Shirley Jenkins	--	SE	SW	T24N-R42E-S15	CRBG	6	140	100 to 140		45	9/5/1995
WWR9	--	Spokane County	Grove Road	SE	SW	T24N-R42E-S15	CRBG	6	197	192 to 197	--	65	4/3/1989
WWR10	--	Brian Snyder	--	--	--	T24N-R42E-S16	CRBG	6	100	--	29 to 100	30	9/6/1991
WWR11	--	Randy Gillingham	Andrus Road	SW	SE	T24N-R42E-S16	CRBG	6	460	280 to 460	--	260	10/31/2006
WWR12	--	Dan Boyland	Melville Road and Spotted Road	N 1/2	SW	T24N-R42E-S16	CRBG	6	100	--	--	15	5/22/1993
WWR13	--	Eldon H. Pearson	--	NW	SW	T24N-R42E-S16	CRBG	6	125	--	18 to 125	25	2/24/1977
WWR14	--	Glenn Gilson	--	SW	SW	T24N-R42E-S16	Glaciofluvial	6	156	--	--	118	1987
WWR15	--	Jerry E. Johns	--	NW	SW	T24N-R42E-S16	CRBG	6	144	--	19 to 144	--	--
WWR16	ABZ939	Mark Tainto	--	NE	SW	T24N-R42E-S16	CRBG	6	80	60 to 80	--	--	--
WWR17	--	Paul West	--	SE	SW	T24N-R42E-S16	CRBG	6	240	--	69 to 240	220	6/4/1984
WWR18	BBH563	Sheila and Kevin Clark	6804 West Andrus Road	SE	SW	T24N-R42E-S16	CRBG	6	400	300 to 400	--	225	8/27/2009
WWR19	AKO656	Andrea Lloyd	Spotted Road @ Melville Rd, Parcel A	NE	SE	T24N-R42E-S17	CRBG	6	112	75 to 112	--	30	6/9/2004
WWR20	--	Charles W. Ort	--	S 1/2	SE	T24N-R42E-S17	CRBG	6	160	35 to 160	--	35	Aug-73
WWR21	AHJ211	Crossfire Const.	Spotted Road @ Melville Rd	--	SE	T24N-R42E-S17	Basement	6	400	--	83 to 400	36	4/4/2003
WWR22	BHL932	Dan Gustafson	Melville Road	--	SE	T24N-R42E-S17	CRBG	6	183	153 to 163	--	52	10/9/2012
WWR23	--	Daniel G. Keister	--	--	--	T24N-R42E-S17	CRBG/Basement	6	85	--	39 to 85	16	6/27/1979
WWR24	AHS559	David and Jane Smith	Melville/Spotted Road	NE	SE	T24N-R42E-S17	Basement	6	420	380 to 420	--	120	7/21/2003
WWR25	AHC435	Jean R Johns	Spotted Rd @ Melville Rd	NE	SE	T24N-R42E-S17	CRBG	6	140	--	79 to 140	40	8/19/2002
WWR26	AKO648	Patty Hunt	Spotted Rd @ Melville	NE	SE	T24N-R42E-S17	CRBG	6	175	60 to 175	--	25	5/19/2004
WWR27	ALR981	Randal Gillingham	Melville Road	NE	SE	T24N-R42E-S17	CRBG	6	180	100 to 180	--	63	7/21/2005
WWR28	--	Rose Stranger	--	--	--	T24N-R42E-S17	Basement	6	180	--	108 to 180	60	2/20/1986
WWR29	--	Mick Lloyd	--	--	--	T24N-R42E-S17	CRBG	6	159	--	38.5 to 159	35	--
WWR30	--	Sam W. Griffin	--	--	--	T24N-R42E-S17	CRBG	6	95	--	--	40	--
WWR31	--	Sam Griffin	--	--	--	T24N-R42E-S17	CRBG	6	90	--	19 to 90	18	4/18/1983
WWR32	BCN976	Herman and Sandy Shreven	8808 W Melville	NW	SE	T24N-R42E-S17	Basement	6	400	260 to 400	--	12	6/13/2012
WWR33	BHW264	Tom Holsten	9202 S. Spotted Rd	SE	SE	T24N-R42E-S17	CRBG	6	140	60 to 135	--	40	10/7/2015
WWR34	AHJ706	Yousif Kaddoura	Melville Rd @ Spotted Rd	--	SE	T24N-R42E-S17	CRBG	6	100	20 to 100	--	31	8/21/2003
WWR35	--	Bob Kuchynski	--	NE	NE	T24N-R42E-S20	CRBG	6	175	--	19 to 175	--	--
WWR36	ABW286	Cecil Crain	--	SW	NE	T24N-R42E-S20	CRBG/Basement	6	500	--	320 to 500	460	6/18/1996
WWR37	--	Howard M. Peterson	--	NE	NE	T24N-R42E-S20	CRBG	6	200	--	74 to 500	55	--
WWR38	AKO870	Jerry Kasinger	Spotted Road	SE	NE	T24N-R42E-S20	CRBG/Basement	6	280	--	87 to 280	155	7/6/2005
WWR39	--	Jesse Vordy	--	NE	NE	T24N-R42E-S20	CRBG	6	126	--	29 to 126	45	--
WWR40	--	John W Rodriguez	--	SE	NE	T24N-R42E-S20	CRBG	6	150	--	19 to 150	80	2/17/1976

Water Well Designation [2]	Ecology Well ID	Owner	Well Address	Quarter-Quarter Section	Quarter Section	Township-Range-Section	Interpreted Hydrogeologic Unit	Well Diameter (inches)	Well Depth (feet bgs)	Screen/ Perforation Depth (feet bgs)	Open/Lined Borehole Depth (feet bgs)	Static Depth to Groundwater (feet bgs)	Date of Groundwater Measurement
WWR41	ACY024	Kasey Stewart	Soda Road	--	--	T24N-R42E-S20	Basement	6	380	340 to 380	--	200	--
WWR 42	AKO850	Lester Martin	Soda Road	SW	NE	T24N-R42E-S20	Basement	6	220	210 to 220	--	93	3/1/2005
WWR43	ABV876	Loren Ottenbreit	--	NE	NE	T24N-R42E-S20	CRBG	6	159	134 to 154	--	50	11/8/1995
WWR44	--	Margaret Shimek	--	SE	NE	T24N-R42E-S20	CRBG	6	215	160 to 200	--	110	9/12/1994
WWR45	--	Richard Dymalski	--	SW	NE	T24N-R42E-S20	CRBG	6	185	60 to 80; 144 to 179	--	70	--
WWR46	--	Richard Smith	--	NE	NE	T24N-R42E-S20	CRBG	6	125	--	19 to 125	20	--
WWR47	--	Ron Smith	--	SE	NE	T24N-R42E-S20	CRBG	6	150	--	62 to 150	--	--
WWR48	--	William Brooks	--	SE	NE	T24N-R42E-S20	CRBG	6	185	--	51 to 185	49	9/11/1977
WWR49	--	William Fraley	--	SE	NE	T24N-R42E-S20	CRBG	6	170	--	21 to 170	50	--
WWR50	--	Charles A. Bertone	--	SE	SE	T24N-R42E-S20	Basement	6	500	95 to 100	--	100	--
WWR51	AAM917	Chris Osting	--	SW	SE	T24N-R42E-S20	Basement	6	475	--	18.5 to 475	200	--
WWR52	BIO213	David Brown	11214 S. Spotted Rd	SE	SE	T24N-R42E-S20	Basement	6	600	500 to 595	--	90	4/13/2015
WWR53	--	Frank Shimek, Jr.	--	NE	SE	T24N-R42E-S20	Basement	6	440	--	280 to 440	--	--
WWR54	--	Graham	S. Spotted Rd.	--	SE	T24N-R42E-S20	Basement	6	185	--	21 to 185	140	6/12/1976
WWR55	--	Jerry White	--	SE	SE	T24N-R42E-S20	Basement	6	580	--	19 to 580	80	--
WWR56	--	Medallion Homes, Inc.	--	SE	SE	T24N-R42E-S20	Basement	6	475	--	20 to 475	55	11/18/1975
WWR57	--	Medallion Homes, Inc.	--	SW	SE	T24N-R42E-S20	Basement	6	300	--	40 to 300	35	3/25/1976
WWR58	APC501	Mike Spring	Soda Road	SE	SE	T24N-R42E-S20	Basement	6	155	145 to 150	--	85	6/12/2007
WWR59	--	Ray Chenhall	--	SE	SE	T24N-R42E-S20	Basement	6	150	--	21 to 150	62	8/20/1976
WWR60	--	Rodger Richards	10810 Spotted Rd.	NE	SE	T24N-R42E-S20	Basement	6	205	--	44 to 205	80	1/14/1992
WWR61	--	Ron Moculski	--	SE	SE	T24N-R42E-S20	Basement	6	300	--	49 to 300	40	10/15/1980
WWR62	W067612	Tracy Springberry	10512 S. Spotted Rd.	NE	SE	T24N-R42E-S20	CRBG	6	200	160 to 189	--	158	--
WWR63	ALR982	Al Day	7107 West Andrus Road	--	NW	T24N-R42E-S21	CRBG	6	280	240 to 280	--	120	7/25/2005
WWR64	BBC168	Jason Jongeward	--	NW	NW	T24N-R42E-S21	CRBG	6	280	200 to 275	--	200	12/5/2012
WWR65	APC320	John Fitzgerald	Spotted Road	SW	NW	T24N-R42E-S21	CRBG	6	163	113 to 163	--	100	5/22/2007
WWR66	APC319	John Fitzgerald	Spotted Road	--	NW	T24N-R42E-S21	CRBG	6	160	--	19 to 160	120	5/21/2007
WWR67	BHP873	John Fitzgerald	10413 S. Spotted Road	NW	NW	T24N-R42E-S21	CRBG	6	180	60 to 180	--	50	7/9/2013
WWR68	ALR984	Mary Morris	Spotted Road	SE	NW	T24N-R42E-S21	CRBG	6	180	120 to 180	--	90	7/27/2005
WWR69	ALR983	Mary Morris	Spotted Road	SE	NW	T24N-R42E-S21	CRBG	6	320	--	19 to 320	90	7/26/2005
WWR70	BBC170	Melodie Marksbury	10202 Ridge Park Ln	NW	NW	T24N-R42E-S21	CRBG	6	260	200 to 255	--	120	12/14/2012
WWR71	AGC124	Randy Gillingham	Andrus Rd.	--	NW	T24N-R42E-S21	CRBG	6	160	--	19 to 160	65	7/18/2001
WWR72	AGC123	Randy Gillingham	Andrus Rd.	--	NW	T24N-R42E-S21	CRBG	6	160	--	19 to 160	100	7/17/2001
WWR73	AGC122	Randy Gillingham	Andrus Rd.	--	NW	T24N-R42E-S21	CRBG	6	140	60 to 140	--	50	7/16/2001
WWR74	AHJ251	Randy Gillingham	Spotted Rd. @ Andrus Rd	--	NW	T24N-R42E-S21	CRBG/Basement	6	300	--	19 to 300	80	6/22/2003
WWR75	AHJ252	Randy Gillingham	Spotted Rd. @ Andrus Rd	--	NW	T24N-R42E-S21	CRBG	6	180	--	19 to 180	90	6/23/2003
WWR76	AHJ083	Randy Gillingham	Spotted Rd	SW	NW	T24N-R42E-S21	CRBG/Basement	6	300	--	53 to 300	Dry	6/13/2003
WWR77	AHJ081	Randy Gillingham	Spotted Rd	SW	NW	T24N-R42E-S21	CRBG/Basement	6	500	--	224 to 500	Dry	6/10/2003
WWR78	AHJ082	Randy Gillingham	Spotted Rd	SW	NW	T24N-R42E-S21	CRBG	6	260	--	74 to 260	130	6/12/2003
WWR79	APC644	Randy Gillingham	Spotted Road and Andrus Road	--	NW	T24N-R42E-S21	CRBG	6	200	100 to 200	--	60	10/19/2006
WWR80	--	Vista Farms #4	--	SW	NW	T24N-R42E-S21	CRBG	8	103	62 to 95	--	45	--
WWR81	--	Vista Farms #4	--	SW	NW	T24N-R42E-S21	CRBG	8	280	240 to 280	--	80	4/22/1987
WWR82	--	Dick Linn	Grove Road	NE	NE	T24N-R42E-S21	CRBG	6	320	--	159 to 320	111	5/11/1992
WWR83	--	Glen Gillson	--	SW	NE	T24N-R42E-S21	CRBG	8	125	--	--	--	--
WWR84	--	Greg Heard	Cheney Spok-Grove	NE	NE	T24N-R42E-S21	CRBG	6	280	--	--	120	2/24/1992
WWR85	--	Harry Smick	---	NW	NE	T24N-R42E-S21	Glaciofluvial	132	11	--	--	6	--
WWR86	ALR780	Jongeward Construction	--	--	NE	T24N-R42E-S21	CRBG/Basement	6	600	--	142 to 500	125	8/30/2006

Water Well Designation [2]	Ecology Well ID	Owner	Well Address	Quarter-Quarter Section	Quarter Section	Township-Range-Section	Interpreted Hydrogeologic Unit	Well Diameter (inches)	Well Depth (feet bgs)	Screen/ Perforation Depth (feet bgs)	Open/Lined Borehole Depth (feet bgs)	Static Depth to Groundwater (feet bgs)	Date of Groundwater Measurement
WWR87	BBH905	Jason Jongeward	W. Crest View Ln	SW	NE	T24N-R42E-S21	--	8	--	--	--	184	9/15/2009
WWR88	ALR767	Jongeward Construction	Andrus/Grove	--	NE	T24N-R42E-S21	CRBG	6	260	200 to 255	--	192	May-06
WWR89	ALR766	Jongeward Construction	Andrus/Grove	--	NE	T24N-R42E-S21	CRBG	6	260	200 to 255	--	192	5/6/2006
WWR90	APS119	Jongeward Construction	--	--	NE	T24N-R42E-S21	CRBG	6	440	380 to 435	--	234	8/25/2007
WWR91	BBC070	Kory Borjessan	--	--	NE	T24N-R42E-S21	CRBG	6	260	200 to 255	--	192	9/24/2009
WWR92	AHC177	Marshall-Town	--	NE	NE	T24N-R42E-S21	CRBG	6	240	--	67 to 240	70	--
WWR93	--	Marshall Community Water Association	--	NE	NE	T24N-R42E-S21	CRBG	--	85	--	--	--	--
WWR94	ALR852	Randall Gillingham	Andrus RD.	--	NE	T24N-R42E-S21	CRBG	6	180	--	19 to 180	18	--
WWR95	AEC119	Randy Gillingham	Andrus Rd. West of Grove Rd.	NW	NE	T24N-R42E-S21	CRBG	6	180	--	19 to 180	20	6/18/1998
WWR96	AEC140	Randy Gillingham	Andrus Rd. West of Grove Rd.	NW	NE	T24N-R42E-S21	CRBG	6	190	--	19 to 190	20	6/17/1998
WWR97	AEH081	Randy Gillingham	Andrus Rd. between Grove and Spotted	NW	NE	T24N-R42E-S21	CRBG	6	280	--	19 to 280	179	5/12/1999
WWR98	--	David Countryman	--	SE	SE	T24N-R42E-S21	Basement	6	102	--	40 to 102	--	--
WWR99	ABV249	Karolyn Burrell	--	--	SE	T24N-R42E-S21	Glaciofluvial	6	60	55 to 60	--	40	--
WWR100	BJD379	Alisha Crowell	10609 S. Spotted Rd.	SW	SW	T24N-R42E-S21	Basement	6	280	230 to 270	--	210	5/10/2016
WWR101	--	Bruce Burris	--	W 1/2	SW	T24N-R42E-S21	Basement	6	540	--	95 to 540	160	8/14/1986
WWR102	--	Bruce Burris	--	NW	SW	T24N-R42E-S21	Basement	6	440	--	166 to 440	140	2/25/1986
WWR103	--	Glenn Gillson	--	--	SW	T24N-R42E-S21	Basement	8	240	--	210 to 240	120	12/31/1980
WWR104	--	Judeth Ann Crosby	Spotted Rd.	NW	SW	T24N-R42E-S21	Basement	6	660	--	106 to 660	--	--
WWR105	AAK980	Stan Horton	--	NE	SW	T24N-R42E-S21	Basement	6	475	115 to 475	--	173	--
WWR106	BBC069	Ken Collins	Tax Parcel 24322.9087	--	-	--	CRBG	6	260	200 to 250	--	192	9/14/2009
WWR107	--	Western Poultry	--	--	--	T24N-R42E-S21	CRBG/Basement	6	290	--	27 to 290	--	--
WWR108	--	Duane Crisp	--	NW	NW	T24N-R42E-S22	CRBG/Basement	6	350	--	--	--	--
WWR109	--	Elbert Wilke	--	--	--	T24N-R42E-S22	CRBG	6	175	--	20 to 175	--	--
WWR110	--	Gustav Albertson	--	--	NW	T24N-R42E-S22	CRBG	6	180	--	38 to 180	40	10/16/1980
WWR111	--	Howard Roach	--	NE	NW	T24N-R42E-S22	CRBG	6	260	240 to 260	--	180	--
WWR112	ACV119	Jay Horton	--	--	NW	T24N-R42E-S22	CRBG	6	356	46 to 356	--	134	--
WWR113	AHJ713	Jay Horton	9716 S. Gardner	--	NW	T24N-R42E-S22	CRBG	6	300	200 to 300	--	140	9/12/2003
WWR114	AKM030	Jeremy and Becky Thompson	Gardner Road	--	NW	T24N-R42E-S22	Basement	6	260	--	99 to 260	57	9/17/2004
WWR115	--	L.K. Harding	--	--	--	T24N-R42E-S22	CRBG	6	246	--	--	196	Dec 1973
WWR116	BJG673	Lowell and Shelly Guske	West Taylor Road	SE	NW	T24N-R42E-S22	CRBG	6	380	250 to 380	--	152	11/22/2016
WWR117	--	Paul J. Dehner	--	NE	NW	T24N-R42E-S22	CRBG	6	193	--	56 to 193	42	--
WWR118	--	Peck Turner	--	NW	NW	T24N-R42E-S22	Glaciofluvial	6	115	110 to 115	--	95	5/15/1985
WWR119	BAC591	Peter Dragnya	Gardner Road	--	NW	T24N-R42E-S22	CRBG	6	300	240 to 300	--	80	9/14/2007
WWR120	--	Stan Horton	--	--	NW	T24N-R42E-S22	CRBG	6	175	170 to 175	--	140	--
WWR121	--	Vally of the Horses Water Dist.	--	NE	NW	T24N-R42E-S22	CRBG	6	293	--	--	60	1/20/1981
WWR122	--	Lloyd K. Harding	--	--	--	T24N-R42E-S22	CRBG	6	127	--	--	--	--
WWR123	ALR857	Randall Gillingham	Gardner Road	--	SW	T24N-R42E-S22	Glaciofluvial	6	240	200 to 240	--	180	5/27/2006
WWR124	--	Charles F + Clyden Cannon	West of Scribner Road	--	NW	T24N-R42E-S27	CRBG	6	180	170 to 180	--	45	11/1/1990
WWR125	--	David A. Raczykawski	Cheney Rd.	NE	NW	T24N-R42E-S27	Basement	6	240	--	19 to 240	80	--
WWR126	--	G.D. Clay	--	--	--	T24N-R42E-S27	Basement	6	385	--	94 to 385	90	--
WWR127	--	Larry Carpenter	W of Scribner Rd and East of RR Right of Way	--	NW	T24N-R42E-S27	Basement	6	386	105.5 to 386	--	90	6/23/2016
WWR128	--	Mildred Mandarino	--	S1/2	SE	T24N-R42E-S27	CRBG	6	325	--	--	25	4/4/1986
WWR129	--	Richard J. Norbert	--	--	--	T24N-R42E-S27	CRBG	6	82	25 to 82	--	10	9/10/1984
WWR130	--	Rick Warrington	--	--	--	T24N-R42E-S27	CRBG	6	73	--	19 to 73	--	--
WWR131	--	Art Madland	--	--	--	T24N-R42E-S27	CRBG	6	295	--	20 to 295	146	8/22/1980
WWR132	APC824	Ken Wilke	Scribner Rd	N1/2	NE	T24N-R42E-S28	Basement	6	400	--	99 to 400	95	9/19/1990

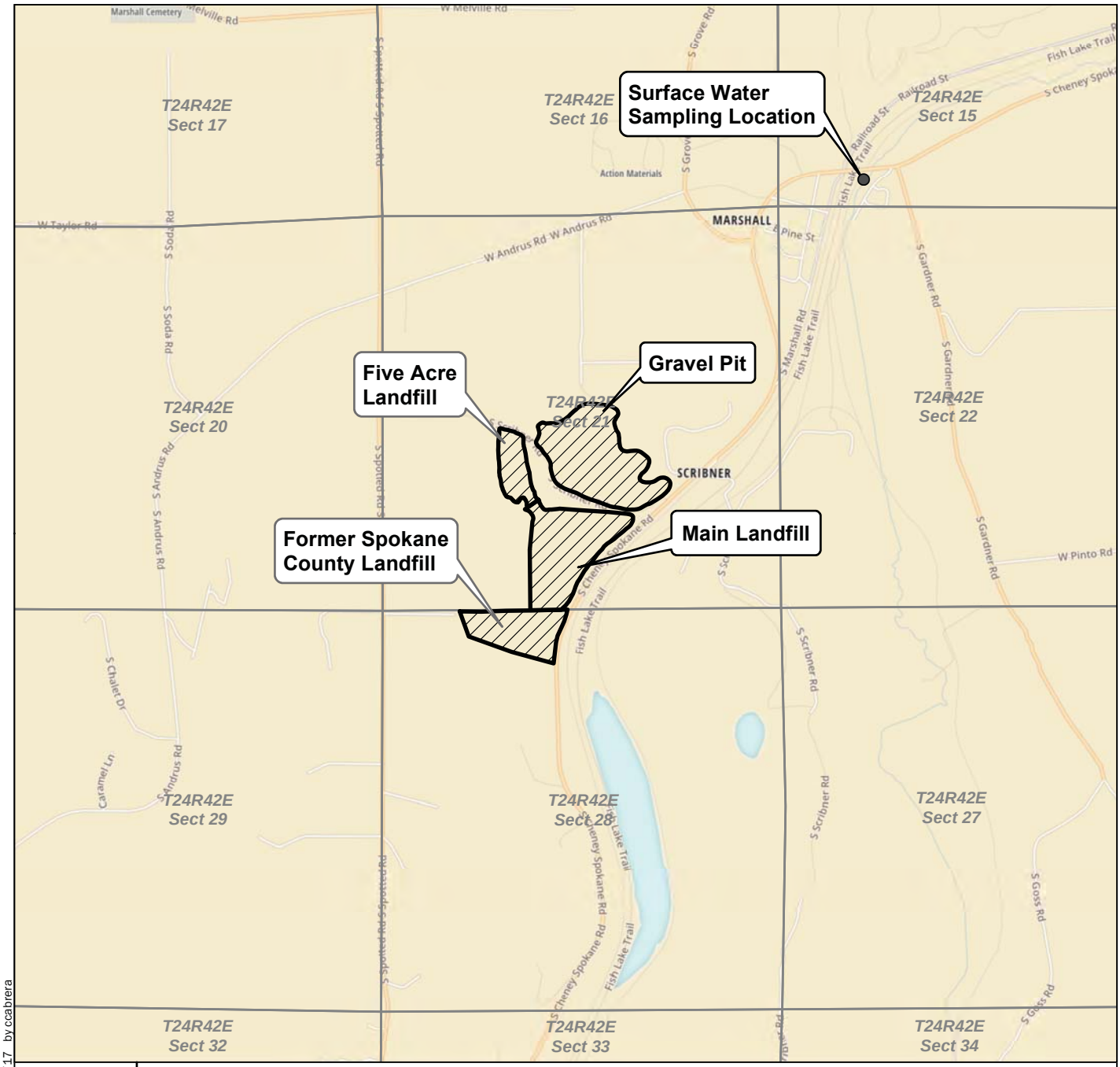
Water Well Designation [2]	Ecology Well ID	Owner	Well Address	Quarter-Quarter Section	Quarter Section	Township-Range-Section	Interpreted Hydrogeologic Unit	Well Diameter (inches)	Well Depth (feet bgs)	Screen/ Perforation Depth (feet bgs)	Open/Lined Borehole Depth (feet bgs)	Static Depth to Groundwater (feet bgs)	Date of Groundwater Measurement
WWR133	--	Mark Eckerich	Parcel 28425-9041		W1/2	T24N-R42E-S28	Glaciofluvial	6	170	150 to 180	--	--	--
WWR134	--	Morlan Homes	--	--	--	T24N-R42E-S28	CRBG	6	190	--	19 to 190	74	9/29/1980
WWR135	--	Terry and Susan Nelson	--	NW	NE	T24N-R42E-S28	CRBG	6	80	--	59 to 80	60	8/2/1979
WWR136	APP543	Todd Rothrock	Scribner Rd	--	NE	T24N-R42E-S28	CRBG	6	280	--	239 to 280	208	9/19/2006
WWR137	--	Gene Ball	--	NE	NW	T24N-R42E-S28	CRBG	6	180	0 to 40	--	--	--
WWR138	--	James Dobbins	--	SW	NW	T24N-R42E-S28	CRBG	6	200	--	27 to 200	--	--
WWR139	--	Jerry Shumaker	--	NE	NW	T24N-R42E-S28	CRBG	6	325	--	39 to 325	139	5/22/1979
WWR140	--	Morland	--	SE	NW	T24N-R42E-S28	CRBG/Basement	6	195	175 to 195	--	--	--
WWR141	--	P.K. Contractors	S 12601 Spotted Rd.	--	NW	T24N-R42E-S28	CRBG	6	240	--	19 to 240	70	8/20/1992
WWR142	--	Pat Prentice	--	SW	NW	T24N-R42E-S28	CRBG	6	275	--	19 to 275	45	5/1/1978
WWR143	--	Wally Pharness	--	NE	NW	T24N-R42E-S28	CRBG	6	160	--	20 to 160	114	9/26/1978
WWR144	--	Bill Laund	--	--	--	T24N-R42E-S29	Basement	6	205	--	21 to 205	--	--
WWR145	--	Billings-Miller	--	SW	NE	T24N-R42E-S29	Basement	6	305	--	18.5 to 305	10	--
WWR146	--	Bob Lantz	--	SE	NE	T24N-R42E-S29	CRBG	6	34	--	--	11	9/8/1978
WWR147	AKM013	Clinton & Patty Hunt	11811 S. Andrus Rd.	--	NE	T24N-R42E-S29	Basement	6	500	--	19 to 500	155	8/4/2004
WWR148	AGG029	Cookie's Retreat Center	--	SW	NE	T24N-R42E-S29	--	6	310	--	--	--	--
WWR149	BAS100	Denise Cumming	Andrus Road	SW	NE	T24N-R42E-S29	Basement	6	1100	--	59 to 1100	45	7/31/2008
WWR150	--	Don Kennedy	Spotted Road	NW	NE	T24N-R42E-S29	Basement	6	400	--	38.5 to 400	15	6/14/1989
WWR151	--	Don Kennedy	Spotted Road	NW	NE	T24N-R42E-S29	Basement	6	400	--	27.5 to 400	30	6/16/1989
WWR152	--	Don Kennedy	--	NW	NE	T24N-R42E-S29	Basement	6	410	--	21 to 410	17	9/29/1976
WWR153	AHF990	Jim & Lisa Vaughn	Andrus Rd	SW	NE	T24N-R42E-S29	Basement	6	280	40 to 280	--	20	3/28/2003
WWR154	--	Jim Andrews	--	SE	NE	T24N-R42E-S29	CRBG	6	140	--	31 to 140	10	6/6/1984
WWR155	--	John Harmon	Andrus Road	--	NE	T24N-R42E-S29	Basement	6	340	--	18 to 340	35	6/23/1992
WWR156	--	John Meridith	--	NE	NE	T24N-R42E-S29	Basement	6	420	--	37 to 420	65	6/25/1979
WWR157	--	Kenneth Perkins	--	NE	NE	T24N-R42E-S29	Basement	6	225	--	61 to 225	100	7/17/1978
WWR158	--	Kevin Massengale	Spotted Rd.	NE	NE	T24N-R42E-S29	Basement	6	525	--	24 to 525	40	--
WWR159	--	Kit Massengal	11502 S. Spotted Rd.	NE	NE	T24N-R42E-S29	Basement	6	365	320 to 360	--	150	4/3/2006
WWR160	--	Larry Winters	11921 S Andrus Rd.	SW	NE	T24N-R42E-S29	Basement	6	340	--	19 to 340	100	10/18/1995
WWR161	--	Larry Winters	11921 S Andrus Rd.	SW	NE	T24N-R42E-S29	Basement	6	440	200 to 440	--	75	7/22/2004
WWR162	AKO650	Patty Hunt	11811 S. Andrus	--	NE	T24N-R42E-S29	Basement	6	320	--	27 to 320	--	--
WWR163	--	Peter & Charlotte Yocom	--	SW	NE	T24N-R42E-S29	Basement	6	105	85 to 105	--	50	--
WWR164	--	Robert Gadd	--	SW	NE	T24N-R42E-S29	Basement	6	300	--	19 to 300	--	--
WWR165	--	Robert Woodruff	--	--	--	T24N-R42E-S29	Basement	6	200	--	20 to 200	75	--
WWR166	--	Spokane Log Homes % Dan Wilson	--	NE	NE	T24N-R42E-S29	Basement	6	400	--	104 to 400	38	12/12/1977
WWR167	--	Steven Bailey	--	NE	NE	T24N-R42E-S29	CRBG	6	84	--	39 to 84	--	--
WWR168	--	William I. Levan	--	--	--	T24N-R42E-S29	Basement	6	205	--	21 to 205	--	--

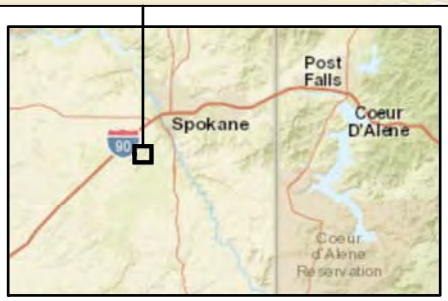
Notes:

[1]Water Well Reports were obtained on January 4, 2017 from a database administered by the Washington State Department of Ecology.

[2]Water Well Designations were assigned by GeoEngineers as a basis for organizing the Water Well Reports. The Water Well Designations are specified at the tops of the Water Well Reports provided in Appendix A.

ID = Identification; -- = not available; bgs = below ground surface; N = north; E = east; NE = northeast; SE = southeast; SW = southwest; NW = northwest; T = township; R = Range; S = section; CRBG = Columbia River Basalt Group.





N
W E
S

2,000 0 2,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 11N

Vicinity Map

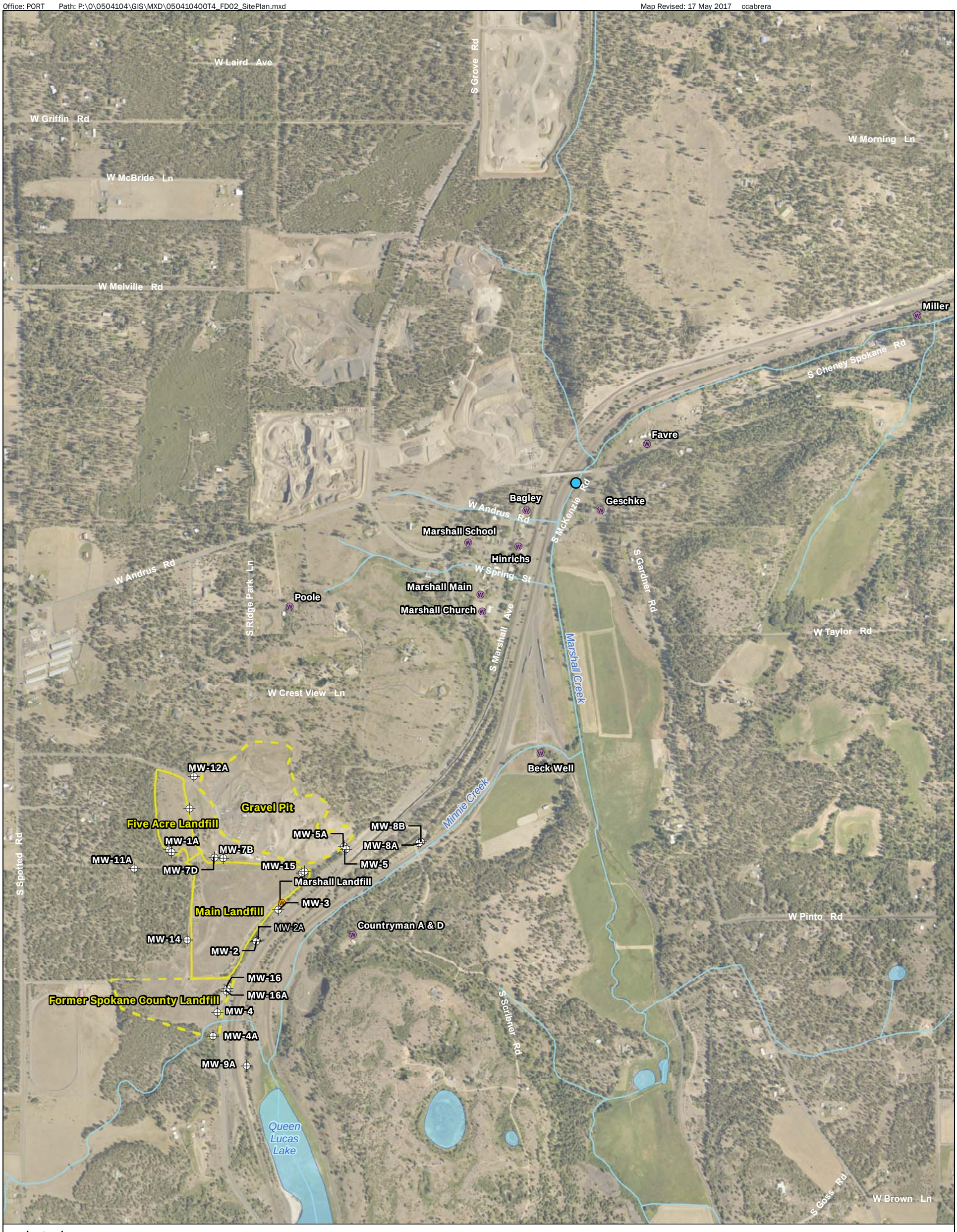
Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure D-1

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Office: PORT Path: P:\0\0504104\GIS\MXD\050410400T4_FD02_SitePlan.mxd Map Revised: 17 May 2017 ccabrera



Legend

- MW-1A — Monitoring Well Designation and Approximate Location
- Marshall Landfill — Marshall Landfill Groundwater Supply Well Approximate Location
- Countryman A & D — Private and/or Community Well Designation and Approximate Location (Fetrow Engineering, 1991)
- Surface Water Sampling Location

N W E S

1,100 0 1,100
Feet

Data Source: Aerial from ESRI Data Online.
Water features from PNW Hydrography.

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

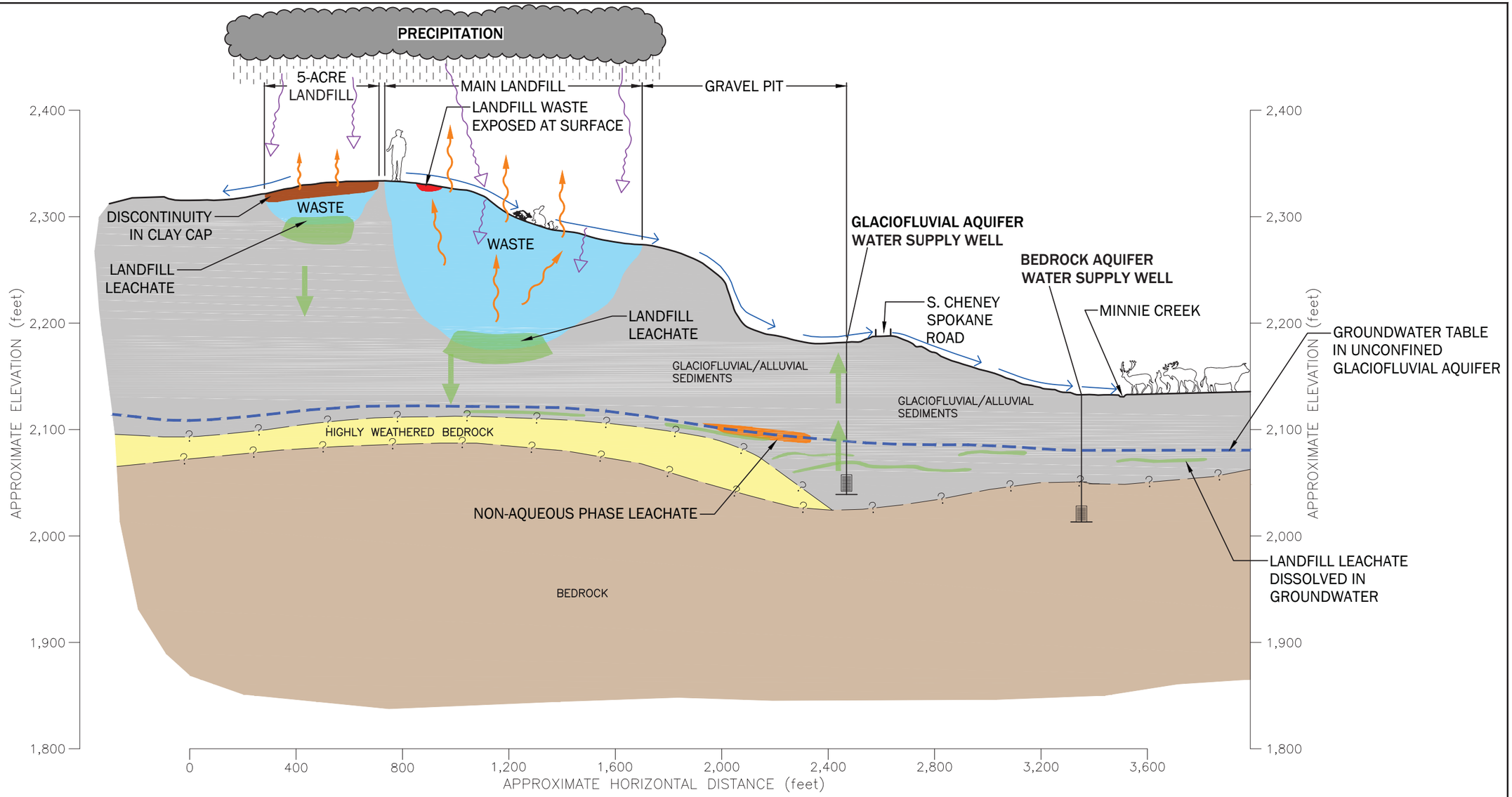
Projection: NAD 1983 UTM Zone 11N

Marshall Landfill Site Plan

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure D-2



Notes:
1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. This is a diagrammatic representation of subsurface conditions and potential exposure pathways for conceptual purposes. All elevations, locations, and dimensions shown are approximate.
4. Elevations refer to the North American Vertical Datum of 1988.

EXPLANATION:

- WELL CASING
- WELL SCREENS
- BOTTOM OF BORING / WELL
- SURFACE WATER RUNOFF RELEASE MECHANISM
- LANDFILL LEACHATE EXPOSURE MECHANISM
- LANDFILL GASES MIGRATION MECHANISM
- PRECIPITATION/INFILTRATION MIGRATION MECHANISM

400 0 400
Horizontal Scale in Feet
100 0 100
Vertical Scale in Feet
Vertical Exaggeration: 4X

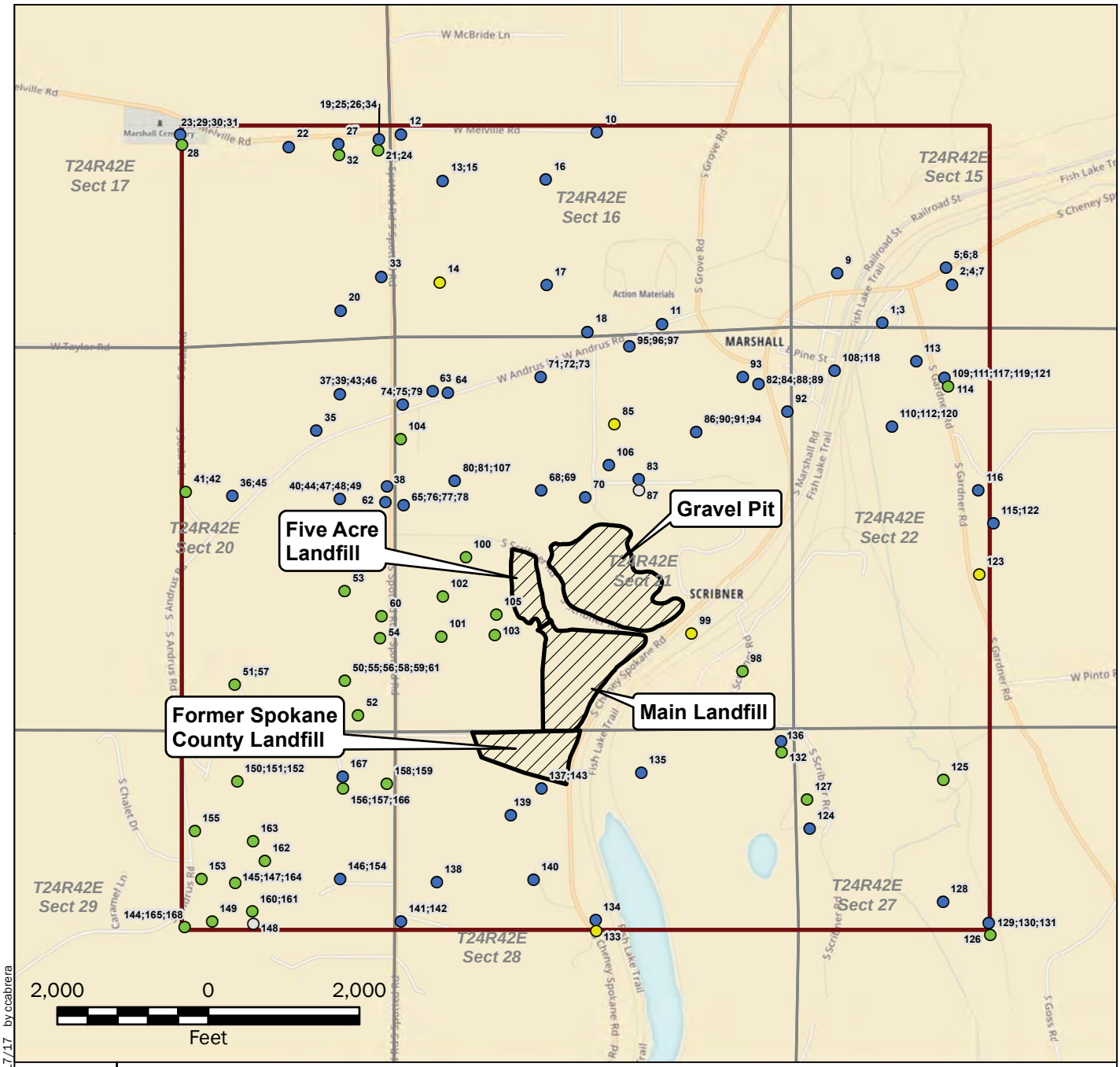
Conceptual Site Model

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure D-3

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Legend

Water Well Report (WWR) Number and Approximate Location

Aquifer Unit

- Glaciofluvial Unit
- CRBG Unit
- Basement Rock
- Not Available

Water Well Report Inventory Boundary

N W E S

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Water wells are approximately located based on well location information presented in the respective WWRs provided in Appendix A.
4. Water well reports were obtained on January 4, 2017 from a database administered by the Washington Department of Ecology.
5. Where a well is open to both the Columbia River Basalt Group (CRBG) and basement rock (see Table H-2), the well is attributed to the CRBG unit.

Water Well Report Inventory

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure D-4

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WWR 1

Please print, sign and return to the Department of Ecology

159052

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current

Notice of Intent No. WE02653

Unique Ecology Well ID Tag No. AKM029

Water Right Permit No. _____

Property Owner Name Al Layton

Well Street Address 9609 S. McKenzie Road

City Cheney **County** Spokane

Location SE 1/4-1/4 SW 1/4 Sec 15 Twn 24 R 42 EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2

☑ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 186 ft. Depth of completed well 186 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 179 ft. ☐ Liner installed " Diam. from ft. to ft. ☐ Threaded " Diam. from ft. to ft.

Perforations: ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs in. by m. and no. of perfs from ft. to ft.

Screens: ☑ Yes ☐ No ☑ K-Pac Location 174 feet

Manufacturer's Name Johnson

Type Stainless Steel - Telescoping Model No. _____

Diam. 6" Slot size 15 from 181 ft. to 186 ft.

Diam. Slot size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from ft. to ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 135 ft. below top of well Date 10/01/04

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs

Airtest 40 gal./min. with stem set at _____ ft. for _____ hrs

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil, Sandy	0	1
Sand w/ Basalt Cobble	1	29
Sand, Coarse	29	70
Sand w/ Basalt Cobble	70	103
Sand, Coarse	103	121
Sand w/ Basalt Cobble	121	164
Broken Basalt w/ Sand - Water 30gpm	164	182
Broken Basalt w/ Sand	182	186
Recommended pump depth is 160 to 174 feet		

NOV 12 2004

Start Date 9/14/04 Completed Date 10/01/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or trainee License No 2139

IF TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Drilling Company J & J Drilling, Inc.

Address S 5613 Linke Road

City, State, Zip Greenacres, WA 99016

Contractor's Registration No. JJDRIL-177KU Date 10/7/04

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 2

WATER WELL REPORT

State of Washington Date Printed: **29-May-2015** Log No. **0**

Construction / Decommission: Original Construction Notice

Construction

PROPOSED USE: **DOMESTIC**

TYPE OF WORK: Owners's Well Number: (If more than one well)

NEW WELL Method: **ROTARY**

DIMENSIONS: Diameter of well: **6** inches

Drilled **100** ft. Depth of completed well **100** ft.

CONSTRUCTION DETAILS:

Liner installed: **PVC**

4 " Dia from **10** ft. to **100** ft.

Casing installed **WELDED**

6 " Dia from **11/2+** ft. to **181/2** ft.

" Dia from ft. to ft.

" Dia from ft. to ft.

Perforations: **Yes** Used In:

Type of perforator used **SKILL SAW**

SIZE of perforations **1/8** in. by **6** in.

60 Perforations from **70** ft. to **100** ft.

Perforations from ft. to ft.

Perforations from ft. to ft.

Screens: **0** K-Pac Location:

Manufacture's Name

Type: Model No

Diam. slot size: from ft. to ft.

Diam. slot size: from ft. to ft.

Gravel/Filter packed: **No** Size of Gravel

Material placed fro ft. to ft.

Surface seal: **Yes** To what depth **181/2** ft.

Seal method: Material used in seal **BENTONITE**

Did any strata contain unusable water **No**

Type of water Depth of strata

Method of sealing strata off

PUMP: Manufacture's name

Type: H.P. **0**

WATER LEVELS Land-surface elevation above mean sea level: **0** ft.

Static level **17** ft. below top of well Date **05/11/2007**

Artesian Pressure lbs per square inch Date

Artesian water controlled by

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made **No** If yes, by whom

Yield: gal/min with ft drawdown after

Yield: gal/min with ft drawdown after

Yield: gal/min with ft drawdown after

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level

Time:	Water Level	Time:	Water Level	Time:	Water Level

Date of test:

Bailer test gal/min ft drawdown after hrs.

Air test **10+** gal/min w/ stem set at **100** ft. for **11/2** hours

Artesian flow gpm Date

Temperature of water Was a chemical analysis made **No**

CURRENT

Notice of Intent No.: **W221043**

Unique Ecology Well I.D. No **APC713**

Water Right Permit Number:

OWNER: **JENKINS, ANNETTE**

OWNER ADD **PO BOX 312**

MARSHALL, WA 99020

Well Add **9215 S. CHENEY SPOKANE RD**

City: **Spokane, WA 99224** County: **Spokane**

Location: 1/4 1/4 Sec **15** T **24** R **42** EW

Lat/Long: (s, t, r still REQUIRED) Lat Deg Lat Min/Sec

Long Deg Long Min/Se

Tax Parcel No.: **24155.9081**

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure. Show thickness of aquifers and the kind and nature of the material in each stratum penetrated. Show at least one entry for each change in formation.

Material	From	To
TOP SOIL	0	1
COARSE SAND W/ BASALT COBBLES	1	8
BASALT GRAY HARD	8	59
SANDSTONE GRAY SOFT FRAC W/WATER	59	74
SHALE BROWN SOFT	74	100

RECEIVED

JUL 15 2015

Department of Ecology
Eastern Regional Office

Notes:

1-6" DRIVE SHOE

Work starte **05/10/2007** Complete **05/11/2007**

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported are true to my best knowledge and belief.

☑ Driller ☐ Engineer ☐ Trainee

Name: **TODD LIVELY** License No.: **2321**

Signature:

If trainee, Licensed driller is: License No.:

Licensed Driller Signature

Drilling Company:

NAME: **FOGLE PUMP & SUPPLY, INC.** Shop: **AIRWAY HEI**

ADDRESS: **PO BOX 1450**

Airway Heights, WA 99001

Phone: **(509) 244-0846** Toll Free: **(888) 343-9355**

E-Mail: **marty@foglepump.com**

FAX: **(509) 244-2875** WEB Site: **WWW.FOGLEPUMP.COM**

Contractor's Registration No.: **FOGLEPS095L4** Date Log Created: **5/28/2015**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

WWR 3

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 055174

Water Right Permit No

OWNER: Name Jerry Geschke Address W 15606 SR-904 Cheney, WA 99204

LOCATION OF WELL: County Spokane SE ¼ SW ¼ Sec. 15 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) McKinsie off Cheney Spokane Rd.

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 480 feet. Depth of completed well 480 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 85 ft.
Welded [X] Liner installed [ ] Threaded [ ] " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18+ ft.
Material used in seal BEntonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 200 ft. below top of well Date 5/30/92
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: 6 gal./min. with ft. drawdown after hrs.
"Air test approx. 6-G.P.M. " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Clay-cobble	0	6
Sand w/gravel	6	19
Basalt-highly fract.	79	84
Basalt-med. w/fracts.	84	125
Basalt-highly fract. w/brn. clay	125	132
Basalt-highly fract. w/clay grey	132	138
Basalt-med. w/fracts.	138	180
Basalt-hard	180	384
Clay-tan-hard	384	434
Granit-med.	434	480

RECEIVED
JUN 2 1992
DEPARTMENT OF ECOLOGY
SPOKANE OFFICE

Work started 5/27/92, 19. Completed 5/30/, 19 92

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J DRILLING INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S 5013 Linke Rd. Greenacres, WA 99016

(Signed) John Hearn (WELL DRILLER) License No. 1962

Contractor's Registration No. JJDRIL-177KU Date 6/2/, 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 4

WATER WELL REPORT

State of Washington Date Printed 28 May-2004 Log No 10304
Construction/Decommission Original Construction Notice of Intent # 150565
Construction

PROPOSED USE **DOMESTIC**

TYPE OF WORK Owners s Well Number (If more than one well) **1**
NEW WELL Method **ROTARY**

DIMENSIONS Diameter of well **6** inches
Drilled **130** ft Depth of completed well **130** ft

CONSTRUCTION DETAILS
Liner installed
4 Dia from **10** ft to **130** ft

Casing installed **WELDED**
6 Dia from **+1 5** ft to **18 5** ft
Dia from ft to ft
Dia from ft to ft

Perforations **Yes** Used In **Liner**
Type of perforator used **SKILL SAW**
SIZE of perforations **6** in by **1/8** in
40 Perforations from **70** ft to **180** ft
Perforations from ft to ft
Perforations from ft to ft

Screens **No** K Pac Location
Manufacture s Name
Type Model No
Diam slot size from ft to ft
Diam slot size from ft to ft

Gravel/Filter packed **No** Size of Gravel
Material placed from ft to ft

Surface seal **Yes** To what depth **18** ft
Seal method Material used in seal **BENTONITE**
Did any strata contain unusable water? **No**
Type of water Depth of strata
Method of sealing strata off

PUMP Manufacture s name
Type H P **0**

WATER LEVELS Land surface elevation above mean sea level **0** ft
Static level **35** ft below top of well Date **04/28/2004**
Artesian Pressure lbs per square inch Date
Artesian water controlled by

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? **No** If yes by whom?
Yield gal/min with ft drawdown after
Yield gal/min with ft drawdown after
Yield gal/min with ft drawdown after
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min ft drawdown after hrs
Air test **10** gal/min w/ stem set at **130** ft for **1** hours
Artesian flow gpm Date
Temperature of water Was a chemical analysis made? **No**

CURRENT
Notice of Intent No **W174068**
Unique Ecology Well I D No **AKT962**
Water Right Permit Number
OWNER **PETERSON, KERI**
OWNER ADDR **34126 AZTEC LANE CHENEY WA 99004**
Well Street Address **9228 S SPOKANE CHENEY RD**
City **Marshall, WA 99020** County **SPOKANE**
Location **SE** 1/4 **SW** 1/4 Sec **15** T **24** R **42E** EWM
Lat/Long (s t r still REQUIRED) Lat Deg Lat Min/Sec
Long Deg Long Min/Sec
Tax Parcel No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color character size of material and structure Show thickness of aquifers and the kind and nature of the material in each stratum penetrated Show at least one entry for each change in formation

Material	From	To
TOPSOIL	0	3
SAND/COARSE BROWN W/BASALT	3	8
BASALT MEDIUM HARD GRAY	8	28
BASALT BROKEN BROWN	28	66
BASALT HARD GRAY	66	108
BASALT FRACTURED GRAY	108	115
BASALT HARD GRAY	115	128
SHALE SOFT BROWN	128	130

JUN 14 2004

Notes

Work started **04/28/2004** Completed **04/28/2004**

WELL CONSTRUCTION CERTIFICATION
I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported are true to my best knowledge and belief

☑ Driller ☐ Engineer ☐ Trainee

Name **MORGAN JOY** License No **1719**
Signature

If trainee Licensed driller is License No
Licensed Driller Signature

Drilling Company
NAME **FOGLE PUMP & SUPPLY INC** Shop **AIRWAY HEI**
ADDRESS **PO BOX 1450**
Airway Heights WA 99001
Phone **5092440846** Toll Free **8883439355**
E Mail **akk@foglepump com**
FAX **5092442875** WEB Site **WWW FOGLEPUMP COM**

Contractor s Registration No **FOGLEPS095L4** Date Log Created **05/28/2004**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 5

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W57305
UNIQUE WELL I.D. # ABZ851
Water Right Permit No. 99204

(1) OWNER: Name Keri Peterson Address S. 8513 Cheney-Spokane HWY Spokane, WA

(2) LOCATION OF WELL: County Spokane SE 1/4 SW 1/4 Sec 15 T 24 N. R 42E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 140 feet. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +1 ft. to 50 ft.
Welded [X] 4" Diam. from -5 ft. to 140 ft.
Liner installed [X]
Threaded [ ] " Diam. from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used skill saw
SIZE of perforations 1/4 in. by 6 in.
100 perforations from 100 ft. to 140 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? surface Depth of strata 20
Method of sealing strata off cased off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 80 ft. below top of well Date 2-24-95
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 20+ gal./min. with stem set at 140 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
top soil	0	3
sand, basalt cobbles	3	50
basalt, black, hard	50	60
basalt, broken, caving, brown	60	68
basalt, gray, hard	68	120
basalt, broken, brown with water	120	130
basalt, black, hard	130	140
1 - 6" drive shoe		

RECEIVED
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work Started 2-23-95 19. Completed 2-24-95 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME FOGLE PUMP & SUPPLY, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 316 W. 5th Colville, Wa. 99114

(Signed) Bart Moorhead / pm (WELL DRILLER) License No. 2109

Contractor's Registration No. FOGLEPS095L4 Date 2-24-95 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWRC

...l and First Copy with
...of Ecology
...y — Owner's Copy
...— Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

OWNER: Name Marcel Oriard Address Marshall, Wash.

LOCATION OF WELL: County Spokane — SE ¼ SW ¼ Sec. 15 T. 24 N., R. 42E W.M.

...distance from section or subdivision corner

PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 260 ft. Depth of completed well 260 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 99 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 99 ft.
Material used in seal Puddling Clay Cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level [redacted]
Static level 120 ft. below top of well Date [redacted]
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

...of test .....
...gal./min. with ..... ft. drawdown after ..... hrs.
...flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Coarse Sand	0'	88'
Basalt, Brown, Med. Hard	88'	120'
Basalt, Gray, Hard	120'	180'
Basalt, Very Dark & Hard	180'	244'
Basalt, dark, fine fered water bearing	244'	255'
Basalt, Very dark & hard	255'	260'

Work started 12 July, 1973 Completed 18 July, 1973

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME L. E. Neilson Inc.
(Person, firm, or corporation) (Type or print)

Address [redacted] Spokane, Wash.

[Signed] Donald L. Neilson
(Well Driller)

License No. Applied for Date 25 July, 1973

(USE ADDITIONAL SHEETS IF NECESSARY)

...P. No. 1256—OS—(Rev. 4-71).

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 7

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 200 ft. Depth of completed well 188 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 19 ft. ☒ Liner installed 4" Diam. from 7 ft. to 188 ft. ☐ Threaded _" Diam. From _ ft. to _ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used bit

SIZE of perfs 3/8 in. by _ in. and no. of perfs _ from 148 ft. to 188 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _ Slot size _ from _____ ft. to _ ft.

Diam. _ Slot size _ from _ ft. to _ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.

Material used in seal Barroid Casing Seal

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 140 ft. below top of well Date 12/3/2015

Artesian pressure _ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 40+ gal./min. with stem set at _ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE22693

Unique Ecology Well ID Tag No. BIU573

Water Right Permit No. _____

Property Owner Name Richard McDonell

Well Street Address 9236 S. Cheney-Spokane Road

City Spokane County Spokane

Location SE1/4-1/4 SW1/4 Sec 15 Twn 24N R 42E **(s, t, r Still REQUIRED)** EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24153.9075

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	1
Sand w/ Gravel	1	12
Basalt, Medium	12	24
Basalt, Fractured w/	24	33
Clay, Brown		
Basalt, Medium w/ Fractures	33	72
Water 3gpm (cut-off)		
Basalt, Fractured	72	76
Basalt, Medium	76	83
Shale, Brown & Medium	83	97
Basalt, Fractured w/	97	108
Clay, Brown		
Basalt, Medium	108	132
Basalt, Fractured w/	132	139
Clay, Brown		
Shale, Brown	139	175
Basalt, Fractured w/	175	178
Clay, Brown		
Water 40+gpm		
Basalt, Medium	178	200
Recommended pump set		
depth is 185 feet.		

Start Date 12/1/2015 Completed Date 12/3/2015

RECEIVED JAN 08 2016 Department of Ecology Eastern Regional Office

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) David Primmer

Driller/Engineer/Trainee Signature

Driller or trainee License No. 3153

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company L & H Drilling Inc

Address 17312 East Linke Road

City, State, Zip Greenacres , WA, 99016

Contractor's Registration No. JJDRII-177KU Date 12/7/2015

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Ecology is an Equal Opportunity Employer

WWR 8

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W61912
Unique Well I.D. # AB2024
Water Right Permit No.

(1) OWNER: Name JENKINS, SHIRLEY Address PO BOX 81 NARSHALL, WA 99020-

(2) LOCATION OF WELL: County SPOKANE - SE 1/4 SW 1/4 Sec 15 T 24 N., R 42E WM
(2a) STREET ADDRESS OF WELL (or nearest address) ,

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 140 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +1 ft. to 34 ft.
WELDED 4 " Dia. from 20 ft. to 140 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/8 in. by 5 in.
40 perforations from 100 ft. to 140 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 19 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off CASING

(7) PUMP: Manufacturer's Name
Type NONE H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 45 ft. below top of well Date 09/05/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by CAP

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

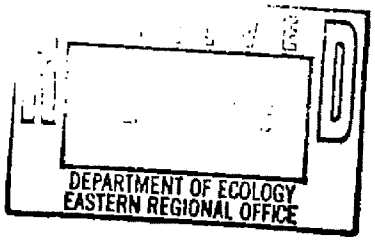
Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 20 gal/min. w/ stem set at 140 ft. for .5 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
SAND SILT	0	4
BOULDERS GRAVEL	4	30
BASALT SOFT	30	33
BASALT MEDIUM	33	70
BASALT SOFT	70	80
BASALT MEDIUM	80	130
BASALT SOFT	130	135
BASALT MEDIUM	135	140



Work started 09/01/95 Completed 09/05/95

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME FOGLE PUMP & SUPPLY, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 316 W 5TH

[SIGNED] [signature] License No. 1287

Contractor's Registration No. FOGLEPS095L4 Date 09/05/95

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR9

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 47

Water Right Permit No. _____

(1) OWNER: Name SPOKANE COUNTY Address _____

(2) LOCATION OF WELL: County SPOKANE SW ¼ SW ¼ Sec 15 T. 24 N., R 42E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) GROVE ROAD

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☒ Other ☐ ☐ DeWater.

(4) TYPE OF WORK: Owner's number of well (if more than one) GR-2

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 197 feet. Depth of completed well 197 ft.

(6) CONSTRUCTION DETAILS: DRIVESHOE

Casing installed: 6 " Diam. from +3 ft. to 190 ft.
Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒ 5'x5"x.250 STAND PIPE
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☒ No ☐ K-TYPE PACKER
Manufacturer's Name JOHNSON
Type STAINLESS STEEL Model No. _____
Diam. 6" T. Slot size .02 from 192 ft. to 197 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel CEMENT SLAB
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE GROUT
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off LOCKING CAP

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 65 ft. below top of well Date 4-3-89
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 20+ gal./min. with stem set at 197 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thicknees of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SAND (FINE TO MED) COBBLES	0'	60'
SAND (V. FINE TO MED)	60'	100'
SAND (FINE - CLEAN)	100'	135'
SAND (FINE) - SILT	135'	175'
SAND (FINE TO MED - CLEAN) W.B	175'	197'

MONITORING WELL

RECEIVED SEP 14 1989 DEPARTMENT OF ECOLOGY SPOKANE REGIONAL OFFICE

Work started 3-31-89, 19. Completed 4-3, 1989

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME ALLBERY DRILLING CORP. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address N. 9601 MONROE SUITE 214 SPOKANE, WA. 99205
(Signed) Steven L. Allbery (WELL DRILLER) License No. 1
Contractor's Registration No. ALLBEDC135JO Date 4-10, 1989

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

WWR16

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 033312

Water Right Permit No. _____

(1) OWNER: Name BRIAN SNYDER Address W. 6225 48TH SPOK.WA. 99204

LOCATION OF WELL: County SPOKANE ¼ ¼ Sec. 16 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 100' feet. Depth of completed well 100' ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" ' Diam. from +1' ft. to 29' ft.
Welded [X] _____ ' Diam. from _____ ft. to _____ ft.
Liner installed [ ]
Threaded [ ] _____ ' Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20' ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 30' ft. below top of well Date 9/6/91
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: 35± gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" AIR TEST APPROX. " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOP SOIL	0	2
BASALT BOULDERS, CLAY	2	25
BASALT, GREY, MED., FRACTURED	25	29
BASALT, GREY, SLIGHTLY FRACT.	29	65
BASALT, GREY, VERY FRAC W/WATER	65	100
6" DRIVE SHOE INSTALLED		
1 HOUR DEVELOPMENT		
EXCELLENT RECOVERY		
100' SCH 40 PVC LINER INSTALLED		

Work started 9/6/91, 19. Completed 9/6/91, 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME VERMILLION WELL DRILLING, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address BOX 637 OTIS ORCHARDS, WA. 99027

(Signed) Keith D. Vermillion (WELL DRILLER) License No. 1079

Contractor's Registration No. VERMIWD126D3 Date 10/5/91, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20 (10/87) -1320-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR11

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

256530

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(•) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W179943

Unique Ecology Well ID Tag No. APC646

Water Right Permit No. _____

Property Owner Name Randy Gillingham

Well Street Address Andrus Road

City Spokane County Spokane

Location SW 1/4-1/4 SE 1/4 Sec 16 Twn 24 R 42 EWM or WWM [x] check one

(Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 24164.9030

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[x] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 460 ft.

Depth of completed well 460 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6 " Diam. from +1 ft. to 325-1/2 ft.

[x] Liner installed 4 " Diam. from 15 ft. to 460 ft.

[ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [x] Yes [ ] No

Type of perforator used 3/8" Spade Bit

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from 280 ft. to 460 ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 260 ft. below top of well Date 10/31/06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 6-1/2 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Basalt, Boulders, Cobble	0	35
Sand, Gravel, Cobble	35	295
Basalt, Broken	295	320
Basalt, Medium	320	330
Basalt, Hard	330	365
Shale, Brown	365	385
Basalt, Hard	385	432
Basalt, Fractured - Water 6-1/2gpm	432	433
Basalt, Hard	433	460
Recommended pump depth is 440 feet.		

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APR - 4 2007
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EASTERN REGIONAL OFFICE

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JAN 19 2007
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 10/20/06 Completed Date 10/31/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[ ] Driller [ ] Engineer [ ] Trainee Name (Print) Kris Nall

Driller/Engineer/Trainee Signature K J Nall

Driller or trainee License No. 2787T

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres, WA 99016

If TRAINEE,
Driller's Licensed No. 2139
Driller's Signature Brian G. Mowat

Contractor's Registration No. JJDRIL-177KU Date 11/1/06

ECY 050-1-20 (Rev 3/05)

Ecology is an Equal Opportunity Employer.

WWR12

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 056882

Water Right Permit No. _____

(1) OWNER: Name Dan Boyland Address W 2726 Garland Ave. Spokane, WA 99205

LOCATION OF WELL: County Spokane NE ¼ SW ¼ Sec. 16 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Melville Rd. off Spotted Rd. Spokane, WA

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 100 feet. Depth of completed well 100 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 26 ft.
Welded [X] 4 " Diam. from _____ ft. to 100 ft.
Liner installed [X]
Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
_____ Slot size _____ from _____ ft. to _____ ft.
_____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 15 ft. below top of well Date 5/22/93
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: 60 gal./min. with _____ ft. drawdown after _____ hrs.
Air test approx. 60-G.P.M. " " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Topsoil	0	1
Basalt-cobble-sand	1	14
Basalt-highly fract.	14	21
Basalt-med.	21	65
Basalt-fract.-water-60-G.P.M.	65	75
Basalt-med.	75	100

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JUN 15 19[illegible]
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 5/21/93, 19. Completed 5/22/, 19 93

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J DRILLING INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S 5613 Linke Rd. Greenacres, WA 99016

(Signed) _____ (WELL DRILLER) License No. 1447

Contractor's Registration No. JJDRII-177KU Date 5/26/, 19 93

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 13

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) **OWNER:** Name Eldon H. Pearson Address Rt. 2, Box 259, Cheney, Wa. 99004

(2) **LOCATION OF WELL:** County Spokane NW ¼ SW ¼ Sec. 16 T. 24 N., R. 42E W.M.

ng and distance from section or subdivision corner N-416 ft of W-520 ft

(3) **PROPOSED USE:** Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 125 ft. Depth of completed well 125 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 18 ft.
Threaded [ ] ..... " Diam. from ..... ft. to ..... ft.
Welded [ ] ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) **PUMP:** Manufacturer's Name .....
Type: ..... H.P. .....

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .... ft
Static level 23 ft. below top of well Date 2/24/77
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a air test made? Yes [X] No [ ] If yes, by whom? Driller
Yield: 35 gal./min. with 102 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [X]

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MAR 0 1 1977
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

3/1/77

(10) **WELL LOG:**

For: ation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Top soil, brn, silty	0'	3'
Basalt, gravel & tan silts, loose	3'	14'
Basalt, fract, blk, m hrd	14'	16'
Basalt, occas fract, drk gray, hrd	16'	42'
Basalt, occas fract, drk gray, m hrd	42'	46'
Basalt, fract, drk gray, m hrd	46'	52'
Clay, yell & brn, firm	52'	54'
Basalt, heav fract, blk, hon comb, w/yell sed, m hrd, water 8 GPM	54'	59'
Basalt, occas fract, drk gray, hrd	59'	66'
Basalt, fract, drk gray, m hrd	66'	71'
Basalt, occas fract, drk gray, hrd	71'	79'
Basalt, fract, blk, m hrd	79'	84'
Basalt, heav fract, blk w/brn sed, m hrd, Water 3 GPM	84'	86'
Clay, yell & cream, greasy, firm	86'	88'
Basalt, heav fract, brn-blk, m hrd, water 4 GPM	88'	90'
Basalt, occas fract, drk gray, m hrd	90'	95'
Basalt, heav fract, brn-blk, w/tan sed, m hrd, water 5 GPM	95'	97'
Basalt, occas fract, drk gray, m hrd	97'	102'
Bentonitic Shale, olive grn, firm	102'	103'
Basalt, fract, blk, m hrd, water 10 GPM	103'	106'
Basalt, occas fract, drk gray, m hrd	106'	111'
Clay, tan, firm	111'	112'
Basalt, fract, drk gray, hon comb, m hrd, water 5 GPM	112'	116'
Basalt, occas fract, drk gray, m hrd	116'	125'

Work started FEB 23, 1977 Completed FEB 24, 1977

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Box 4341, Spokane, Wa. 99202

[Signed] James J. Zinkgraf
(Well Driller)

License No. 0544 Date Feb. 28, 1977

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR14

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name GLENN GILLSON Address W 5024 Lincoln Springs Rd Spok

LOCATION OF WELL: County SPOKANE — SW ¼ SW ¼ Sec. 16 T. 24 N., R. 42 W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 156 ft. Depth of completed well 156 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 155 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 118 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
APPROX. 60 GPM BY AIRTEST
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
SAND, GRAVEL, COBBLE	0	100
BASALT - FRACT.	100	103
SAND, GRAVEL, COBBLE, WATER 136'-156'	103	156

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DEC 28 1987
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 10/2, 19 87 Completed 10/6, 19 87

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J & J DRILLING INC.
(Person, firm, or corporation) (Type or print)

Address 5563 Lake Rd. Cheweka WA

[Signed] Benjamin L Carpenter
(Well Driller)

License No. 1278 Date 10/13, 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 15

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. R 15108 1805 7992

Permit No. .....

(1) OWNER: Name JERRY E. JOHNS Address Rt. #2, Cheney, Wash.

(2) LOCATION OF WELL: County SPOKANE NW ¼ SW ¼ Sec. 16 T. 21 N., R. 42 E W.M.

Bearing and distance from section or subdivision corner

PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 144 ft. Depth of completed well 144 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +2 ft. to 19 ft.
Threaded [ ] ." Diam. from ft. to ft.
Welded [X] ." Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 19 ft.
Material used in seal Cement & Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2350 ft.
Static level 11 ft. below top of well Date 12 Feb 74
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [X] No [ ] If yes, by whom? Driller
Yield: 30 gal./min. with 131 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 12 Feb 74
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

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FEB 26 1974
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Clay top soil	0	1
Clays scab basalt rocks gravel loose	1	5
Bas brn blk med hard	5	7
Bas grey blk brn seams hard	7	12
Bas grey very hard	12	20
Bas grey blk hard	20	22
Bas grey frac brn seams hard (3 GPM)	22	24
Bas gry frac brn seams hard	24	26
Bas grey occ brn seams hard	26	30
Bas grey frac brn seams h to hsi	30	30-32
Bas gry blk frac vas clay binder med hard	32	34½
Bas gry blk vas brn coat h si	34½	34½-37
Bas gry blk hard	37	38½
Bas blk green seams hard	38½	42
Bas blk vas gry cal hard (8 GPM)	42	42-45
Bas gry occ seams h to v h	45	56
Bas gry frac h side	56	60
Bas gry gren grey seams hard	60	64½
Bas gry blk frac vas gren coat	65½	65½-66
Bas frac vas blk seams h si	66	70
Bas gry vas gren shal coat h si	70	70-75
Clay brn med hard	75	76
Bas blk vas tan coat hard	76	82
Bas brn frac vas h si (15 GPM)	82	82-90
Bas gry brn vas brn coat hard	90	97
Bas gry blk drk gren seam h	97	101
Bas gry blk hard	101	104
Bas gry blk frac brn seams hard (20 gpm)	104	108
Bas gry blk hard	108	111
Bas gry very hard	111	132½
Bas gry frac gold coat med h (25 -30 GPM)	132½	134
Clays gry brn mixed hard	134	136
~~Clays brn decomp mix gry brn clays med h~~	~~136~~	~~136-144~~

WELL DRILLER'S STATEMENT: Completed
Started Feb 7, 74, Completed Feb 12, 74
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp Ave., Spokane, 99202

[Signed] Jack F Zinkgraf
(Well Driller)
Jack F. Zinkgraf, Co-Partner

License No. 0545 Date Feb. 19, 19 74

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 16

56017

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No **W081601**
Unique Well I D # **ABZ939**
Water Right Permit No

(1) OWNER Name **TAINIO MARK** Address **111 COLLEGE HILL ST #67 CHENEY WA 99004-**

(2) LOCATION OF WELL County **SPOKANE** **NE** 1/4 **SW** 1/4 Sec **16** T **24** N R **42** WM
(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE **DOMESTIC**

(4) TYPE OF WORK Owner s Number of well (If more than one) **1**
NEW WELL Method **ROTARY**

(5) DIMENSIONS Diameter of well **6** inches
Drilled **80** ft Depth of completed well **80** ft

(6) CONSTRUCTION DETAILS
Casing installed **6** Dia from **+1** ft to **19** ft
WELDED Dia from ft to ft
4 Dia from **10** ft to **80** ft
Perforations **YES**
Type of perforator used **SKILL SAW**
SIZE of perforations **1/4** in by **6** in
perforations from **60** ft to **80** ft
perforations from ft to ft
perforations from ft to ft
Screens **NO**
Manufacturer s Name
Type Model No
Diam slot size from ft to ft
Diam slot size from ft to ft
Gravel packed **NO** Size of gravel
Gravel placed from ft to ft
Surface seal **YES** To what depth? **19** ft
Material used in seal **BENTONITE**
Did any strata contain unusable water? **NO**
Type of water? Depth of strata ft
Method of sealing strata off **CASING**

(7) PUMP Manufacturer s Name
Type **NONE** H P

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level ft below top of well Date **08/01/96**
Artesian Pressure lbs per square inch Date
Artesian water controlled by **CAP**

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? **NO** If yes by whom?
Yield gal /min with ft drawdown after hrs

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min ft drawdown after hrs
Air test **30+** gal/min w/ stem set at **80** ft for 1 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? **NO**

(10) WELL LOG

Formation Describe by color character size of material and structure and show thickness of aquifers and the kind and nature of the material in each stratum penetrated with at least one entry for each change in formation

MATERIAL	FROM	TO
SAND GRAVEL	**0**	**8**
BROKEN BASALT	**8**	**16**
BASALT BLACK HARD	**16**	**65**
BROKEN BASALT W/WATER	**65**	**80**
	80	

OCT - 3 1996

Work started **08/01/96** Completed **08/01/96**

WELL CONSTRUCTOR CERTIFICATION
I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

NAME **FOGLE PUMP & SUPPLY INC**
(Person firm or corporation) (Type or print)

ADDRESS **316 W 5TH**

[SIGNED] Bart Morehead Jr License No **2109**

Contractor s
Registration No **FOGLEPS095L4** Date **09/27/96**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR17

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No.

(1) OWNER: Name Paul West Address W. 6315 Thorpe Rd., Spokane, WA. 99204

(2) LOCATION OF WELL: County Spokane — SE ¼ SW ¼ Sec 16 T. 24 N., R 42E W.M.

ring and distance from section or subdivision corner

(3) PROPOSED USE: Domestic XX Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well XX Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary XX Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 240 ft. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +2 ft. to 69 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded XX " Diam. from ft. to ft.

Perforations: Yes ☐ No XX
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No XX
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No XX Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes XX No ☐ To what depth? XX 18 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No XX
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2340 ft.
Static level 220 ft. below top of well Date 6/4/84
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes XX No ☐ If yes, by whom? driller
Yield: 30 gal./min. with 10 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No XX

6/15/84

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brn silty top soil	0'	2'
Basalt, sand, gravels & boulders	2'	19'
Basalt, fract, blk & brn sed, med hrd	19'	26'
Basalt, drk gray, hrd	26'	37'
Basalt, heav fract, drk gray w/lime grn sed, med hrd, water ½ GPM (bad odor)	37'	38'
Basalt, occas fract, drk gray, med hrd	38'	45'
Basalt, heav fract, drk gray w/heav brn sed/loose, water 4 GPM, bad odor	45'	56'
Basalt, drk gray, med hrd	56'	61'
Basalt, fract, drk gray w/rusty brn sed, med hrd, water 4 GPM, bad odor	61'	65'
Basalt, occas fract, drk gray, med hrd	65'	76'
Basalt, fract, drk gray w/moist tan sed, med hrd, water 4 GPM	76'	80'
Basalt, occas fract, drk gray, med hrd	80'	106'
Basalt, fract, brnish grn, hon comb, med hrd, water 8 GPM	106'	114'
Basalt, occas fract, drk gray, med hrd	114'	122'
Basalt, fract, drk gray, med hrd, water 3 GPM	122'	125'
Basalt, occas fract, drk gray, med hrd to hrd	125'	163'
Basalt, fract, brnish blk w/wood chips, med hrd, water 5 GPM	163'	165'
Shale, green & gray wood chups, hrd	165'	192'
Shale, brnish gray, hrd	192'	219'
Basalt, fract, blk, hon comb, hrd grn sed, med hrd to loose, water 10 GPM	219'	234'
Basalt, occas fract, drk gray, med hrd	234'	240'

RECEIVED
JUN 15 1984
DEPARTMENT OF ECOLOGY
SPOKANE, WASH.

Work started May 30 19 84 Completed June 4 19 84

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address P.O. BOX 4341, Spokane, WA. 99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0544 Date June 13 19 84

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR18

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number 357997

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 400 ft. Depth of completed well 400 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 55 ft.

☒ Liner installed 4" Diam. from 10 ft. to 400 ft.

☐ Threaded ____" Diam. From ____ ft. to ____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used bit

SIZE of perfs 3/8 in. by ____ in. and no. of perfs ____ from 300 ft. to 400 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location

Manufacturer's Name

Type Model No.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand

Materials placed from ____ ft. to ____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturer's Name

Type: H.P.

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 225 ft. below top of well Date 8/27/09

Artesian pressure ____ lbs. per square inch Date

Artesian water is controlled by (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest 12 gal./min. with stem set at ____ ft. for ____ hrs.

Artesian flow ____ g.p.m. Date

Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE10424

Unique Ecology Well ID Tag No. BBH563

Water Right Permit No.

Property Owner Name Sheila and Kevin Clark

Well Street Address 6804 West Andrus Road

City County Spokane

Location SE 1/4-1/4 SW 1/4 Sec 16 Twn 24N R 42E **(s, t, r Still REQUIRED)** EWM ☐ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24163.9032

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil, Sandy	0	1
Sand w/ Broken Basalt &	1	10
Boulders		
Broken Basalt w/ Sand	10	48
Basalt Fractured w/	48	50
Clay, Brown		
Basalt, Soft to Medium	50	78
Basalt, Fractured w/	78	87
Shale, Brown		
Basalt, Medium	87	125
Basalt, Fractured w/	125	134
Shale, Grey		
Basalt, Soft	134	144
Basalt, Fractured w/	144	163
Shale, Tan		
Basalt, Soft	163	180
Basalt, Fractured w/	180	201
Shale, Brown		
Shale, Brown & Medium	201	229
Basalt, Medium w/ Fractures	229	326
Water 2gpm		
Basalt, Fractured	326	328
Water 5gpm		
Basalt, Medium w/ Fractures	328	364
Water 1gpm		
Basalt, Fractured w/	364	373
Water 4gpm		
Basalt, Soft & Broken	373	394
Shale, Brown & Soft	394	400

Start Date 8/25/09 Completed Date 8/27/09

RECEIVED
OCT 23 2009
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
, WA, 99016

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian Mosset

Driller or trainee License No. 2139

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres

Contractor's Registration No. JJDRII-177KU Date 8/28/09

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

WWR 19

Please print, sign and return to the Department of Ecology

153430

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current

Notice of Intent No. WI81108

Unique Ecology Well ID Tag No. AKO656

Water Right Permit No. _____

Property Owner Name Andrea Lloyd

Well Street Address Spotted Rd @ Melville Rd. Parcel A

City Spokane **County** Spokane

Location NE 1/4-1/4 SE 1/4 **Sec** 17 **Twn** 24 **R** 42 EWM or WWM ☑ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 112 ft. Depth of completed well 112 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 111 ft. ☐ Liner installed _____ " Diam. from _____ ft. to _____ ft. ☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☑ Yes ☐ No

Type of perforator used Cutting Torch

SIZE of perfs _____ in. by ___ in. and no. of perfs 148 from 75 ft. to 112 ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 30 ft. below top of well Date 6/9/04

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 75 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	2
Boulders, Cobble and Sand	2	7
Basalt, Medium w/ Fractures	7	58
Basalt, Fractured w/ Shale, Brown	58	77
Basalt, Fractured - Water 75gpm	77	80
Basalt, Medium	80	110
Shale, Brown & Medium	110	112
Set pump at 80 feet.		

RECEIVED AUG 18 2004 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 6/9/04 Completed Date 6/9/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature Don Anderson

Driller or trainee License No. 1447

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No. JJDRIL-177KU Date 6/18/04

IF TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. G3-22270

Permit No. G3-22270P

(1) OWNER: Name Charles W Ost Address Box 250 Rt 2 Cheney Wash

(2) LOCATION OF WELL: County Spokane S½ ¼ SE ¼ Sec 17 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 160 ft. Depth of completed well 160 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: none" Diam. from ___ ft. to ___ ft.
Threaded ☐ ___" Diam. from ___ ft. to ___ ft.
Welded ☒ 6" Diam. from 0 ft. to 35 ft.

Perforations: Yes ☐ No ☐
Type of perforator used ___
SIZE of perforations ___ in. by ___ in.
___ perforations from ___ ft. to ___ ft.
___ perforations from ___ ft. to ___ ft.
___ perforations from ___ ft. to ___ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ___
Type ___ Model No ___
Diam. ___ Slot size ___ from ___ ft. to ___ ft.
Diam. ___ Slot size ___ from ___ ft. to ___ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ___
Gravel placed from ___ ft. to ___ ft.

Surface seal: Yes ☒ No ☐ To what depth? 35 ft.
Material used in seal ___
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ___ Depth of strata 35
Method of sealing strata off ___

(7) PUMP: Manufacturer's Name Fairbanks Rochester
Type: Submersible H.P. 3

(8) WATER LEVELS: Land-surface elevation above mean sea level 2360 ft.
Static level 2060 35 ft. below top of well Date Aug 73
Artesian pressure ___ lbs. per square inch Date ___
Artesian water is controlled by ___ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? C W Ost
Yield: 60 gal./min. with 75 ft. drawdown after 24 hrs.
" 60 " 75 " 48 "
" 60 " 76 " 72 "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
7	35	2	70		

Date of test Aug 1973
Bailer test 50 gal./min. with ___ ft. drawdown after 75 hrs.
Artesian flow ___ g.p.m. Date ___
Temperature of water 53 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Dirt Sand & Boulders Rock	0	35
Solid Rock	35	60
Broken Basalt	60	95
Blue Cobble Clay	95	133
Boulders & Clay	133	155
Red Rock	155	160

0140 8" 14#
13.8
4 1

Work started ___ 19___ Completed ___ 19___

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & C Rochester (Person, firm, or corporation) (Type or print)

Address 1301 E 5th Spokane Wn

[Signed] ___ (Well Driller)

License No. 215 Date ___ 19___

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR21

Please print sign and return to the Department of Ecology

Water Well Report

Original – Ecology 1st copy – owner 2nd copy – driller

ECOLOGY
Construction/Decommission 137808

☑ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No W153079

Unique Ecology Well ID Tag No AHJ211

Water Right Permit No _____

Property Owner Name Crossfire Const Larry Gleave

Well Street Address Spotted Rd @ Melville Rd

City Spokane County Spokane

Location ___1/4 1/4 SE 1/4 Sec 17 Twn 24N R 42E EWM ☑ or WWM ☐ circle one

Lat/Long (s, t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 24174 9097

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner s number of well (if more than one) 1

☑ New well ☐ Reconditioned *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 400 ft
Depth of completed well 400 ft

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam from +1 ft to 83 ft
☑ Liner installed 4 Diam from ____ ft to 400 ft
☐ Threaded ____ Diam from ____ ft to ____ ft

Perforations ☐ Yes ☑ No
Type of perforator used _____
SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____
Manufacturer s Name _____
Type _____ Model No _____
Diam ____ Slot size ____ from ____ ft to ____ ft
Diam ____ Slot size ____ from ____ ft to ____ ft

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____
Materials placed from ____ ft to ____ ft

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft
Material used in seal Barroid Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP Manufacturer s Name _____
Type _____ H P _____

WATER LEVELS Land surface elevation above mean sea level _____ ft
Static level 36 ft below top of well Date 4/04/03
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes by whom? _____
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test ____ gal /min with ____ ft drawdown after ____ hrs
Airtest 10 gal /min with stem set at ____ ft for ____ hrs
Artesian flow _____ g p m Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil	0	1
Sand & Basalt Cobble	1	15
Clay, Brown & Medium	15	37
Clay Yellow	37	57
Granite Soft to Medium	57	80
Granite, Medium	80	104
Granite, Soft to Medium Water 1/2gpm	104	118
Granite Medium w/ Fractures	118	148
Granite Fractured Water 1gpm	148	152
Granite, Medium	152	167
Granite, Fractured - Water 2 1/2gpm	167	171
Granite Medium w/ Fractures	171	270
Granite Hard w/ Slight Fractures	270	400
Recommended pump depth is 380 feet		
Well air tested at 4gpm prior to hydro		
fracturing Well air tested at 10gpm		
post hydro fracturing A pump test is		
needed to determine accurate gpm's		

RECEIVED
JUL 28 2003
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 3/31/03 Completed Date 4/4/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Don Anderson
Driller/Engineer/Trainee Signature Don Anderson
Driller or trainee License No 1447

If TRAINEE
Driller s Licensed No _____
Driller s Signature _____

Drilling Company J & J Drilling, Inc
Address S 5613 Linke Rd
City State Zip Greenacres, WA 99016
Contractor s Registration No JJDRII 177KU Date 4/9/03

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 22

467592

WATER WELL REPORT

Original 1st copy-Ecology, 2nd copy-owner, 3rd copy-driller

Construction/Decommission *("x") in circle*

Construction *ORIGINAL INSTALLIATION*

Notice of Intent Number **W 276831**

PROPOSED USE: Domestic

TYPE OF WORK: Owner's number of well (if more than one)

New Well *Method:* Rotary

Dimensions: Diameter of well 6 inches, drilled 198 ft.
Depth of completed well 183 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Liner installed 6 " Diam. from 1 ft. to 19 ft.
4 " Diam. from 12 ft. to 183 ft.
" Diam. from ft. to ft.

Perforations: NO

Type of perforator used

SIZE of perfs in. by in. and no. of perfs from ft. to ft.

Screens: YES ☐ K-Packer Location

Manufacturer's Name

Type PVC Factory SI Model No.

Diam. 4 Slot size 20 from 153 ft. to 163 ft.

Diam. Slot size from ft. to ft.

Gravel/Filter packed: No Size of gravel/sand

Materials placed from ft. to ft.

Surface Seal: To what depth? 19 ft.

Material used in seal Bentonite dry granular

Did any strata contain unusable water? NO

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturer's Name

Type: H.P.

WATER LEVELS Land-surface elevation above mean sea level ft.

Static level 52 ft. below top of well Date 10/9/2012

Artesian pressure lbs. per square inch Date

Artesian water is controlled by cap, valve, etc.)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? NO If yes, by whom?

Yield: gal/min with ft drawdown after hrs

Yield: gal/min with ft drawdown after hrs

Yield: gal/min with ft drawdown after hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test Bailer test gal./min. with ft. drawndown after hrs.

Airtest gal./min. with stem set at 150 ft. for 1 hrs. GPM: 35

Artesian flow g.p.m. Date

Temperature of water Was chemical analysis made? NO

CURRENT

Notice of Intent No. W 276831

Unique Ecology Well ID Tag No. BHL 932

Property Owner Name DAN GUSTAFSON

Well Street Address MELVILLE RD.

City SPOKANE County Spokane

Location 1/4-1/4 SE 1/4 Sec 17 Twn 24 R 42

Lat/Long (s, t, r Still REQUIRED) Lat Deg Min Sec

Long Deg Min Sec

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the materials in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	
Sand & Gravel	0	15
Basalt Medium Black	15	135
Basalt Fractured Black&Rust Water Bearing	135	138
Basalt Hard Black	138	168
Clay Yellow	168	185
Sand White	185	189
Clay Yellow	189	198

RECEIVED
OCT 22 2012
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

FORMATION PACKERS SET AT 95 AND 100 FT.

Start Date 10/8/2012 Completed Date 10/9/2012

Tax Parcel No. 241749101

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller Trainee Driller or trainee License No. 1709

Name (Print Last, First) Tarbert, Troy

Driller/Engineer/Trainee Signature

IF TRAINEE: Driller's License No:

Driller's Signature

Drilling Company TARBERT DRILLING

Address 34700 TEEL HILL RD. N.

City, State, Zip Davenport, WA 99122

Contractor's Registration No. TARBED*954CJ Date

ECY 050-1-20 (Rev 3/05)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 23

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Daniel G. Keister Address P.O.Box 560,Airway Heights, Wa. 99001

(2) LOCATION OF WELL: County Spokane — ¼ — ¼ Sec. 17 T. 24 N., R. 42E W.M.

ng and distance from section or subdivision corner Blk 1, Lot 2

(3) PROPOSED USE: Domestic XX Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well XX Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary XX Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 85 ft. Depth of completed well 85 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 39 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded XX " Diam. from ft. to ft.

Perforations: Yes ☐ No XX
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No XX
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No XX Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes XX No ☐ To what depth? 18 ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No XX
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2400 ft.
Static level 16 ft. below top of well Date 6/27/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes XX No ☐ If yes, by whom? Driller air
Yield: 49 gal./min. with 69 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No XX

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brn silty top soil	0'	3'
Clay,brn	3'	4'
Basalt gravel & sand,tan sed	4'	6'
Basalt,heav fract,w/moist brn clay, firm	6'	9'
Basalt,decomp,W/heav brn sed,firm, loose	9'	19'
Basalt,heav fract,drk gray w/tan sed,m hrd	19'	21'
Basalt,heav fract,brn & blk,w/heav brd sed,loose	21'	24'
Basalt,occas fract,drk gray,m hrd	24'	27'
Basalt,heav fract,brn & gray,w/grn sed,loose,seepage	27'	36'
Basalt,occas fract,drk gray,m hrd	36'	52'
Basalt,fract,drk gray w/hrd brn sed, m hrd,water 3 GPM	52'	56'
Basalt,occas fract,drk gray,m hrd	56'	67'
Basalt,heav fract,brn & gray w/grn sed,m hrd,water 6 GPM	67'	69'
Basalt Clay,moist,greenish brn, firm	69'	73'
Basalt,decopp,brn,firm	73'	75'
[illegible]		
Decomposed granite w/layers white & orange qrtz sand,fine to coarse, loose,water 30 GPM	75'	78'
Decomposed granite,tan,very soft & loose	78'	85'

RECEIVED
JUL 5 1979
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started June 26, 1979 Completed June 27, 1979

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZIMKRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp,Box 4341,Spokane,Wa.99202

[Signed] James J. Zimkraf
(Well Driller)

License No. 0544 Date July 2, 1979

ECY 060-1-20

7/5/79

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 24
(page 1 of 2)

WATER WELL REPORT

State of Washington Date Printed 29 Jul 2003 Log No 22403

Construction/Decommission Original Construction Notice of Intent # 138647

Construction

PROPOSED USE **DOMESTIC**

TYPE OF WORK Owners s Well Number (If more than one well) **1**

NEW WELL Method **ROTARY**

DIMENSIONS Diameter of well **6** inches

Drilled **420** ft Depth of completed well **420** ft

CONSTRUCTION DETAILS

Liner installed

4 Dia from **10** ft to **420** ft

Casing installed **WELDED**

6 Dia from **+2** ft to **148** ft

Dia from ft to ft

Dia from ft to ft

Perforations **Yes** Used In **Liner**

Type of perforator used **SKILL SAW**

SIZE of perforations **6** in by **1/8** in

80 Perforations from **380** ft to **420** ft

Perforations from ft to ft

Perforations from ft to ft

Screens **No** K Pac Location

Manufacture s Name

Type Model No

Diam slot size from ft to ft

Diam slot size from ft to ft

Gravel/Filter packed **No** Size of Gravel

Material placed from ft to ft

Surface seal **Yes** To what depth **20** ft

Seal method Material used in seal **BENTONITE**

Did any strata contain unusable water? **Yes**

Type of water **SURFACE WATER** Depth of strata **16**

Method of sealing strata off **CASING/SEAL**

PUMP Manufacture s name

Type H P **0**

WATER LEVELS Land surface elevation above mean sea level **0** ft

Static level **120** ft below top of well Date **07/21/2003**

Artesian Pressure lbs per square inch Date

Artesian water controlled by

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? **No** If yes by whom?

Yield gal/min with ft drawdown after

Yield gal/min with ft drawdown after

Yield gal/min with ft drawdown after

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min ft drawdown after hrs

Air test **9** gal/min w/ stem set at **420** ft for **1** hours

Artesian flow gpm Date

Temperature of water Was a chemical analysis made? **No**

CURRENT

Notice of Intent No **W153276**

Unique Ecology Well I D No **AHS559**

Water Right Permit Number

OWNER **SMITH DAVID & JANE**

OWNER ADDR **SCOTT DOUBET 411 S SUPREME CRT SPOKANE** 99223

Well Street Address **MELVILLE/SPOTTED RD**

City County **SPOKANE**

Location **NE** 1/4 **SE** 1/4 Sec **17** T **24** R **42E** EWM

Lat/Long (s t r still REQUIRED) Lat Deg Lat Min/Sec

Long Deg Long Min/Sec

Tax Parcel No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure Show thickness of aquifers and the kind and nature of the material in each stratum penetrated Show at least one entry for each change in formation

Material	From	To
SILTY TOPSOIL	0	1
COARSE SAND GRAVEL W/COBBLES	1	15
BROKEN BASALT BLACK W/COARSE SAND	15	46
SOME WATER	46	46
SANDY BROWN CLAY	46	67
TAN/YELLOW CLAYW/QUARTZ SAND	67	148
GRANITE BROWN/WHITE MEDIUM	148	178
GRANITE BLACK/WHITE HARD	178	214
GRANITE BLACK/WHITE MED W/FRAC	214	237
GRANITE BLACK/WHITE HARD	237	249
GRANITE BLACK/WHITE MED W/FRAC	249	285
GRANITE BLACK/WHITE MEDIUM	285	297
CONTINUED	297	297

Notes

1 6 DRIVE SHOE TOTAL GPM = 9 10

SEP - 5 2003

Work started **07/17/2003** Completed **07/21/2003**

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported are true to my best knowledge and belief

☑ Driller ☐ Engineer ☐ Trainee

Name **TODD LIVELY** License No **2321**

Signature Todd Lively

If trainee Licensed driller is License No

Licensed Driller Signature

Drilling Company

NAME **FOGLE PUMP & SUPPLY INC** Shop **AIRWAY HEI**

ADDRESS **PO BOX 1450**

Airway Heights WA 99001

Phone **5092440846** Toll Free **8883439355**

E Mail **akk@foglepump com**

FAX **5092442875** WEB Site **WWW FOGLEPUMP COM**

Contractor's Registration No **FOGLEPS095L4** Date Log Created **07/29/2003**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 24
(page 2 of 2)

WATER WELL REPORT

State of Washington Date Printed 29 Jul 2003 Log No 22403

Construction/Decommission Original Construction Notice of Intent #

Construction

PROPOSED USE **DOMESTIC**

TYPE OF WORK Owner's Well Number (If more than one well) **1PG2**

NEW WELL Method **ROTARY**

DIMENSIONS Diameter of well **6** inches

Drilled **420** ft Depth of completed well **420** ft

CONSTRUCTION DETAILS

Liner installed

4 Dia from **10** ft to **420** ft

Casing installed **WELDED**

6 Dia from **+2** ft to **148** ft

Dia from ft to ft

Dia from ft to ft

Perforations **Yes** Used In **Liner**

Type of perforator used **SKILL SAW**

SIZE of perforations **6** in by **1/8** in

80 Perforations from **380** ft to **420** ft

Perforations from ft to ft

Perforations from ft to ft

Screens **No** K Pac Location

Manufacture's Name

Type Model No

Diam slot size from ft to ft

Diam slot size from ft to ft

Gravel/Filter packed **No** Size of Gravel

Material placed from ft to ft

Surface seal **Yes** To what depth **20** ft

Seal method Material used in seal **BENTONITE**

Did any strata contain unusable water? **Yes**

Type of water **SURFACE WATER** Depth of strata **16**

Method of sealing strata off **CASING/SEAL**

PUMP Manufacture's name

Type H P **0**

WATER LEVELS Land surface elevation above mean sea level **0** ft

Static level **120** ft below top of well Date **07/21/2003**

Artesian Pressure lbs per square inch Date

Artesian water controlled by

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? **No** If yes by whom?

Yield gal/min with ft drawdown after

Yield gal/min with ft drawdown after

Yield gal/min with ft drawdown after

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min ft drawdown after hrs

Air test **9** gal/min w/ stem set at **420** ft for **1** hours

Artesian flow gpm Date

Temperature of water Was a chemical analysis made? **No**

CURRENT

Notice of Intent No **W153276**

Unique Ecology Well I D No **AHS559**

Water Right Permit Number

OWNER **SMITH DAVID & JANE**

OWNER ADDR **SCOTT DOUBET 411 S SUPREME CRT SPOKANE** 99223

Well Street Address **MELVILLE/SPOTTED RD**

City County **SPOKANE**

Location **NE** 1/4 **SE** 1/4 Sec **17** T **24** R **46E** EWM

Lat/Long (s t r still REQUIRED) Lat Deg Lat Min/Sec

Long Deg Long Min/Sec

Tax Parcel No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure Show thickness of aquifers and the kind and nature of the material in each stratum penetrated Show at least one entry for each change in formation

Material	From	To
CONTINUED	297	297
GRANITE BLACK/WHITE HARD	297	313
GRANITE BLACK/WHITE MED W/FRAC	313	341
GRANITE GREEN/WHITE SOFT	341	352
GRANITE BLACK/WHITE MED W/FRAC	352	372
GRANITE BLACK/WHITE FRACTURED	372	387
SOFT W/WATER	387	387
GRANITE BLACK/WHITE MED W/FRAC	387	420

SEP - 5 2003

Notes

1 6 DRIVE SHOE TOTAL GPM = 9 10

Work started **07/17/2003** Completed **07/21/2003**

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported are true to my best knowledge and belief

☑ Driller ☐ Engineer ☐ Trainee

Name **TODD LIVELY** License No **2321**

Signature Todd Lively

If trainee Licensed driller is License No

Licensed Driller Signature

Drilling Company

NAME **FOGLE PUMP & SUPPLY INC** Shop **AIRWAY HEI**

ADDRESS **PO BOX 1450**

Airway Heights WA 99001

Phone **5092440846** Toll Free **8883439355**

E Mail **akk@foglepump com**

FAX **5092442875** WEB Site **WWW FOGLEPUMP COM**

Contractor's Registration No **FOGLEPS095L4** Date Log Created **07/29/2003**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 25

WATER WELL REPORT

ECOLOGY Original & 1st copy Ecology 2nd copy owner 3rd copy driller

Construction/Decommission (x in circle) 121340
- (X) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*_____

CURRENT Notice of Intent No W156646

Unique Ecology Well ID Tag No AHC435

Water Right Permit No _____

Property Owner Name Jean R Johns

Well Street Address Spotted Rd @ Melville Rd

City Cheney Parcel B County Spokane

Location NE 1/4 1/4 SE 1/4 Sec 17 Twn 24N R 42E EWM or WWM *circle one*

Lat/Long (s,t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

PROPOSED USE (X) Domestic ( ) Industrial ( ) Municipal ( ) DeWater ( ) Irrigation ( ) Test Well ( ) Other_____

TYPE OF WORK Owner's number of well (if more than one)_____
(X) New Well ( ) Reconditioned *Method* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (X) Rotary ( ) Jetted

DIMENSIONS Diameter of well 6 inches drilled 140 ft
Depth of completed well 140 ft

CONSTRUCTION DETAILS
Casing Installed (X) Welded 6 Diam from +1 ft to 79 ft
(X) Liner installed 4 Diam from _____ ft to 140 ft
( ) Threaded _____ Diam from _____ ft to _____ ft

Perforations ( ) Yes (X) No
Type of perforator used_____
SIZE of perfs_____ in by_____ in and no of perfs_____ from _____ ft to _____ ft

Screens ( ) Yes (X) No ( ) K Pac Location_____
Manufacturer's Name_____
Type_____ Model No _____
Diam _____ Slot Size_____ from_____ ft to_____ ft
Diam _____ Slot Size_____ from_____ ft to_____ ft

Gravel/Filter packed ( ) Yes (X) No ( ) Size of gravel/sand_____
Materials placed from_____ ft to_____ ft

Surface Seal (X) Yes ( ) No To what depth? 18+ ft
Materials used in seal Bentonite
Did any strata contain unusable water? ( ) Yes (X) No
Type of water?_____ Depth of strata_____
Method of sealing strata off_____

PUMP Manufacturer's Name_____
Type _____ H P _____

WATER LEVELS Land surface elevation above mean sea level_____ ft
Static level 40 ft below top of well Date 8/19/02
Artesian pressure_____ lbs per square inch Date_____
Artesian water is controlled by_____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ( ) Yes (X) No If yes by whom?_____
Yield _____ gal /min with_____ ft drawdown after_____ hrs
Yield _____ gal /min with_____ ft drawdown after_____ hrs
Yield _____ gal /min with_____ ft drawdown after_____ hrs
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test_____
Bailer test_____ gal /min with _____ ft drawdown after_____ hrs
Airtest 17 gal /min with stem set at_____ ft for _____ hrs
Artesian flow_____ g p m Date_____
Temperature of water_____ Was a chemical analysis made? ( ) Yes (X) No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil	0	1
Cobble & Sand w/ Clay,	1	7
Brown		
Sand, Coarse	7	12
Basalt, Fractured	12	25
Clay, Brown w/ Sand,	25	74
Quartz		
Basalt, Medium	74	80
Basalt, Hard	80	91
Basalt, Fractured -	91	94
Water 5gpm		
Basalt, Medium	94	112
Basalt, Fractured -	112	117
Water 12gpm		
Basalt, Hard	117	130
Shale, Grey & Hard	130	140
Recommended pump depth is 120 feet		

RECEIVED
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 8/19/02 Completed Date 8/19/02

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

(X) Driller ( ) Engineer ( ) Trainee Name (Print) Don Anderson
Driller/Engineer/Trainee Signature Don Anderson
Driller or Trainee License No 1447

Drilling Company J & J Drilling, Inc
Address S 5613 Linke Rd
City State Zip Greenacres, WA 99016
Contractor's Registration No JJDRII-177KU Date 8/21/02

If trainee, licensed driller's Signature and License no _____

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 26

153456

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. WE02185

Unique Ecology Well ID Tag No. AKO648

Water Right Permit No. _____

Property Owner Name Patty Hunt

Well Street Address Spotted Rd @ Melville

City _____ **County** Spokane

Location NE 1/4-1/4 SE 1/4 Sec 17 Twn 24 R 42 EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 175 ft.
Depth of completed well 175 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 19 ft.
☑ Liner installed 4 " Diam. from 8 ft. to 175 ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☑ Yes ☐ No
Type of perforator used 3/8" Spade Bit
SIZE of perfs _____ in. by ___ in. and no. of perfs ____ from 60 ft. to 175 ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 25 ft. below top of well Date 5/19/04
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 13 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Sand w/ Basalt Boulders	0	6
Basalt, Soft	6	11
Basalt, Medium w/ Fractures	11	55
Basalt, Fractured w/ Shale, Grey	55	62
Basalt, Fractured w/ Shale, Brown - Water 8gpm	62	131
Basalt, Broken w/ Shale, Green - Water 3gpm	131	135
Basalt, Medium w/ Fractures - Water 2gpm	135	170
Basalt, Fractured w/ Shale, Black	170	173
Shale, White and Medium	173	175
Recommended pump depth is 160 feet.		

RECEIVED
AUG 18 2004
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5/18/04 Completed Date 5/19/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset
Driller/Engineer/Trainee Signature Brian T. Mosset
Driller or trainee License No. 2139

IF TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRIL-177KU Date 5/23/04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

180667

WWR 27

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[x] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft.
Depth of completed well 180 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6" Diam. from +1 ft. to 19 ft.
[x] Liner installed 4" Diam. from 7 ft. to 180 ft.
[ ] Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: [x] Yes [ ] No
Type of perforator used 3/8" Spade Bit
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from 100 ft. to 180 ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? [ ] Yes [x] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 63 ft. below top of well Date 7/21/05
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [x] No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? [ ] Yes [x] No

CURRENT
Notice of Intent No. W181131
Unique Ecology Well ID Tag No. ALR981
Water Right Permit No. _____
Property Owner Name Randall Gillingham
Well Street Address Melville Road
City Cheney County Spokane
Location NE 1/4-1/4 SE 1/4 Sec 17 Twn 24 R 42 EWM or WWM [x] circle one
Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. _____

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	1
Sand w/ Clay, Brown	1	7
Basalt, Medium	7	63
Basalt, Fractured	63	87
Basalt, Medium	87	104
Basalt, Fractured - Water 15gpm	104	127
Basalt, Medium	127	180
Recommended pump depth is 160 feet.		

RECEIVED
OCT – 4 2005
DEPARTMENT OF ECOLOGY

Start Date 7/21/05 Completed Date 7/21/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[ ] Driller [ ] Engineer [ ] Trainee Name (Print) Don Anderson
Driller/Engineer/Trainee Signature Don Anderson
Driller or trainee License No. 1447

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Road
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRII-177KU Date 8/1/05

Ecology is an Equal Opportunity Employer.

 The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

WWR 28

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ...
Permit No. ...

(1) OWNER: Name Rose Stranger Address Box-537 Mt. Vernon, WA.

LOCATION OF WELL: County Spokane ¼ ¼ Sec. 17 T. 24 N., R. 42 W.M.

g and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) ...
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 180 ft. Depth of completed well 170 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 108 ft.
Threaded [ ] " Diam. from ... ft. to ... ft.
Welded [X] " Diam. from ... ft. to ... ft.

Perforations: Yes [ ] No [X]
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ...
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? Sulphur Depth of strata 108-150
Method of sealing strata off Casing

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 60 ft. below top of well Date 2/[illegible]
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water le[illegible] is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? ...
Yield: 8 gal./min. with ... ft. drawdown after ... hrs.
" " " "
" Air test approx. " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes [ ] No [X]

4/22/86

(USE ADDITIONAL SHEETS IF NECESSARY)

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Basalt boulders + clay; brown	0	10
Clay w/basalt cobbles	10	30
Clay, pink + red	30	60
Sand, clay (red) + gravel	60	100
Highly decomposed granite	100	108
Granite, salt + pepper, hard w/ water	108	150
Granite, grey, med.	150	170
Granite, grey salt + pepper, hard	170	180

RECEIVED
APR 22 1986
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 3/13, 19 86 Completed 3/20, 19 86

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J. J. [illegible], Inc. (Person, firm, or corporation) (Type or print)
Address [illegible], Wash.
[Signed] Keith D. Vanvillion (Well Driller)
License No. [illegible] Date 3/[illegible], 19 86

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 29

24/42-17R

Well Number: 24/42-17R County: Spo

Owner or Tenant MICK LLOYD

Application No. _____ Permit No. _____ Cert. No. _____

Type of Well: DRILLED Date Drilled: JULY, 1973

Depth of Well: 159' Production: 80 GPM

Diameter: 6"

Altitude: 2355

Static Water Level 35' (EL: 2320) Date _____ Type of Meas: _____

Depth of Casing: 38½'

Pump HP: _____

Pump Intake Depth: _____

Use: DOMESTIC, STOCK

DRILLING CONTRACTOR: J. & H. DRILLING CO.

MATERIAL	FROM	TO
SAND AND GRAVEL	0	37
BASALT - HARD	37	106
CLAY - RED, BROWN, SOFT	106	118
BASALT - HARD	118	159

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 30

24/42-17A

Well Number: 24/42-17A County: GP

Owner or Tenant SAM W. GRIFFIN

Application No. _____ Permit No. _____ Cert. No. _____

Type of Well: DRILLED Date Drilled JULY, 1973

Depth of Well: 95' Production: 30 GPM

Diameter: 6"

Altitude: 2360

Static Water Level 40' (EL' 2320) Date _____ Type of Meas: _____

Depth of Casing: _____

Pump HP: _____

Pump Intake Depth: _____

Use: DOMESTIC

DRILLING CONTRACTOR: _____

MATERIAL	From	To
SAND & GRAVEL	0	30
BASALT	30	95

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 31

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Sam Griffin Address Rt-2 Box 241 Phoney wa. 99004

(2) LOCATION OF WELL: County Spokane ¼ ¼ Sec. 17 T. 24 N., R. 43 W.M.

Bearing and distance from section or subdivision corner Lot-1 Blk 1 Griffin Addition

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6' inches.
Drilled 90 ft. Depth of completed well 90 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 19 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☐ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 18 ft. below top of well Date 4-18-83
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
Air Test 40+ GPM "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sandy Top Soil	0	1
Sand & Gravel	1	8
Basalt - Hard	8	22
Basalt Frac. w/Brn Clay	22	25
Basalt - Fractured	25	35
Brn Clay - Hard.	35	40
Basalt Frac w/Brn Clay	40	50
Gray Clay - Hard	50	60
Basalt w/ Gray Clay	60	75
Quartz Sand - Water	75	90

RECEIVED
SEP 23 1985
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL

Work started 4-18 19 83 Completed 4-21 19 83

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J & J Drilling
(Person, firm, or corporation) (Type or print)
Address 6635 Link Rd

[Signed] (Well Driller)
License No. 0215 Date 4-29 19 83

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 32

477295

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

State of Washington Date Printed: 12-Jul-2012 Log No. 0

Construction / Decommission: Original Construction Notice

Construction

PROPOSED USE: DOMESTIC

TYPE OF WORK: Owners's Well Number: (If more than one well) 1

NEW WELL Method: ROTARY

DIMENSIONS: Diameter of well: 6 inches

Drilled 400 ft. Depth of completed well 400 ft.

CONSTRUCTION DETAILS:

Liner installed: PVC

4 " Dia from 200 ft. to 400 ft.

Casing installed WELDED

6 " Dia from +2 ft. to 228 ft.

" Dia from ft. to ft.

" Dia from ft. to ft.

Perforations: Yes Used In: LINER

Type of perforator used SKILL SAW

SIZE of perforations 1/8 in. by 6 in.

120 Perforations from 260 ft. to 400 ft.

Perforations from ft. to ft.

Perforations from ft. to ft.

Screens: 0 K-Pac Location:

Manufacture's Name

Type: Model No

Diam. slot size: from ft. to ft.

Diam. slot size: from ft. to ft.

Gravel/Filter packed: No Size of Gravel

Material placed fro ft. to ft.

Surface seal: Yes To what depth 18 ft.

Seal method: Material used in seal BENTONITE

Did any strata contain unusable water No

Type of water Depth of strata

Method of sealing strata off

PUMP: Manufacture's name

Type: H.P. 0

WATER LEVELS Land-surface elevation above mean sea level: 0 ft.

Static level 12 ft. below top of well Date 06/13/2012

Artesian Pressure lbs per square inch Date

Artesian water controlled by

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made No If yes, by whom

Yield: gal/min with ft drawdown after

Yield: gal/min with ft drawdown after

Yield: gal/min with ft drawdown after

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level

Time:	Water Level	Time:	Water Level	Time:	Water Level

Date of test:

Bailer test gal/min ft drawdown after hrs.

Air test 4 gal/min w/ stem set at 400 ft. for 1 hours

Artesian flow gpm Date

Temperature of water Was a chemical analysis made No

CURRENT

Notice of Intent No.: WE14568

Unique Ecology Well I.D. No BCN976

Water Right Permit Number:

OWNER: SCHREVEN, HERMAN & SANDY

OWNER ADD 8808 W MELVILLE

CHENEY, WA 99004

Well Add 8808 W MELVILLE

City: Cheney, WA 99004 County: Spokane

Location: NW 1/4 SE 1/4 Sec 17 T 24 R 42 EW

Lat/Long: (s, t, r still REQUIRED) Lat Deg Lat Min/Sec

Long Deg Long Min/Se

Tax Parcel No.: 24172.9019

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure. Show thickness of aquifiers and the kind and nature of the material in each stratum penetrated. Show at least one entry for each change in formation.

Material	From	To
TOPSOIL	0	2
BROKEN BASALT	2	43
DECOMPOSED GRANITE W/CLAY	43	193
SOFT BROWNISH GRAY GRANITE	193	230
HARD GRAY GRANITE	230	290
SOFT BROWN GRANITE	290	295
HARD GRAY GRANITE	295	400

RECEIVED

JUL 19 2012

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Notes:

Work starte 06/04/2012 Complete 06/13/2012

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported are true to my best knowledge and belief.

☑ Driller ☐ Engineer ☐ Trainee

Name: SAM BEARDSLEE License No.: 2905

Signature:

If trainee, Licensed driller is: License No.:

Licensed Driller Signature

Drilling Company:

NAME: FOGLE PUMP & SUPPLY, INC. Shop: AIRWAY HEI

ADDRESS: PO BOX 1450

Airway Heights, WA 99001

Phone: (509) 244-0846 Toll Free: (888) 343-9355

E-Mail: marty@foglepump.com

FAX: (509) 244-2875 WEB Site: WWW.FOGLEPUMP.COM

Contractor's Registration No.: FOGLEPS095L4 Date Log Created: 7/12/2012

WWR33

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

■ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ■ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

■ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ■ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 12 inches, drilled 140 ft.
Depth of completed well 140 ft.

CONSTRUCTION DETAILS

Casing ☐ Welded 6 " Diam. from +1.5 ft. to 18.5 ft.
Installed: ■ Liner installed 4 " Diam. from -1 ft. to 140 ft.
☐ Threaded _____ " Diam. From _____ ft. to _____ ft.

Perforations: ■ Yes ☐ No
Type of perforator used SKILLSAW
SIZE of perfs 1/4 in. by 8 in. and no. of perfs 80 from 60 ft. to 135 ft.

Screens: ☐ Yes ■ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ■ No Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ■ Yes ☐ No To what depth? 18.5 ft.
Material used in seal DRY Bentonite
Did any strata contain unusable water? ☐ Yes ■ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 40 ft. below top of well Date 10/7/15
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ■ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 20 gal./min. with stem set at 135 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date 10/7/15
Temperature of water _____ Was a chemical analysis made? ☐ Yes ■ No

CURRENT

Notice of Intent No. WE 22271
Unique Ecology Well ID Tag No. BHW-264
Water Right Permit No. _____
Property Owner Name TOM HOLSTEN
Well Street Address 9202 S. SPOTTED RD
City SPOKANE County SPOKANE
Location SE 1/4-1/4 SE 1/4 Sec 17 Twn 24 R 42 EWM ■ Or WWM ☐
(s, t, r Still REQUIRED)

Lat/Long Lat Deg ____ Lat Min/Sec ____
Long Deg ____ Long Min/Sec ____
Tax Parcel No. (Required) 24174.9103

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BASALT Cobble & SAND	0	7
BASALT MEDIUM	7	33
BASALT MEDIUM-LIGHT	33	61
ROTTEN BASALT 5gpm	61	78
BASALT LIGHT	78	82
BASALT MED-HARD	82	97
BASALT FRACTURED 7gpm	97	108
BASALT HIGHLY FRACTURED WITH 8gpm	108	115
BASALT MED-LIGHT	115	140

RECEIVED
OCT 19 2015
Eastern Washington Office

Start Date 10/7/15 Completed Date 10/7/15

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

■ Driller ☐ Engineer ☐ Trainee Name (Print) Alex Vermillion
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 2236
IF TRAINEE: Driller's License No: _____
Driller's Signature: _____

Drilling Company Vermillion Pump & Drilling
Address 6. 16516 Temple Rd
City, State, Zip SPOKANE, WA, 99217
Contractor's Registration No. VERMIPD887CZ Date _____

ECY 050-1-20 (Rev 02/10) *If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

WWR 34

Please print sign and return to the Department of Ecology

Water Well Report

Original – Ecology 1st copy – owner 2nd copy – driller

ECOLOGY

Construction/Decommission 139831

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current

Notice of Intent No W174264

Unique Ecology Well ID Tag No AHJ706

Water Right Permit No _____

Property Owner Name Yousif Kaddoura

Well Street Address Melville Rd @ Spotted Rd

City _____ County Spokane

Location ___1/4 1/4 SE 1/4 Sec 17 Twn 24N R 42E EWM ☑ WWM ☐ circle one

Lat/Long (s, t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 24174 9100

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner s number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 100 ft

Depth of completed well 100 ft

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam from +1 ft to 19 ft

☑ Liner installed 4 Diam from 6 ft to 100 ft

☐ Threaded _____ Diam from _____ ft to _____ ft

Perforations ☑ Yes ☐ No

Type of perforator used spade bit

SIZE of perfs 3/8 in by ___ in and no of perfs ___ from 20 ft to 100 ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____

Manufacturer s Name _____

Type _____ Model No _____

Diam _____ Slot size _____ from _____ ft to _____ ft

Diam _____ Slot size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft to _____ ft

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer s Name _____

Type _____ HP _____

WATER LEVELS Land surface elevation above mean sea level _____ ft

Static level 31 ft below top of well Date 8/21/03

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes by whom? _____

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal /min with _____ ft drawdown after _____ hrs

Airtest 24 gal /min with stem set at _____ ft for _____ hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil Sandy	0	1
Basalt Cobble w/ Sand	1	11
Basalt, Medium to Hard	11	31
Basalt Fractured w/ Shale Brown	31	43
Water 2gpm		
Basalt, Medium	43	57
Basalt, Fractured w/ Shale, Grey	57	64
Water 2gpm		
Basalt Medium	64	70
Basalt, Highly Fractured	70	90
Water 20gpm		
Basalt Medium to Soft	90	100

RECEIVED
OCT 15 2003
DEPT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 8/20/03 Completed Date 8/21/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian Mosset

Driller or trainee License No 2139

If TRAINEE

D iller s L censed No _____

Driller s Signature _____

Drilling Company J & J Drilling, Inc

Address S 5613 Linke Rd

City State Zip Greenacres, WA 99016

Contractor s Registration No JJDRIL 177KU Date 8/22/03

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 35

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Bob Kuchynski Address 1504 E. Garland Spokane, Wa 99207

(2) LOCATION OF WELL: County Spokane SW¼ NE¼ NE¼ Sec. 20 T. 24 N., R. 42E W.M.

...g and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 175 ft. Depth of completed well 175 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 19 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☐ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ...
Type ... Model No ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18½ ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2345 ft.
Static level ... ft. below top of well Date ...
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

...te of test ...
...test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
OVERBURDEN	0	15
Med Soft Brown Basalt	15	40
Med Hard Gray Basalt	40	47
Med Brn Basalt w/water	47	85
Med Hard Gray Basalt	85	104
Brn Clay w/water	104	108
Med Gray Fractured Basalt w/water	108	152
Med Gray Basalt	152	175

AIR TEST 8½ GPM

RECEIVED
MAY 8 - 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 4-25, 19 78 Completed 4-26, 19 78

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C+S Drilling Inc.
(Person, firm, or corporation) (Type or print)
Address RT 3 Box 143 Chattaroy, Wa 99004

[Signed] Ron C Adams
(Well Driller)

License No. 773 Date May 2, 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

5/8/78 Spokane SW 7½ Four Lakes

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Marty

WWR36

W2457

WATER WELL REPORT

State Card No. W062457
Unique Well I.D. # ABW286
Water Right Permit No.

STATE OF WASHINGTON

(1) OWNER: Name CRAIN, CECIL Address W. 4002 PRINCETON SPOKANE, WA 99205-

(2) LOCATION OF WELL: County SPOKANE - SW 1/4 NE 1/4 Sec 20 T 24 N., R 42 WM

(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 500 ft. Depth of completed well 500 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 320 ft.
STEEL CASING " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 23 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? YES
Type of water? MUDDY Depth of strata 140 ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 460 ft. below top of well Date 06/18/96
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 1 gal/min. w/ stem set at 500 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	2
SAND	2	8
SAND GRAVEL COBBLES	8	72
CLAY BROWN SAND	72	76
COARSE SAND	76	84
CLAY WITH SAND	84	130
BROKEN BASALT	130	136
SAND GRAVEL TRACE OF WATER	136	142
BROKEN BASALT	142	156
LIGHT BROWN CLAY	156	215
YELLOW CLAY	215	226
YELLOW CLAY SAND	226	240
BROWN CLAY SAND	240	300
CLAY SILT SAND	300	310
DECOMPOSED GRANITE	310	318
MEDIUM GRANITE	318	350
HARD FRACTURED GRANITE	350	419
BLACK & WHITE GRANITE WITH WATER	419	500
	500	

Work started 06/12/96 Completed 06/18/96

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 601 BROADWAY

[SIGNED] License No. 1933

Contractor's Registration No. PO-ND-EI*248JE Date 06/19/96

WWR 37

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Howard M. Peterson Address Rt. 2 Box 171 Chewy, Wa

(2) LOCATION OF WELL: County Spokane NE¼NE¼ Sec. 20 T. 24 N., R. 42 W.M.
¼ and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 74 ft.
Threaded [ ] ..." Diam. from ... ft. to ... ft.
Welded [X] ..." Diam. from ... ft. to ... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes [X] No [ ] To what depth? 184 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ... Depth of strata ...
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level 2350 ft.
Static level Approx. 55 ft. below top of well Date .....
Artesian pressure ... lbs. per square inch Date .....
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? .....
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 3 gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	2
Broken Basalt /w clay	2	73
Hard Basalt	73	120
Green clay	120	128
Med. Hard Basalt (3 gal)	128	168
white clay	168	183
Brown clay	183	200
3 gal per min.		

RECEIVED
MAY 18 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 4-26 19 78 Completed 5-27 19 78

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Aqua Drilling Inc. (Person, firm, or corporation) (Type or print)
Address Box 659 Hayden Lake, Idaho
[Signed] Theron D. Lewis (Well Driller)
License No. 0718 Date 5-28 19 78

Four Lakes 792

(USE ADDITIONAL SHEETS IF NECESSARY)

5/18/78

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 38
(Page 1 of 2)

Please print, sign and return to the Department of Ecology

172018

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. WE03194
Unique Ecology Well ID Tag No. AKO870
Water Right Permit No. _____
Property Owner Name Jerry Kasinger
Well Street Address Spotted Road
City Cheney **County** Spokane
Location SE 1/4-1/4 NE 1/4 Sec 20 Twn 24 R 42 EWM ☑ or WWM ☐ circle one
Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☑ New well ☐ Reconditioned ☐ Deepened
Method: ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 280 ft.
Depth of completed well 280 ft.

CONSTRUCTION DETAILS
Casing Installed: ☑ Welded 6" Diam. from +1 ft. to 87 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☑ No
Type of perforator used _____
SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level none ft. below top of well Date 2/17/05
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 0 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil, Sandy	0	1
Sand w/ Basalt Cobble	1	5
Basalt Cobble w/ Sand & Boulders	5	27
Sand w/ Broken Basalt	27	63
Clay, Brown & Medium	63	82
Basalt, Soft	82	110
Basalt, Fractured w/ Shale, Brown	110	130
Shale, Brown w/ Basalt Fractures	130	158
Shale, Grey & Medium	158	199
Granite Sands w/ Decomposed Granite	199	250
Granite, Soft	250	280

RECEIVED
MAY 11 2005
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 2/16/05 Completed Date 2/17/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset
Driller/Engineer/Trainee Signature Brian G. Mosset
Driller or trainee License No. 2139

IF TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRIL-177KU Date 3/2/05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 38
(page 2 of 2)

Please print, sign and return to the Department of Ecology

Water Well Report 179924

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* WE03194

Current
Notice of Intent No. W179454
Unique Ecology Well ID Tag No. AK0870
Water Right Permit No.
Property Owner Name Terry Karlinger
Well Street Address Spotted Rd. 10408
City Cheney **County** Spokane
Location SE 1/4-1/4 NE 1/4 Sec 20 Twn 24 R 42 EWM or WWM ☑ circle one
Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____
Tax Parcel No.

PROPOSED USE: ☐ DeWater ☒ Domestic ☐ Irrigation ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)
☐ New well ☒ Reconditioned ☐ Deepened
Method: ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 200 ft.
Depth of completed well 162 ft.

CONSTRUCTION DETAILS
Casing Installed: ☐ Welded ____" Diam. from ____ ft. to ____ ft.
☐ Liner installed ____" Diam. from ____ ft. to ____ ft.
☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☐ No
Type of perforator used
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☐ No ☐ K-Pac Location
Manufacturer's Name
Type Model No.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand
Materials placed from ____ ft. to ____ ft.

Surface Seal: ☐ Yes ☐ No To what depth? ____ ft.
Material used in seal
Did any strata contain unusable water? ☐ Yes ☐ No
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name
Type: H.P.

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 155 ft. below top of well Date 7/6/05
Artesian pressure ____ lbs. per square inch Date
Artesian water is controlled by (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☒ Yes ☐ No If yes, by whom? Jarmer
Yield: 3 gal./min. with 10 ft. drawdown after 4 hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.
Artesian flow ____ g.p.m. Date
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Performed Aqua Freed Treatment		
Injected 1,700 lbs CO2		
Increased Well Yeild From		
0 GPM To 3 GPM		

RECEIVED
SEP 13 2005
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 7/5/05 Completed Date 8/19/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Scott Barratt
Driller/Engineer/Trainee Signature
Driller or trainee License No. 2590

If TRAINEE,
Driller's Licensed No.
Driller's Signature

Drilling Company Water Recovery Service
Address 2915 S. Glenrose Rd
City, State, Zip Spokane, WA 99223
Contractor's Registration No. WATERR504401H Date 4/8/06

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

WWR 39

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. G3-26315

Permit No. .....

(1) OWNER: Name Jesse Vurdy Address 7901 E AIKI SPOKANE, Wash. 99206

(2) LOCATION OF WELL: County Spokane — NE ¼ NE ¼ Sec 30 T. 24 N., R. 42 E W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 126 ft. Depth of completed well 126 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 99 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☐ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 45 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 20+ gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water Cool Was a chemical analysis made? Yes ☐ No ☒

RECEIVED
SEP 1 1976
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil	0	1
loose Basalt	1	7
Basalt	7	120
porse Basalt - water	120	126

Work started 8/18, 19 76 Completed 8/18, 19 76

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME American Drilling
(Person, firm, or corporation) (Type or print)
Address P.O. Box 14977 Spokane, Wash. 99214
[Signed] B O Mauzy
Well Driller
License No. 0322 Date 9/12, 19 76

ECY 050-1-20 (USE ADDITIONAL SHEETS IF NECESSARY)

6/17

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

WWR 40

Application No.

Permit No.

(1) OWNER: Name JOHN W RODRIGUEZ Address RT #1 MARSHALL

(2) LOCATION OF WELL: County SPOKANE SE ¼ NE ¼ Sec 20 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) 1

New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 150 ft. Depth of completed well 150 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 19 ft.
Threaded [ ] " Diam. from ft. to ft.
Welded [X] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depths ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2340 ft.
Static level 80 ft. below top of well Date 2-17-76
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
		Approx. 20	9 pm		

Date of test
test gal./min. with ft. drawdown after hrs.
n flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
OVERBURDEN	0	8
BASALT SOFT BROWN	8	25
BASALT HARD GRAY	25	80
CLAY SOME WATER	80	92
BASALT SOFT BROWN W/ WATER	92	196
BASALT HARD	196	150

Work started 2-16, 19 76 Completed 2-17, 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Q+S INDUSTRIES INC.
(Person, firm, or corporation) (Type or print)

Address RT 3 Box 143 CHENEY

[Signed] O. P. Quigley
(Well Driller)

License No. 0572 Date 2-18, 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7336—OS—(Rev. 4-71)
ECY-070-28

2 | 2" | 196

WWR41

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy 74943

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W121457

UNIQUE WELL I.D. # ACY-024

Water Right Permit No.

(1) OWNER: Name Kasey Stewart Address 1514 2nd St Cheney WA 99004

(2) LOCATION OF WELL: County Spokane 1/4 1/4 Sec 20 T 24N N.R. 42E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) Soda Road

TAX PARCEL NO.:

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
☒ New Well Method: ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS: Diameter of well 6" inches
Drilled 380 feet. Depth of completed well 380 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded 6" Diam. from +2 ft. to -173 ft.
☒ Liner installed 4" Diam. from -160 ft. to -380 ft.
☐ Threaded Diam. from ft. to ft.

Perforations: ☒ Yes ☐ No
Type of perforator used Skillsaw
SIZE of perforations 1/8 in. by 6 in.
84 perforations from -340 ft. to -380 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location
Manufacturer's Name
Type Model No.
Diam. Slot Size from ft. to ft.
Diam. Slot Size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand
Material placed from ft. to ft.

Surface seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 200 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: *Drawdown is amount water level is lowered below static level*
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
Yield: gal /min. with ft. drawdown after hrs.
Yield: gal /min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test gal./min. with ft. drawdown after hrs.
Airtest 2 gal./min. with 379 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

ECY 050-1-20 (11/98)

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Topsoil	0	2
Sands Gravel Tan Clay	2	33
Clay Tan Soft	33	175
Granite Brown Decomposed Soft	175	220
Granite Lt. Gray	220	280
Granite Green Medium	280	290
Granite Gray Hard	290	380

RECEIVED
SEP 17 1999
DEPARTMENT OF ECOLOGY
REGIONAL OFFICE

Work Started 9/1/99 Completed 9/2/99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Jim McLeslie License No. 2257
(Licensed Driller/Engineer)

Trainee Name License No.

Drilling Company H2O WELL SVC 1-800-772-4901

(Signed) Jim McLeslie License No. 2257
(Licensed Driller/Engineer)

Address 582 W HAYDEN HAYDEN LAKE ID. 83835

Contractor's Registration No. H2OWESI101DW Date 9/2/99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Please print, sign and return to the Department of Ecology

172021

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current

Notice of Intent No. WE03153

Unique Ecology Well ID Tag No. AKO850

Water Right Permit No. _____

Property Owner Name Lester Martin

Well Street Address Soda Road

City Cheney **County** Spokane

Location SW 1/4-1/4 NE 1/4 Sec 20 Twn 24 R 42 EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 220'2" ft.

Depth of completed well 220'2" ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 209 ft.

☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.

☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs _____ from ____ ft. to ____ ft.

Screens: ☑ Yes ☐ No ☑ K-Pac Location 201'11"

Manufacturer's Name Johnson

Type Telescoping/Stainless Steel Model No. _____

Diam. 6 Slot size 18 from 215'2" ft. to 220'2" ft.

Diam. 6 Slot size 16 from 210'2" ft. to 215'2" ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 93 ft. below top of well Date 3/1/05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 12 to 15 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil, Sandy	0	1
Sand w/ Broken Basalt	1	27
Sand, Coarse	27	70
Clay, Brown & Medium	70	75
Sand, Coarse	75	97
Basalt, Broken	97	109
Clay, Tan & Medium	109	133
Clay, Grey & Medium	133	144
Clay, Tan w/ Sand Strips	144	166
Clay, Brown & Medium	166	182
Granite, Decomposed	182	210
Granite, Sands - Water 12 to 15gpm	210	220'2"
Recommended pump depth is 200 feet.		

RECEIVED
MAY 11 2005
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL

Start Date 2/24/05 Completed Date 3/1/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or trainee License No. 2139

IF TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No. JJDRIL-177KU Date 3/2/05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

WWR 43

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WO59873
Unique Well I.D. # ABV876
Water Right Permit No.

(1) OWNER: Name OTTENBREIT, LOREN Address 1005 SUMMITT CHENEY, WA 99004-

(2) LOCATION OF WELL: County SPOKANE - NE 1/4 NE 1/4 Sec 20 T 24 N., R 42 WM

(2a) STREET ADDRESS OF WELL (or nearest address) ,

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (IF more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 159 ft. Depth of completed well 154 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 93 ft.
STL CAS/PVC 4 " Dia. from 5 ft. to 154 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/4 in. by 6 in.
60 perforations from 134 ft. to 154 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: YES Size of gravel SAND
Gravel placed from 130 ft. to 154 ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? YES
Type of water? CLOUDY Depth of strata 83 ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... 2340 ft.
Static level 50 ft. below top of well Date 11/08/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 5 gal/min. w/ stem set at 150 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL SAND CLAY	0	7
HARD BLACK BASALT	7	23
SOFT GREY CLAY	23	45
BROKEN BASALT CLAY	45	83
FINE SAND WITH WATER	83	89
MEDIUM BROWN CLAY	89	93
HARD BLACK BASALT	93	147
MEDIUM CLAY WITH WATER	147	154
FINE BROWN SAND	154	159
	159	

Work started 11/07/95 Completed 11/08/95

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] [signature] License No. 1796

Contractor's
Registration No. PO-ND-EI*248JE Date 11/10/95

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR44

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W44372
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name SHIMEK, MARGARET Address 10117 S. ANDRUS CHENEY, WA 99004-

(2) LOCATION OF WELL: County SPOKANE - SE 1/4 NE 1/4 Sec 20 T 24 N., R 42E WM
(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
DEEPENED Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 90 ft. Depth of completed well 215 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 4 " Dia. from 5 ft. to 160 ft.
4 " Dia. from 200 ft. to 215 ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: YES
Manufacturer's Name
Type PVC Model No.
Diam. 4 slot size 20 from 160 ft. to 200 ft.
Diam. slot size from ft. to ft.

Gravel packed: YES Size of gravel 8-12
Gravel placed from 100 ft. to 215 ft.

Surface seal: NO To what depth? ft.
Material used in seal
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off SEAL METHOD 1

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 110 ft. below top of well Date 09/12/94
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time | Water Level | Time | Water Level | Time | Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 20 gal/min. w/ stem set at 210 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
MEDIUM BLACK BASALT	125	180
SOFT BASALT CLAY	180	195
BASALT TRACE CLAY	195	200
CLAY QUARTZ SAND	200	205
HARD GRAY CLAY	205	215

RECEIVED
SEP 13 1994
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 09/06/94 Completed 09/12/94

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6810 BROADWAY

[SIGNED] Michelle Kelly License No. 1981

Contractor's Registration No. PO-ND-EI*248JE Date 09/14/94

WWR 45

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name Richard Drmaleki Address PO Box 11663 Spokane, Wa.

(2) LOCATION OF WELL: County Spokane SW ¼ NE ¼ Sec 20 T 24 N., R 42 E W.M.
¢ and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 185 ft. Depth of completed well 185 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 29.9" ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐ PVC. PIPE
Type of perforator used SAW
SIZE of perforations ¼ in. by 6 in.
40 perforations from 60 ft. to 80 ft.
68 perforations from 144 ft. to 179 ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2340 ft.
Static level 70 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 10 gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Cold Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil ~~Clay~~ Clay	0	3
Boulders & Gravel	3	30
Basalt Black Frac.	30	35
Basalt Black porous	35	70
Basalt Black porous &	70	
Clay, yellow water		100
Basalt Black, ~~porous~~ Hard	100	165
Basalt Black porous &	165	
clay yellow water.		185
Seep -	70	
water	165	

RECEIVED
NOV 28 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 11/18 19 78 Completed 11/19 19 78

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME American Drilling (Person, firm, or corporation) (Type or print)
Address P.O. Box 14977 Spokane Wash. 99214
[Signed] Dallas A. Wright (Well Driller)
License No. 0993 Date 11/27 19 78

11/27/78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 46

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name ROBERT SMITH Address RT 2 CHENEY

(2) LOCATION OF WELL: County SPOKANE NE ¼ NE ¼ Sec 20 T. 24 N., R. 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 125 ft. Depth of completed well 125 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 19 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? ..... ft.
Material used in seal PUDDLING CLAY
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 20 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
		AIR TEST		25 gpm	

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
OVER BURDEN	0	16
BASALT - HARD GRAY	16	30
BASALT & CLAY SOFT	30	37
BASALT - SOFT GRAY	37	55
BASALT & CLAY	55	70
BASALT SOFT BROW W/ WATER	70	125

Work started 24 May 19 X Completed 27 May 19 X

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & S Industries Inc
(Person, firm, or corporation) (Type or print)
Address Rt 3 Box 143 Cheney
[Signed] O P Caffey
(Well Driller)
License No. 0572 Date 16 June 19 X

8/9/16

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 47

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name RON SMITH Address RT 2 CHENEY

(2) LOCATION OF WELL: County SPOKANE — SE ¼ NE ¼ Sec. 20 T. 24 N., R. 42 W.M.

...ng and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 150 ft. Depth of completed well 150 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 62 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal PUDDLING CLAY
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ... Depth of strata ...
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ... ft. below top of well Date ...
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	AIR TEST			2C: 4pm	

Date of test .....
... r test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
CLAY BROWN	0	15
BOULDERS	15	16
GRAVEL	16	62
BASALT CLAY	62	71
BASALT HARD GRAY	71	141
BASALT SOFT BROWN W/WATER	141	150

Work started 14 JUNE, 19 76 Completed 15 JUNE, 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C+S Drilling (Person, firm, or corporation) (Type or print)
Address RT 3 BOX 143 CHENEY
[Signed] C.P Coffey (Well Driller)
License No. 0572 Date 16 JUNE, 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

8/9/16

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 48

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name WILLIAM BROOKS Address W 4119 THORPE RD. SPOKANE WASH 99204

LOCATION OF WELL: County SPOKANE SE ¼ NE ¼ Sec 20 T 24 N., R 42 W.M.

g and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Air-Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 185 ft. Depth of completed well 185 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ..." Diam. from ... ft. to ... ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ 6" Diam. from -1 ft. to 51 ft.

Perforations: Yes ☐ No ☑
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name .....
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 50 ft.
Material used in seal BENTONITE MIXTURE
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2549 ft.
Static level 49 ft. below top of well Date 09-11-77
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

...e of test .....
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
OVERBURDEN (SAND & GRAVEL)	0	15'
LARGE SAND & GRAVEL	15'	48'
LOOSE BROKEN GRAY BASALT WATER	48'	65'
HARD GRAY BASALT	65'	175'
SOFT GRAY HOKEY BASALT WITH YELLOW-BROWN ROCK - WATER-	175	185

AIR TEST 18 G.P.M.

RECEIVED
OCT 10 1980
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

2340

Work started 09-09, 19 77 Completed 09-11, 19 77

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C&S DRILLING (Person, firm, or corporation) (Type or print)
Address RT #3 BOX 43, CHENEY, WASH. 99004
[Signed] O. J. Colley (Well Driller)
License No. 0572 Date 10-11, 19 77

10/13/80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR49

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No.

(1) OWNER: Name WILLIAM TRALEY Address MARSHALL WN.

(2) LOCATION OF WELL: County SPOKANE SE ¼ NE ¼ Sec 20 T 24 N., R 42 W.M.

ng and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 170 ft. Depth of completed well 170 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to 21 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal PUDDLING CLAY
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2340 ft.
Static level 50 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	AIR TEST		20 gpm		

Date of test
test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
SAND	0	15
BASALT	15	53
BASALT W/CLAY	53	143
CLAY	143	154
BASALT	154	159
BASALT BROWN WATER	159	167
BASALT	167	170

Work started 4-26 19 76 Completed 4-26 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C+S INDUSTIES INC. (Person, firm, or corporation) (Type or print)
Address RT 3 Box 143 CHENEY
[Signed] O P Coffey (Well Driller)
License No. 572 Date 4-26 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

4/8/14

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 50

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Charles A. Bertone Address 511 S. Civic Spokane WA 99202

(2) LOCATION OF WELL: County Spokane SE ¼ SE ¼ Sec 20 T. 24 N., R. 42 E.W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled ..... ft. Depth of completed well ..... ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 100 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☑ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☑ No ☐
Type of perforator used .....
SIZE of perforations 6 by 1/4 in. by ..... in.
95 perforations from 95 ft. to 100 ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☑ No ☐ To what depth? 20+ ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 100 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom? .....
Yield: 5 gpm with ..... ft. drawdown after air test. hrs.
" " " " "
" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
..... test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Clay	0	4
M. H. Green	4	14
Soft Dk. Green	14	60
M. H. Green	60	96
H. Green	96	100
Caved 6" = 100'		
M H. Green	100	500
Broken Rocks with Small Amounts of Water Several places		

RECEIVED
JUL 21 1977
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 7-7, 19 77 Completed 7-8, 19 77

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Aqua Drilling + Dev. Inc (Person, firm, or corporation) (Type or print)
Address Box 1499 Coeur d'Alene
[Signed] E Lynn Lewis (Well Driller)
License No. 268 Date 7-8, 19 77

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 1356—OS—(Rev. 4-71). 7/21/77

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 51

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W21181

UNIQUE WELL I.D. # AAM917

Water Right Permit No. _____

OWNER: Name CHRIS OSTING Address 114 "B" ARMSTRONG DR., SPOKANE, WA 99204

LOCATION OF WELL: County SPOKANE SW 1/4 SE 1/4 Sec 20 T. 24 N., R. 42E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 475 feet. Depth of completed well 475 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6" Diam. from +1.5 ft. to 18.5 ft.
Welded ☒ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____" Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 200' ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: 1 gal./min. with _____ ft. drawdown after _____ hrs.
" ESTIMATED AIR LIFT 1 GPM "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOP SOIL	0	1
DECOMPOSED GRANITE SOFT	1	8
GRANITE MEDIUM SOFT	8	195
GRANITE HARD	195	475

RECEIVED JAN - 4 1994 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

6" DRIVE SHOE UTILIZED

Work Started 12/20/93 19. Completed 12/22 19 93

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME PONDEROSA DRILLING & DEVELOPMENT, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 BROADWAY, SPOKANE, WA 99212

(Signed) _____ (WELL DRILLER) (BOB DEHLE) License No. 2059

Contractor's Registration No. PO-ND-EI*248JE Date 12/28 19 93

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 52

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

CURRENT

Notice of Intent No. WE20427

Unique Ecology Well ID Tag No. BIO-213

Water Right Permit No. _____

Property Owner Name DAVID BROWN

Well Street Address 11214 S. SPOTTED RD

City Cheney County Spokane

Location SE 1/4-1/4 SE 1/4 Sec 20 Twn 24 R 42 (s, t, r Still REQUIRED) EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24204.9036

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 10 inches, drilled 600 ft. Depth of completed well 600 ft.

CONSTRUCTION DETAILS

Casing installed: ☐ Welded 10" Diam. from +1.5 ft. to 185 ft.

☒ Liner installed 4" Diam. from -7 ft. to 600 ft.

☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used SKILSAW

SIZE of perfs 1/4 in. by 2 in. and no. of perfs 100 from 500 ft. to 595 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 185 ft.

Material used in seal Dry Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 90 ft. below top of well Date 4-13-15

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 1-2 gal./min. with stem set at 595 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date 4-13-15

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	2
BASALT Cobble	2	4
Granite Decomp. Brown	4	16
" White to Gray Light	16	96
" S&P Light	96	110
Granite S&P medium-Light	110	190
" " medium	190	240
" " " w/Green	240	283
Granite S&P Light	283	290
" " medium	290	306
" " Light w/rock	306	337
" " medium Light	337	362
" " medium	367	426
Granite S&P medium w/Green	426	457
" " medium	457	505
" " medium Light	505	525
" " medium	525	600

RECEIVED

MAY 18 2015

Department of Ecology
Eastern Regional Office

Start Date 4-10-15 Completed Date 4-13-15

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Alex Vermillion

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2236

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company Vermillion Pump & Drilling

Address 6.16516 Temple Rd

City, State, Zip Spokane, WA. 99217

Contractor's Registration No. VERMIP09870Z Date _____

ECY 050-1-20 (Rev 02/10) *If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

WWR 53

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) **OWNER:** Name FRANK SHIMEK, JR. Address R.T. 1 BOX 300 CHENEY, WA. 99004

(2) **LOCATION OF WELL:** County SPOKANE — NE ¼ SE ¼ Sec. 20 T. 24 N., R. 42E W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one)

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 445 ft. Depth of completed well 440 ft.

(6) **CONSTRUCTION DETAILS:** DRIVESHOE

Casing installed: 6 " Diam. from +1 ft. to 280 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ft.
Static level ft. below top of well Date 2-2-87
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a ~~pump~~ AIR test made? Yes ☒ No ☐ If yes, by whom? DRILLER
Yield: ½ gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date 2-2-87
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG:**

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
OVERBURDEN	0'	1'
SAND - BASALT GRAVEL MIX	1'	17'
BROKEN BASALT - CLAY (MOIST)	17'	21'
SAND - BASALT GRAVEL MIX	21'	31'
SAND (COURSE)	31'	37'
SAND - GRAVEL MIX	37'	62'
SAND (COURSE)	62'	85'
SAND - GRAVEL MIX	85'	101'
SAND (COURSE)	101'	125'
SAND - GRAVEL MIX	125'	158'
CLAY (BROWN - HARD)	158'	167'
BASALT (BLACK - FRACTURED)	167'	188'
CLAY (BROWN - SOFT) ½ G.P.M.	188'	221'
CLAY - SAND MIX (ORANGE)	221'	275'
CLAY - BROKEN GRANITE	275'	285'
GRANITE (BROWN - SOFT) 1 G.P.M.	285'	320'
GRANITE (GRAY - HARD)	320'	362'
GRANITE (BLACK - MED) ½ G.P.M.	362'	371'
GRANITE (BROWN - MED)	371'	407'
GRANITE (GRAY/BROWN - HARD)	407'	445'

RECEIVED
MAY 5 1987
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 1-22, 1987 Completed 2-2, 1987

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ALLBERY DRILLING CORP. (Person, firm, or corporation) (Type or print)
N. 4601 MONROE SUITE 214
Address SPOKANE, WA. 99205

[Signed] Steven L. Allbery (Well Driller)

License No. 4 Date 2-2, 1987

5/5/87

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 54

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name GRAHAM Address 1824 W SHARP - SPO. WA. 99201

(2) LOCATION OF WELL: County SPOKANE SW ¼ SE ¼ Sec 20 T. 24 N., R. 42E W.M.

Bearing and distance from section or subdivision corner 1M1 S. SPOTTED RD. AND SE¼-SW¼

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 195 ft. Depth of completed well 195 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ..." Diam. from 0 ft. to 21 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☑
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name .....
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ... Depth of strata ...
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2160 ft.
Static level 140 ft. below top of well Date 6-12-76
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
test 12 gal./min. with 24 ft. drawdown after 2½ hrs.
Artesian flow ... g.p.m. Date 6-12-76
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
SANDY - TOP SOIL	0	15
GRANIT - WHITE - BELT?	15	125
" VERIOUS "	125	170
" LT. GREY "	170	195

RECEIVED
AUG 17 1976
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 6-11, 1976. Completed 6-13, 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME B & B Co. (Person, firm, or corporation) (Type or print)
Address 11924 E SPRAGUE
[Signed] A. Benander (Well Driller)
License No. 0033 Date 6-15, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

8/24/14

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 55

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 000052

Water Right Permit No _____

OWNER: Name Jerry White Address _____

LOCATION OF WELL: County Spokane SE ¼ SE ¼ Sec 20 T 24 N., R 42 W.M.

(2a) **STREET ADDDRESS OF WELL** (or nearest address) _____

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 580 feet. Depth of completed well 580 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from +1 ft. to 19 ft.
Welded ☐ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 80 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: 2 gal./min. with _____ ft. drawdown after _____ hrs.
Est. Air Lift " " "
" " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
over burden	0	3
brown decomposed granite	3	11
green granite med hard	11	14
brown granite decomposed	14	47
green granite med	47	52
Brown granite soft	52	75
Salt & pepper granite med moist	75	79
brown granite soft	79	126
green granite med	126	131
brown granite soft	131	168
Salt & pepper granite med	168	202
green granite med.	202	219
Salt & pepper granite med	219	244
green granite hard	244	251
Brown granite soft moist	251	253
Salt & pepper granite med	253	296
green granite hard	296	315
Salt & pepper granite med	315	379
green granite hard	379	402
Salt & pepper granite med moist	402	457
green granite hard	457	488
Salt & pepper granite med	488	543
green granite hard	543	580

RECEIVED
FEB 6 1991

Work started 1/4 19 Completed 1/11 19 91

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Fogle Pump & Supply (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 316 W. 5th Colville
(Signed) Richard A. Brown (WELL DRILLER) License No. 1238
Contractor's Registration No. PS194MF Date 1/14 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 56

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 7
Permit No.

(1) OWNER: Name Medallion Homes, Inc. Address W. 7217 45th Ave, Spokane, Wa. 99204

(2) LOCATION OF WELL: County Spokane Lot M SE ¼ SE ¼ Sec. 20 T. 24 N., R. 42E W.M.

ng and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 475 ft. Depth of completed well 475 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 20 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 35 ft. below top of well Date 11/18/75
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a air test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 5 gal./min. with 440 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil,brn	0'	3'
Quartz,heav fract,brn-orange-wht	3'	8'
Quartz,fract,brn & wht,m hrd	8'	45'
Quartz,fract,tan,m hrd	45'	82'
Quartz,fract,wht & orange,m hrd, water 1 GPM	82'	84'
Quartz,coose fract,gray-wht,m hrd	84'	99'
Quartz,prple & clear,m hrd	99'	120'
Quartz,coose fract,drk gray,m hrd	120'	124'
Quartz,fract,wht & gray,m hrd, water 1 GPM	124'	128'
Granite,coose fract, slp,hrd	128'	137'
Quartz,coose fract,drk gray,m hrd	137'	168'
Quartz,coose fract,gray,m hrd	168'	184'
Quartz,wht & tan,m hrd	184'	198'
Quartz,coose fract,wht,gra-gray, m hrd	198'	228'
Quartz,drk gray,m hrd	228'	245'
Quartz,coose fract,Prple & clear,m hrd	245'	281'
Quartz,gray,wht,gra,m hrd	281'	287'
Quartz,lt purple,wht-gray,m hrd	287'	305'
Quartz,gray-white,mica flks,m hrd	305'	318'
Quartz,fract,gray-wht,m hrd, water 1 GPM	318'	358'
Granite,slp,gra,m hrd	358'	378'
Quartz,coose fract,drk gray-yelly wht,m hrd,water 1 GPM	378'	398'
Quartz,white-clr,mica flks,m hrd	398'	414'
Quartz,coose fract,drk gray,m hrd	414'	434'
Quartz,coose fract,wht-yell,m hrd	434'	448'
Quartz,coose fract,wht-gray-gra, m hrd,water 1 GPM	448'	448'
Quartz,wht-gray-prple,m hrd	448'	458'
Quartz,gray-gra,m hrd	458'	475'

Work started Nov. 7, 19 75 Completed Nov. 18, 19 75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME KIRKMAN'S WELL DRILLING COMPANY
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Spokane, Wa. 99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0546 Date Dec. 4, 19 75

12/5/75

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71)
ECY-070-28

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 57

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Medallion Homes, Inc. Address W. 7217 45th, Spokane, Wash. 99204

LOCATION OF WELL: County Spokane Tract "B" SW ¼ SE ¼ Sec. 20 T. 24 N., R. 42E W.M.

ng and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 500 ft. Depth of completed well 500 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 40 ft.
Threaded [ ] " Diam. from ..... ft. to ..... ft.
Welded [X] " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 85 ft. below top of well Date 3/25/76
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a bail test made? Yes [X] No [ ] If yes, by whom? Driller
Yield: 5 gal./min. with 265 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brn silty top soil	0'	5'
Granite,decomp,tan	5'	10'
Granite,fract,tan,m hrd	10'	16'
Granite,heav fract,tan,m hrd	16'	28'
Granite,fract,gray,m hrd	28'	32'
Granite,decomp,tan w/white quartz, loose	32'	34'
Granite,fract,gray,m hrd	34'	46'
Granite,white & tan,fract,m hrd, water 1 GPM	46'	57'
Granite,fract,white & tan,thin layers drk gray, m hrd	57'	123'
Granite,occas fract,s & p,mica flakes,m hrd	123'	131'
Granite,occas fract,drk gray,m hrd	131'	153'
Granite,fract,white & gray, m hrd, water 2 GPM	153'	154'
Granite,occas fract,white & gray, mica flakes,m hrd	154'	172'
Granite,fract,drk gray & brn sed, m hrd	172'	194'
Quartz,white & little gray,fract, m hrd,water 2 GPM	194'	209'
Granite,occas fract,drk gray,mica flakes,m hrd	209'	227'
Granite,s & p,hrd	227'	248'
Granite,grn-gray-white,hrd	248'	269'
Granite,occas fract,white & gray, m hrd	269'	287'
Granite,occas fract,grn-gray,mica flakes,m hrd	287'	300'

RECEIVED
APR 3 1976
DEPARTMENT OF ECOLOGY
REGIONAL OFFICE

Work started March 22 19 76 Completed March 25 19 76

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME KIRKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)
Address E. 1604 Sharp, Spokane, Wa. 99202

[Signed] James J. Kirkgraf
(Well Driller)
License No. 0544 Date April 2, 1976

4/5/74

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71)
ECY-070-28

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 58

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION* 309124

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 155 ft. Depth of completed well 155ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 8" Diam. from +1 ft. to 19 ft.

Installed: ☐ Liner installed 6" Diam. from +2 ft. to 155 ft.

☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 145

Manufacturer's Name JOHNSON

Type SS Model No. _____

Diam. 5 Slot size .15 from 145 ft. to 150 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18ft.

Material used in seal BENTONITE GRANULAR

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: *Manufacturer's* Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 85ft. below top of well Date 6/21/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: 5gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest gal./min. with stem set at 125ft. for 3.5hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water COLD Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE06869

Unique Ecology Well ID Tag No. APC-501

Water Right Permit No. _____

Property Owner Name MIKE SPRING

Well Street Address SODA ROAD

City CHENEY County SPOKANE

Location SE1/4-1/4 SE1/4 Sec 20 Twn 24 R 42E

EWM ☒ Or WWM ☐

Lat/Long (s, t, r Still REQUIRED) Lat Deg N47 Min 33 Sec 727

Long Deg W117 Min 31 Sec 892

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Sands	0	10
Broken Basalt w/ Brown Clay	10	18
Broken Basalt w/ Brown Clay	18	30
Fractured Black Basalt	30	70
Brown Clay w/ Soft Sands	70	120
Med. Soft White Clay	120	130
Med. Soft Tan Clay	130	140
White Clay w/ Silica Sand	140	145
Silica Sand w/ Quartz 8 gpm	145	152
Soft Tan Clay	152	155

RECEIVED MAY 17 2007 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 6/19/07 Completed Date 6/21/07

Tax Parcel No. 24202-9084

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Driller or trainee License No. 2763

Name (Print Last, First) HALTERMAN, MIKE

Driller/Engineer/Trainee Signature

IF TRAINEE: Driller's License No: _____

Driller's Signature: Mike Halterman

Drilling Company H2O WELL SERVICE INC.

Address 582 W. HAYDEN AVE.

City, State, Zip HAYDEN, ID, 83835

Contractor's Registration No. H2OWESI101DW Date 6/22/07

ECY 050-1-20 (Rev 3/05)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR59

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Ray Chenhall Address S. 1512 Taylor, Spokane, Wa. 99204

(2) LOCATION OF WELL: County Spokane — SE ¼ SE ¼ Sec. 20 T. 24 N., R. 42E W.M.

-ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 150 ft. Depth of completed well 150 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 21 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 21 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 68 ft. below top of well Date 8/20/76
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a ~~bail~~ test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 8 gal./min. with 88 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

...te of test .....
test ..... gal./min. with ..... ft. drawdown after ..... hrs.
...rtesian flow ..... g.p.m. Date .....
...mperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil, brn	0'	3'
Decomp. quartz, brn, mica, fine	3'	6'
Quartz, tan-grn, firm	6'	11'
Quartz, orng-tan, mica, firm	11'	13'
Quartz, grn-brn, fract, m hrd	13'	16'
Quartz, fract, wht-tan-grn, m hrd	16'	26'
Quartz, fract, wht-tan, m hrd	26'	47'
Quartz, fract, wht-brn, m hrd, water ± GPM	47'	49'
Quartz, fract, wht-grn-brn, m hrd	49'	58'
Quartz, occas fract, gray-tan, m hrd	58'	61'
Quartz, fract, tan-gray, mica, m hrd	61'	81'
Quartz, occas fract, gray-tan, m hrd	81'	84'
Quartz, occas fract, gray, m hrd	84'	88'
Quartz, fract, gray-tan, mica, m hrd	88'	108'
Quartz, drk gray, m hrd	108'	113'
Quartz, occas fract, wht-tan, m hrd	113'	120'
Quartz, fract, wht-tan-gray, mica, m hrd	120'	129'
Quartz, heav fract, white-rusty brn-gray, m hrd, water 8 GPM	129'	138'
Quartz, occas fract, gray-tan, m hrd	138'	141'
Quartz, fract, brn-gray-wht, m hrd	141'	147'
Quartz, heav fract, rusty brn-gray-wht, m hrd	147'	150'

RECEIVED
AUG 23 1976
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started Aug. 19, 1976 Completed Aug. 20, 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Box 4341, Spokane, Wa. 99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0644 Date Aug. 20, 1976

8/24/76

(USE ADDITIONAL SHEETS IF NECESSARY)

050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 66

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 057552

Water Right Permit No. _____

(1) OWNER: Name Rodger Richards Address 10810 Spotted Rd. Cheney, WA 99004

(2) LOCATION OF WELL: County Spokane NE ¼ SE ¼ Sec 20 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Same

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 205 feet. Depth of completed well 205 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 44 ft.
Welded [X] Liner installed [X] Threaded [ ] 4 " Diam. from _____ ft. to 200 ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18± ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 80 ft. below top of well Date 1/14/92
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: 7 gal./min. with _____ ft. drawdown after _____ hrs.
"Air test approx. 7-G.P.M. " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
er test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Topsoil	0	3
SAnd-gravel	3	9
Basalt-highly fractured	9	18
Clay-brn.	18	21
Granit-soft	21	83
Granit-med.	83	115
Granit-soft	115	125
Granit-fractured	125	126
Granit-soft	126	154
Granit-med.	154	186
Granit-fractured	186	187
Granit-med.	187	205

RECEIVED
MAR - 4 1992
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 1/13/92 19. Completed 1/14/ 19 92

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J DRILLING INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S 5613 Linke Rd. Greenacres, WA 99016

(Signed) John Kearns (WELL DRILLER) License No. 1962

Contractor's Registration No. JJDRII-177KU Date 1/15/ 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 61

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Ron Moczulski Address 701 Hill View Drive, Cheney, Wa. 99004

(2) LOCATION OF WELL: County Spokane SE ¼ SE ¼ Sec. 20 T. 24 N., R. 42E W.M.

Bearing and distance from section or subdivision corner Tract "H"

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 300 ft. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1½ ft. to 49 ft.
Threaded [ ] " Diam. from ft. to ft.
Welded [X] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2300 ft.
Static level 40 ft. below top of well Date 10/15/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump air test made? Yes [X] No [ ] If yes, by whom? driller
Yield: 5 gal./min. with 260 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

RECEIVED
OCT 24 1980
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown silty top soil	0'	1'
Granite, decomp, brn & wht w/mic flks, loose	1'	34'
Granite, heav fract, tan, clr, mica flks, med hrd to loose	34'	48'
Granite, fract, tan & wht, mica flks, med hrd, water ½ GPM	48'	72'
Granite, occas fract, grn-wht-gray, med hrd,	72'	94'
Granite, occas fract, salt & pep, w/mica, med hrd	94'	114'
Granite, occas fract, grn-brn-wht, w/thin layers drk gray, med hrd	114'	131'
Granite, fract, grn-drk gray-wht-clr, mica flks, med hrd, water ½ GPM	131'	134'
Qrtz, occas fract, wht-clr-prple, w/ thin soft layers drk gray, med hrd	134'	154'
Granite, drk gray, white w/thin lay, brn, wht speck, med hrd	154'	160'
Granite, fract, drk grn-blk-clr, med hrd, water 2½ GPM	160'	163'
Granite, wht-clr-grn w/silver mica flks, med hrd	163'	182'
Qrtz, wht-yell-clear w/grn speks, med hrd to hrd	182'	224'
Granite, pccs fract, drk gray w/thin layers wht & yell qrtz, med hrd, water 1½ GPM	224'	240'
Qrtz, wht-clear-pink-lite grn, mica, med hrd	240'	273'
Granite, wht w/gray speks, w/thin seams drk gray, med hrd to hrd	273'	288'
Granite, drk gray, grn-wht, med hrd	288'	300'

Work started Oct. 13, 1980 Completed Oct 15, 1980

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Box 4341, Spokane Wa. 99202

[Signed] James J. Zinkgraf
Well Driller

License No. 0544 Date October 22, 1980

10/24/80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR62

082ABI

Start Card No. ~~22457~~

UNIQUE WELL I.D. # AX667612

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

1) **OWNER:** Name TRACY SPRING BERRY Address 10512 S. SPOTTED RD. CHENEY, WA.

LOCATION OF WELL: County SPOKANE NE 1/4 SE 1/4 Sec 20 T. 24 N., R. 42E W.M.

2a) **STREET ADDRESS OF WELL** (or nearest address) SAME AS ABOVE

3) **PROPOSED USE:** ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

4) **TYPE OF WORK:** Owner's number of well (If more than one) _____

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 200 feet. Depth of completed well 190 ft.

6) **CONSTRUCTION DETAILS:**

Casing installed: 6" Diam. from +1 ft. to 159 ft.
Welded ☒ 5" Diam. from 0 ft. to 189 ft.
Liner installed ☐ Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used TORCH
SIZE of perforations .025 in. by 8 in.
75 perforations from 160 ft. to 189 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 204 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 158 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
APPROX. 100PM BY AIRTEST "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOPSOIL & BOULDERS	0	1
SAND, GRAVEL & BOULDERS	1	30
SAND, GRAVEL & COBBLES	30	50
BRN. SAND & CLAY STRIPS	50	150
BRN. CLAY - FIRM TO HARD	150	161
BASALT - VERY FRACT. 10 GPM	161	190
BRN. CLAY - FIRM TO HARD	190	195
DK. BRN. CLAY - "	195	200

Work Started 4/9 19. Completed 4/12 19 96

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME CARPENTER DRILLING CO. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 8918 N. FARKER RD. SPOKANE, WA.

(Signed) _____ (WELL DRILLER) License No. 1278

Contractor's Registration No. CARPEDC077P2 Date 4/15 19 96

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR63

180670

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. WE03929

Unique Ecology Well ID Tag No. ALR982

Water Right Permit No. _____

Property Owner Name Al Day

Well Street Address 7107 West Andrus Rd

City Cheney County Spokane

Location 1/4-1/4 NW1/4 Sec 21 Twn 24 R 42 EWM [x] or WWM [ ] circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2
[x] New well [ ] Reconditioned [ ] Deepened
Method: [ ] Dug [ ] Bored [ ] Driven [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 280 ft.
Depth of completed well 280 ft.

CONSTRUCTION DETAILS
Casing Installed: [x] Welded 6" Diam. from +1 ft. to 19 ft.
[x] Liner installed 4" Diam. from 12 ft. to 280 ft.
[ ] Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: [x] Yes [ ] No
Type of perforator used 3/8" Spade Bit Perfs from 160ft to 180ft
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from 240 ft. to 280 ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? [ ] Yes [x] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 120 ft. below top of well Date 7/25/05
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [x] No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 50+ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Clay, Brown	0	1
Basalt, Fractured	1	3
Basalt, Hard	3	27
Basalt, Medium w/ Fractures	27	115
Basalt, Hard	115	132
Basalt, Medium	132	180
Basalt, Hard w/ Shale, Brown	180	237
Basalt, Medium	237	240
Basalt, Fractured - Water 50+gpm	240	270
Basalt, Medium	270	280
Recommended pump depth is 270 feet.		

RECEIVED
OCT - 5 2005
DEPARTMENT OF ECOLOGY

Start Date 7/22/05 Completed Date 7/25/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[ ] Driller [ ] Engineer [ ] Trainee Name (Print) Don Anderson
Driller/Engineer/Trainee Signature Don Anderson
Driller or trainee License No. 1447

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRII-177KU Date 8/2/05

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

 The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

WWR64

492664

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well _____ inches, drilled _____ ft. Depth of completed well _____ ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 1.5 ft. to 21.5 ft.
☒ Liner installed 4" Diam. from -8 ft. to 280 ft.
☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used Skillsaw

SIZE of perfs 1/4 in. by 8 in. and no. of perfs 60 from 200 ft. to 275 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 21.5 ft.

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name Franklin

Type: 20 gpm H.P. 2

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 200 ft. below top of well Date 12-5-12

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? VPD

Yield: 32 gal./min. with 0 ft. drawdown after 4 hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 12-5-12

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 40+ gal./min. with stem set at 275 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☒ Yes ☐ No

CURRENT

Notice of Intent No. WE15579

Unique Ecology Well ID Tag No. BBC-168

Water Right Permit No. _____

Property Owner Name Jason Jongeward

Well Street Address LOTC

City Cheney County Spokane

Location NW 1/4-1/4 NW 1/4 Sec 21 Twn 24 R 42 EWM ☒ Or WWM ☐

(s, t, r Still REQUIRED)

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24212.9073

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Basalt HARD	3"	26'
Basalt Fractured	26'	41'
Basalt Medium	41'	70'
Basalt Vesicular	70'	95'
Basalt medium	95'	152'
Rotton Basalt w/ green clay	152'	158'
Basalt w/ Brown Clay	158'	176'
Basalt Vesicular	176'	224'
Basalt Vesicular w/ yellow clay & water	224'	278'
Basalt medium.	278	280
Excellent recovery		
Very clean		

RECEIVED
DEC 21 2012
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 12-3-12 Completed Date 12-4-12

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Alex Vermillion

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2336

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company Vermillion Pump & Drilling LLC

Address E. 16516 Temple Rd

City, State, Zip Spokane WA. 99217

Contractor's Registration No. VERMIPD987CZ Date _____

ECY 050-1-20 (Rev 02/10) *If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 65

2657 86

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 163 ft. Depth of completed well 163ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 19 ft. ☒ Liner installed 4" Diam. from 13 ft. to 163 ft. ☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used bit

SIZE of perfs 3/8in. by _____ in. and no. of perfs _____ from 113ft. to 163ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 100ft. below top of well Date 5/22/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 3.5 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE06673

Unique Ecology Well ID Tag No. APC320

Water Right Permit No. _____

Property Owner Name John Fitzgerald

Well Street Address Spotted Road

City DEER PARK County Spokane

Location SW 1/4-1/4 NW 1/4 Sec 21 Twn 24N R 42E (s, t, r Still REQUIRED) EWM ☐ Or WWM ☐

Lat/Long Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 24212.9060

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Basalt, Cobble w/ Clay, Brown	0	2
Basalt, Soft	2	6
Basalt, Medium	6	27
Basalt, Fractured w/	27	42
Shale, Brown		
Basalt, Medium	42	59
Basalt, Fractured w/	59	81
Shale, Brown		
Basalt, Fractured w/	81	90
Shale, Tan		
Basalt, Soft	90	102
Basalt, Medium	102	137
Basalt, Fractured -	137	138
Water 3-1/2gpm		
Basalt, Medium	138	147
Shale, Tan and Medium	147	157
Shale, Yellow and Medium	157	162
Quartz Sand, Fine	162	163
Recommended pump depth is		
150 to 155 feet.		

RECEIVED

JUL 13 2007

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5/21/07 Completed Date 5/22/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian G. Mosset

Driller or trainee License No. 2139

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres , WA, 99016

Contractor's Registration No. JJDRII-177KU Date 5/24/07

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 66

WATER WELL REPORT 265788

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 1

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 160 ft. Depth of completed well 160 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 19 ft.

☐ Liner installed _" Diam. from _ ft. to _ ft.

☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _in. by _____ in. and no. of perfs _____ from _ft. to _ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 120 ft. below top of well Date 5/21/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 1.75 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE06573

Unique Ecology Well ID Tag No. APC319

Water Right Permit No. _____

Property Owner Name John Fitzgerald

Well Street Address Spotted Road

City DEER PARK County Spokane

Location 1/4-1/4 NW1/4 Sec 21 Twn 24N R 42E **(s, t, r Still REQUIRED)** EWM ☐ Or WWM ☐

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 24212.9060

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Basalt, Cobble w/ Clay, Brown	0	8
Basalt, Medium	8	30
Basalt, Fractured w/	30	59
Shale, Brown		
Basalt, Soft	59	78
Basalt, Fractured w/	78	120
Shale, Brown - Water 1-3/4gpm		
Basalt, Medium	120	145
Shale, Grey and Medium	145	153
Quartz Sand, Fine	153	156
Shale, Tan and Soft	156	160
We recommend that the well is lined prior to use.		

RECEIVED
JUL 13 2007
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5/18/07 Completed Date 5/21/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian K. Mosset

Driller or trainee License No. 2139

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres , WA, 99016

Contractor's Registration No. JJDRIL177KU Date 5/24/07

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR67

493167

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 4

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft. Depth of completed well 180ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 39 ft. ☒ Liner installed 4" Diam. from 10 ft. to 180 ft. ☐ Threaded _" Diam. From _ ft. to _ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used bit

SIZE of perfs 3/8in. by ____ in. and no. of perfs ____ from 60ft. to 180ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _Slot size _ from _ ft. to _ ft.

Diam. _____Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.

Material used in seal Barroid Casing Seal

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 50ft. below top of well Date 7/9/13

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____gal./min. with _____ft. drawdown after _____hrs.

Yield: _____gal./min. with _____ft. drawdown after _____hrs.

Yield: _____gal./min. with _____ft. drawdown after _____hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ft. drawdown after _____hrs.

Airtest 3 gal./min. with stem set at _____ft. for _____hrs.

Artesian flow _____g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE16502

Unique Ecology Well ID Tag No. BHP873

Water Right Permit No. _____

Property Owner Name John Fitzgerald

Well Street Address 10413 S. Spotted Road

City Cheney County Spokane

Location NW1/4-1/4 NW1/4 Sec 21 Twn 24N R 42E (s, t, r Still REQUIRED) EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24212.9060

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	2
Sand w/ Boulders	2	14
Basalt, Broken	14	27
Sand	27	35
Basalt, Broken	35	42
Basalt, Medium	42	45
Basalt, Soft w/	45	57
Fractures - Water 3gpm		
Basalt, Medium	57	72
Basalt, Soft w/ Fractures	72	76
Basalt, Medium	76	93
Basalt, Broken w/	93	96
Shale, Brown		
Shale, Brown & Soft	96	101
Basalt, Medium	101	155
Shale, Grey & Medium	155	164
Shale, Brown & Medium	164	180
Recommended pump set		
depth is 80 to 170 feet		

AUG 20 2013

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 7/8/13 Completed Date 7/9/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) David Primmer

Driller/Engineer/Trainee Signature [signature]

Driller or trainee License No. 3153

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres , WA, 99016

Contractor's Registration No. JJDRIL-177KU Date 7/15/2013

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 68

180668

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

[x] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. WE03940

Unique Ecology Well ID Tag No. ALR984

Water Right Permit No. _____

Property Owner Name Mary Morris

Well Street Address Spotted Road

City Cheney County Spokane

Location SE 1/4-1/4 NW 1/4 Sec 21 Twn 24 R 42 EWM [x] or WWM [ ] circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2

[x] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft.

Depth of completed well 180 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6 " Diam. from +1 ft. to 19 ft.

[x] Liner installed 4 " Diam. from 7 ft. to 180 ft.

[ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [x] Yes [ ] No

Type of perforator used 3/8" Spade Bit

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from 120 ft. to 180 ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 90 ft. below top of well Date 7/27/05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 8 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Sand and Boulders	0	7
Basalt, Hard w/ Slight Fractures	7	37
Basalt, Medium w/ Fractures	37	151
Basalt, Fractured - Water 8gpm	151	152
Shale, Brown and Medium	152	180
Recommended pump depth is 150 feet from top of		
steel casing.		

RECEIVED OCT - 6 2005

DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 7/26/05 Completed Date 7/27/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[ ] Driller [ ] Engineer [ ] Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature Don Anderson

Driller or trainee License No. 1447

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No. JJDRII-177KU Date 8/2/05

If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

180669

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(•) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. WE03939

Unique Ecology Well ID Tag No. ALR983

Water Right Permit No. _____

Property Owner Name Mary Morris

Well Street Address Spotted Road

City Cheney County Spokane

Location SE 1/4-1/4 NW 1/4 Sec 21 Twn 24 R 42 EWM or WWM (•) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: (•) Domestic ( ) Industrial ( ) Municipal ( ) DeWater ( ) Irrigation ( ) Test Well ( ) Other _____

TYPE OF WORK: Owner's number of well (if more than one) 1

(•) New well ( ) Reconditioned *Method:* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (•) Rotary ( ) Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 320 ft.
Depth of completed well 320 ft.

CONSTRUCTION DETAILS

Casing Installed: (•) Welded 6" Diam. from +1 ft. to 19 ft.
( ) Liner installed _____" Diam. from _____ ft. to _____ ft.
( ) Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ( ) Yes (•) No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ( ) Yes (•) No ( ) K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ( ) Yes (•) No ( ) Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: (•) Yes ( ) No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ( ) Yes (•) No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 90 ft. below top of well Date 7/26/05
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ( ) Yes (•) No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 2-1/2 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ( ) Yes (•) No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Boulders and Sand	0	8
Basalt, Medium w/ Fractures	8	110
Basalt, Fractured - Water 1gpm	110	111
Basalt, Medium	111	155
Basalt, Fractured - Water 1-1/2gpm	155	156
Shale, Brown & Hard w/ Sand Strips	156	308
Sand, Quartz and Medium	308	320
Operator recommends that the well be lined prior to		
use. Recommended pump depth is 155 feet.		

RECEIVED
OCT - 5 2005
DEPARTMENT OF ECOLOGY

Start Date 7/25/05 Completed Date 7/26/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

( ) Driller ( ) Engineer ( ) Trainee Name (Print) Don Anderson
Driller/Engineer/Trainee Signature Don Anderson
Driller or trainee License No. 1447

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRII-177KU Date 8/2/05

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

492663

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☐ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 12 inches, drilled 260 ft. Depth of completed well 260 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded 12" Diam. from +1.5 ft. to 18.5 ft.

☒ Liner installed 4" Diam. from -7 ft. to 260 ft.

☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used SKILLSAW

SIZE of perfs 1/4 in. by 3 in. and no. of perfs 160 from 100 ft. to 255 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18.5 ft.

Material used in seal Dry Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name Franklin

Type: 20 gpm H.P. 2

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 120 ft. below top of well Date 12-14-12

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Driller

Yield: 30 gal./min. with 0 ft. drawdown after 4 hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 40 gal./min. with stem set at 255 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☒ Yes ☐ No

CURRENT

Notice of Intent No. WE156213

Unique Ecology Well ID Tag No. BBC - 170

Water Right Permit No. _____

Property Owner Name MELODIE MARKSBURY

Well Street Address 10202 Ridge Park Ln

City Cheney County Spokane

Location A(N)1/4-1/4(W)1/4 Sec 21 Twn 24 R 42 EWM ☒ Or WWM ☐

(s, t, r Still REQUIRED)

Lat/Long Lat Deg ____ Lat Min/Sec ____

Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24212.9072

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	3
Basalt med	3	22
Basalt med to Light	22	160
Basalt vesicular w/water	160	255
Basalt med.	255	260

RECEIVED
DEC 21 2012
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 12-13-12 Completed Date 12-13-12

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☐ Trainee Name (Print) Alex Vermillion

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 23310

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company Vermillion Pump & Drilling

Address E. 11651 Temple Rd

City, State, Zip Spokane Wa. 99217

Contractor's Registration No. VERMIPD887C2 Date 12-14-12

WWR 71

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 102963
- (X) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*_____

CURRENT Notice of Intent No. W130893

Unique Ecology Well ID Tag No. AGC124

Water Right Permit No. _____

Property Owner Name Randy Gillingham

Well Street Address Andrus Rd.

City _____ County: Spokane

Location ____ 1/4 - 1/4 NW 1/4 Sec 21 Twn 24N R 42E EWM or WWM *circle one*

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other_____

TYPE OF WORK: Owner's number of well (if more than one)_____

[X] New Well [ ] Reconditioned *Method* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 160 ft
Depth of completed well 160 ft

CONSTRUCTION DETAILS

Casing [X] Welded 6" Diam from +1 ft to 19 ft
Installed: [X] Liner installed 4" Diam from _____ ft to 160 ft
[ ] Threaded _____" Diam from _____ ft to _____ ft

Perforations: [ ] Yes [X] No
Type of perforator used_____
SIZE of perfs____in by____in and no. of perfs_____ from _____ ft to _____ ft

Screens: [ ] Yes [X] No [ ] K-Pac Location_____
Manufacturer's Name_____
Type_____ Model No _____
Diam _____ Slot Size_____ from_____ ft to_____ ft
Diam _____ Slot Size_____ from_____ ft to_____ ft

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand_____
Materials placed from_____ ft to_____ ft

Surface Seal: [X] Yes [ ] No To what depth? 18+ ft
Materials used in seal Bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water?_____ Depth of strata_____
Method of sealing strata off_____

PUMP: Manufacturer's Name_____
Type_____ H P _____

WATER LEVELS: Land-surface elevation above mean sea level_____ ft
Static level 65 ft below top of well Date 7/18/01
Artesian pressure_____ lbs per square inch Date_____
Artesian water is controlled by_____ (cap, valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?_____
Yield _____ gal/min with_____ ft drawdown after_____ hrs
Yield _____ gal/min with_____ ft drawdown after_____ hrs
Yield _____ gal/min with_____ ft drawdown after_____ hrs

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test_____
Bailer test_____ gal/min with _____ ft drawdown after_____ hrs
Airtest 11 gal/min with stem set at_____ ft for _____ hrs
Artesian flow_____ g.p.m Date_____
Temperature of water_____ Was a chemical analysis made? [ ] Yes [X] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil	0	1
Basalt Boulders w/	1	6
Clay, Brown		
Basalt, Medium	6	26
BAsalt, Hard	26	65
Basalt, Fractured w/	65	68
Shale, Brown - Water		
6gpm		
Basalt, Medium	68	89
Basalt, Broken - Water	89	97
3gpm		
Basalt, Medium w/	97	122
Fractures		
BAsalt, Fractured w/	122	126
Shale, Green		
Basalt, Medium	126	139
BAsalt, Fractured -	139	143
Water 2gpm		
Basalt, Hard	143	160

RECEIVED NOV 14 2001 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 7/17/01 Completed Date 7/18/01

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or Trainee License No. 2139

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No JJDRII-177KH Date 7/25/01

If trainee, licensed driller's Signature and License no. _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 72

WATER WELL REPORT

STATE OF WASHINGTON ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)* 102962
- X Construction
- O Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT Notice of Intent No. W130888

Unique Ecology Well ID Tag No. AGC123

Water Right Permit No.

Property Owner Name Randy Gillingham

Well Street Address Andrus Rd.

City _____ County: Spokane

Location ____ 1/4 - 1/4 NW 1/4 Sec 21 Twn 24N R 42E EWM or WWM *circle one*

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No.

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK: Owner's number of well (if more than one)

[X] New Well [ ] Reconditioned *Method.* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 160 ft
Depth of completed well 160 ft

CONSTRUCTION DETAILS

Casing Installed: [X] Welded 6" Diam from +1 ft to 19 ft
[X] Liner installed 4" Diam from ____ ft to 160 ft
[ ] Threaded ____" Diam. from ____ ft to ____ ft

Perforations: [ ] Yes [X] No
Type of perforator used
SIZE of perfs ____ in by ____ in. and no of perfs ____ from ____ ft to ____ ft

Screens: [ ] Yes [X] No [ ] K-Pac Location
Manufacturer's Name
Type ____ Model No ____
Diam ____ Slot Size ____ from ____ ft to ____ ft
Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand
Materials placed from ____ ft to ____ ft

Surface Seal: [X] Yes [ ] No To what depth? 18+ ft
Materials used in seal Bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? ____ Depth of strata ____
Method of sealing strata off

PUMP: Manufacturer's Name
Type ____ H P ____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft
Static level 100 ft below top of well Date 7/17/01
Artesian pressure ____ lbs per square inch Date ____
Artesian water is controlled by ____ (cap, valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield ____ gal/min with ____ ft. drawdown after ____ hrs
Yield ____ gal/min with ____ ft. drawdown after ____ hrs
Yield ____ gal/min. with ____ ft. drawdown after ____ hrs

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test ____ gal/min with ____ ft drawdown after ____ hrs
Airtest 18 gal/min with stem set at ____ ft for ____ hrs
Artesian flow ____ g p m Date ____
Temperature of water ____ Was a chemical analysis made? [ ] Yes [X] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil, Sandy	0	1
Sand w/ Basalt Boulders & Clay, Brown	1	5
Basalt Boulders & Broken Basalt	5	14
Basalt, Hard	14	42
Basalt, Fractured w/ Clay, Brown	42	47
BAsalt, Medium w/ Fractures	47	77
BAsalt, Fractured - Water 2gpm	77	78
Basalt, Medium w/ Fractures	78	103
Basalt, Fractured - Water 1gpm	103	104
Basalt, Medium	104	126
Basalt, Fractured - Water 1gpm	126	128
BAsalt, Medium	128	135
BAsalt, Fractured - Water 13gpm	135	139
BAsalt, Medium w/ Fractures - Water 3gpm	139	158
Shale, Brown & Medium	158	160

RECEIVED NOV 14 2001 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 7/16/01 Completed Date 7/17/01

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or Trainee License No. 2139

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No. JJDRII-177K Date 7/25/01

If trainee, licensed driller's Signature and License no.

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 73

WATER WELL REPORT

STATE OF WASHINGTON ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)* 102941

(X) Construction

( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*_____

CURRENT Notice of Intent No. W130887

Unique Ecology Well ID Tag No. AGC122

Water Right Permit No. _____

Property Owner Name Randy Gillingham

Well Street Address Andrus Rd.

City _____ County: Spokane

Location ____ 1/4 - 1/4 NW 1/4 Sec 21 Twn 24N R 42E EWM or WWM *circle one*

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other_____

TYPE OF WORK: Owner's number of well (if more than one)_____

[X] New Well [ ] Reconditioned *Method* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 140 ft

Depth of completed well 140 ft

CONSTRUCTION DETAILS

Casing Installed: [X] Welded 6" Diam from +1 ft to 19 ft

[ ] Liner installed 5" Diam from 8 ft to 140 ft

[ ] Threaded _____" Diam from _____ ft to _____ ft

Perforations: [X] Yes [ ] No

Type of perforator used cutting torch

SIZE of perfs 1/4 in by 6 in and no of perfs 240 from 60 ft to 140 ft

Screens: [ ] Yes [X] No [ ] K-Pac Location_____

Manufacturer's Name_____

Type_____ Model No _____

Diam _____ Slot Size_____ from_____ ft to_____ ft

Diam _____ Slot Size_____ from_____ ft. to_____ ft

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand_____

Materials placed from_____ ft to_____ ft

Surface Seal: [X] Yes [ ] No To what depth? 18+ ft

Materials used in seal Bentonite

Did any strata contain unusable water? [ ] Yes [X] No

Type of water?_____ Depth of strata_____

Method of sealing strata off_____

PUMP: Manufacturer's Name_____

Type _____ H P _____

WATER LEVELS: Land-surface elevation above mean sea level_____ ft

Static level 50 ft below top of well Date 7/16/01

Artesian pressure_____ lbs per square inch Date_____

Artesian water is controlled by_____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom?_____

Yield _____ gal./min with_____ ft drawdown after_____ hrs

Yield _____ gal./min with_____ ft drawdown after_____ hrs.

Yield _____ gal./min with_____ ft drawdown after_____ hrs

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test_____

Bailer test_____ gal./min with _____ ft drawdown after_____ hrs

Airtest 20 gal./min with stem set at_____ ft for _____ hrs

Artesian flow_____ g p m Date_____

Temperature of water_____ Was a chemical analysis made? [ ] Yes [X] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil, Sandy	0	1
Sand w/ Basalt Cobble	1	3
Basalt Boulders w/	3	8
Clay, Brown		
Basalt, Broken	8	14
Basalt, Medium w/	14	22
Fractures		
Basalt, Hard	22	47
Basalt, Fractured w/	47	53
Clay, Brown - Water		
2gpm		
Basalt, Medium w/	53	76
Fractures		
Basalt, Fractured w/	76	79
Clay, Brown		
Void - Water 5gpm	79	82
BAsalt, Fractured w/	82	86
Clay, Tan		
Basalt, Medium	86	110
BAsalt, Fractured -	110	112
Water 3gpm		
Basalt, Medium	112	125
Basalt, Fractured -	125	126
Water 10gpm		
Basalt, Medium	126	140

RECEIVED NOV 14 2001 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 7/13/01 Completed Date 7/16/01

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or Trainee License No 2139

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No JJDRII-177KH Date 7/25/01

If trainee, licensed driller's Signature and License no._____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Please print sign and return to the Department of Ecology WWR 74

Water Well Report

Original – Ecology 1st copy – owner, 2nd copy – driller

ECOLOGY Construction/Decommission 135807

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No W174231

Unique Ecology Well ID Tag No AHJ251

Water Right Permit No _____

Property Owner Name Randy Gillingham

Well Street Address Spotted Rd. @ Andrus Rd

City Spokane County Spokane

Location ___1/4 1/4 NW1/4 Sec 21 Twn 24N R 42E EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner s number of well (if more than one) _____

☑ New well ☐ Reconditioned *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 300 ft. Depth of completed well 300 ft.

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam from +1 ft to 19 ft

☐ Liner installed _____ Diam from _____ ft to _____ ft

☐ Threaded _____" Diam from _____ ft to _____ ft

Perforations ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in by ___ in. and no of perfs _____ from _____ ft to _____ ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____

Manufacturer s Name _____

Type _____ Model No _____

Diam _____ Slot size _____ from _____ ft to _____ ft

Diam _____ Slot size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft to _____ ft

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer s Name _____

Type _____ H.P _____

WATER LEVELS Land surface elevation above mean sea level _____ ft.

Static level 80 ft below top of well Date 6/22/03

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal /min with _____ ft drawdown after _____ hrs

Airtest 1 gal /min with stem set at _____ ft for _____ hrs

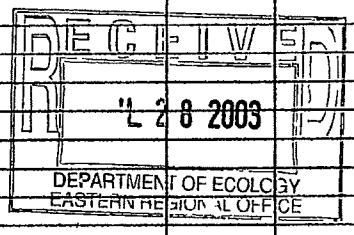
Artesian flow _____ g p.m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Topsoil	0	1
Clay Brown	1	4
Basalt, Medium	4	90
Shale, Brown & Hard	90	120
Basalt Hard	120	140
Basalt, Medium & Fractured Water	140	150
1gpm		
Shale Brown & Medium	150	165
Sand, Quartz w/ Mica	165	168
Shale, Brown	168	183
Granite, Soft to Medium	183	300
Recommended pump depth is 140 feet		



Start Date 6/21/03 Completed Date 6/22/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature Don Anderson / CM

Driller or trainee License No 1447

Drilling Company J & J Drilling, Inc.

Address S 5613 Linke Rd

City State Zip Greenacres, WA 99016

Contractor s Registration No JJDRIJ 177KU Date 6/30/03

IF TRAINEE Driller s Licensed No _____ Driller s Signature _____

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR75

Please pnnt, sign and return to the Department of Ecology

Water Well Report

Original – Ecology 1st copy – owner 2nd copy – driller

ECOLOGY

Construction/Decommission 135808

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No W174235

Unique Ecology Well ID Tag No AHJ252

Water Right Permit No _____

Property Owner Name Randy Gillingham

Well Street Address Spotted Rd. @ Andrus Rd

City Spokane County Spokane

Location ___1/4 1/4 NW1/4 Sec 21 Twn 24N R 42E EWM or WWM ☑ circle one

Lat/Long (s t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner s number of well (if more than one) _____

☑ New well ☐ Reconditioned *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 180 ft

Depth of completed well 180 ft.

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam from +1 ft to 19 ft

☑ Liner installed 4 Diam from _____ ft to 180 ft

☐ Threaded _____ Diam from _____ ft to _____ ft

Perforations ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____

Manufacturer s Name _____

Type _____ Model No _____

Diam _____ Slot size _____ from _____ ft to _____ ft

Diam _____ Slot size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer s Name _____

Type _____ HP _____

WATER LEVELS Land surface elevation above mean sea level _____ ft

Static level 90 ft. below top of well Date 6/23/03

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes by whom? _____

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min with _____ ft. drawdown after _____ hrs

Airtest 40+ gal /min with stem set at _____ ft for _____ hrs

Artesian flow _____ g p.m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Clay	0	1
Boulders	1	13
Basalt, Medium	13	27
Basalt Slightly Fractured	27	37
Basalt, Medium to Hard w/ Slight Fractures	37	153
Basalt, Fractured Water 40+gpm	153	157
Shale, Green & Medium	157	165
Shale Brown & Medium	165	180
Recommended pump depth is 160 feet		

RECEIVED JUL 28 2003 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 6/22/03 Completed Date 6/23/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature Don Anderson/CM

Driller or trainee License No 1447

Drilling Company J & J Drilling, Inc

Address S 5613 Linke Rd.

City State Zip Greenacres, WA 99016

Contractor s Registration No JJDRIL-177KU Date 6/30/03

If TRAINEE Driller's Licensed No _____ Drille s S gnature _____

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 76

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology 1st copy – owner 2nd copy – driller

STATE OF WASHINGTON ECOLOGY

Construction/Decommission 135809

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No W174213

Unique Ecology Well ID Tag No AHJ083

Water Right Permit No _____

Property Owner Name Randy Gillingham

Well Street Address Spotted Rd

City Spokane County Spokane

Location SW 1/4 1/4 NW 1/4 Sec 21 Twn 24N R 42E BWM or WWM ☑ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK. Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 300 ft. Depth of completed well 300 ft.

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam. from +1 ft to 53 ft

☐ Liner installed Diam. from _____ ft to _____ ft

☐ Threaded Diam from _____ ft to _____ ft

Perforations ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in by ____ in and no of perfs ____ from ____ ft. to ____ ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____

Manufacturer's Name _____

Type _____ Model No _____

Diam _____ Slot size _____ from _____ ft to _____ ft

Diam _____ Slot size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer's Name _____

Type _____ H.P _____

WATER LEVELS Land-surface elevation above mean sea level _____ ft

Static level none ft below top of well Date 6/13/03

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes by whom? _____

Yield _____ gal./min with _____ ft drawdown after _____ hrs

Yield _____ gal./min with _____ ft drawdown after _____ hrs

Yield _____ gal./min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal /min with _____ ft drawdown after _____ hrs

Airtest 0 gal /min with stem set at _____ ft for _____ hrs

Artesian flow _____ g p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Basalt Cobble w/ Clay, Brown	0	8
Basalt Broken	8	26
Sand w/ Basalt Cobble	26	33
Clay Brown w/ Sand	33	38
Basalt, Broken	38	48
Basalt, Medium to Soft	48	79
Shale, Brown & Medium	79	94
Basalt Medium w/ Fractures	94	126
Basalt, Fractured w/ Shale Grey	126	133
Shale, Orange & Medium	133	150
Granite, Soft	150	300

RECEIVED JUL 28 2003 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

Start Date 6/12/03 Completed Date 6/13/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or trainee License No 2139

Drilling Company J & J Drilling, Inc

Address S. 5613 Linke Rd

City State Zip Greenacres, WA 99016

Contractor's Registration No JJDRIL 177KU Date 6/18/03

If TRAINEE,

Driller's Licensed No _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer ECY 050-1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 77

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology 1st copy – owner 2nd copy – driller

ECOLOGY

Construction/Decommission 135810

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No W174208

Unique Ecology Well ID Tag No AHJ081

Water Right Permit No _____

Property Owner Name Randy Gillingham

Well Street Address Spotted Rd.

City Spokane County Spokane

Location SW 1/4-1/4 NW 1/4 Sec 21 Twn 24N R 42E EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner s number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 500 ft. Depth of completed well 500 ft.

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam from +1 ft to 224 ft

☐ Liner installed _____ Diam from _____ ft to _____ ft

☐ Threaded _____ Diam from _____ ft to _____ ft

Perforations ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____

Manufacturer s Name _____

Type _____ Model No _____

Diam _____ Slot size _____ from _____ ft to _____ ft

Diam _____ Slot size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer s Name _____

Type _____ H.P _____

WATER LEVELS Land-surface elevation above mean sea level _____ ft

Static level none ft. below top of well Date 6/10/03

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes by whom? _____

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Yield _____ gal /min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min with _____ ft drawdown after _____ hrs

Airtest 0 gal./min with stem set at _____ ft for _____ hrs

Artesian flow _____ g p.m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Basalt Cobble w/ Clay Brown	0	19
Basalt Broken w/ Sand	19	51
Sand, Coarse	51	74
Sand w/ Basalt Cobble	74	126
Sand, Coarse	126	198
Basalt, Broken	198	208
Clay, Brown w/ Sand Strips	208	219
Granite, Medium to Soft	219	279
Granite Medium w/ Fractures	279	362
Granite, Soft	362	403
Granite, Medium w/ Fractures	403	500

RECEIVED
JUL 28 2003
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 6/6/03 Completed Date 6/10/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian Mosset

Driller or trainee License No 2139

Drilling Company J & J Drilling, Inc

Address S 5613 Linke Rd

City State Zip Greenacres, WA 99016

Contractor s Registration No JJDRIL-177KU Date 6/18/03

If TRAINEE

Driller s Licensed No _____

Driller s Signature _____

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 78

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology 1st copy – owner 2nd copy – driller

ECOLOGY

Construction/Decommission 139180

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No W174209

Unique Ecology Well ID Tag No AHJ082

Water Right Permit No _____

Property Owner Name Randy Gillingham

Well Street Address Spotted Rd

City Spokane County Spokane

Location SW 1/4 1/4 NW 1/4 Sec 21 Twn 24N R 42E EWM or WWM ☑ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 260 ft.

Depth of completed well 254 ft.

CONSTRUCTION DETAILS

Casing Installed ☑ Welded 6 Diam from +1 ft to 74 ft

☑ Liner installed 4 Diam from 8 ft to 254 ft

☐ Threaded _____ Diam from _____ ft to _____ ft.

Perforations ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens ☐ Yes ☑ No ☐ K Pac Location _____

Manufacturer's Name _____

Type _____ Model No _____

Diam _____ Slot size _____ from _____ ft to _____ ft

Diam _____ Slot size _____ from _____ ft to _____ ft.

Gravel/Filter packed ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft

Surface Seal ☑ Yes ☐ No To what depth? 18+ ft

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer's Name _____

Type _____ H.P _____

WATER LEVELS Land-surface elevation above mean sea level _____ ft

Static level 130 ft. below top of well Date 6/12/03

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield _____ gal./min with _____ ft drawdown after _____ hrs

Yield _____ gal./min with _____ ft drawdown after _____ hrs

Yield _____ gal./min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min with _____ ft drawdown after _____ hrs

Airtest 8 gal./min with stem set at _____ ft for _____ hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Basalt Cobble w/ Clay, Brown	0	5
Basalt, Broken	5	43
Clay, Brown & Medium	43	47
Basalt Fractured w/ Clay Brown	47	59
Sand, Coarse	59	64
Basalt, Broken	64	69
Basalt, Medium	69	88
Basalt Fractured w/ Shale Grey	88	101
Shale, Grey & Medium	101	109
Shale, Brown & Medium	109	117
Basalt, Soft	117	150
Shale Grey w/ Sand Stips Fine - Water	150	161
Water 8gpm		
Shale Orange & Medium	161	167
Shale, Brown & Medium	167	210
Basalt, Medium w/ Fractures	210	242
Shale, Brown & Medium	242	257
Quartz Sand Fine	257	260
Well needs a pump test to determine if well can pump water without sand and at how many gallons per minute		

SEP 25 2003

Start Date 6/11/03 Completed Date 6/12/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian D. Mosset

Driller or trainee License No 2139

Drilling Company J & J Drilling, Inc.

Address S 5613 Linke Rd

City State, Zip Greenacres, WA 99016

Contractor's Registration No JJDRIL 177KU Date 6/18/03

If TRAINEE,

Driller's Licensed No _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer ECY 050-1 20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 79

256531

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(•) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. WE05841

Unique Ecology Well ID Tag No. APC644

Water Right Permit No. _____

Property Owner Name Randy Gillingham

Well Street Address Spotted Road and Andrus Road

City Spokane County Spokane

Location ___ 1/4-1/4 NW 1/4 Sec 21 Twn 24 R 42 EWM or WWM [x] check one

(Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[x] New well [ ] Reconditioned [ ] Deepened *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 200 ft. Depth of completed well 200 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6" Diam. from +1 ft. to 19 ft.; [x] Liner installed 4" Diam. from 15 ft. to 200 ft.; [ ] Threaded ___" Diam. from ___ ft. to ___ ft.

Perforations: [x] Yes [ ] No

Type of perforator used 3/8" Spade Bit and Drill

SIZE of perfs ___ in. by ___ in. and no. of perfs ___ from 100 ft. to 200 ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. ___ Slot size ___ from ___ ft. to ___ ft.

Diam. ___ Slot size ___ from ___ ft. to ___ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____

Materials placed from ___ ft. to ___ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 60 ft. below top of well Date 10/19/06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? _____

Yield: ___ gal./min. with ___ ft. drawdown after ___ hrs.

Yield: ___ gal./min. with ___ ft. drawdown after ___ hrs.

Yield: ___ gal./min. with ___ ft. drawdown after ___ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test ___ gal./min. with ___ ft. drawdown after ___ hrs.

Airtest 17 gal./min. with stem set at ___ ft. for ___ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water ___ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Cobble, Boulders	0	7
Basalt, Medium to Hard	7	42
Basalt, Fractured - Water 1gpm	42	45
Basalt, Medium	45	165
Basalt, Fractured w/ Shale, Brown - Water	165	200
16gpm		
Recommended pump depth is 180 feet.		

RECEIVED
APR - 4 2007
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

RECEIVED
JAN 19 2007
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 10/18/06 Completed Date 10/19/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[ ] Driller [ ] Engineer [ ] Trainee Name (Print) Kris Nall

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2787T

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres, WA 99016

IF TRAINEE,
Driller's Licensed No. 2139
Driller's Signature _____

Contractor's Registration No. JJDRII-177KU Date 10/26/06

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 80

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ..
Permit No. ..

(1) **OWNER:** Name Vista Farms #4 Address Route 4 Box 257 Cheney, WA 99004

(2) **LOCATION OF WELL:** County Spokane — SW ¼ NW ¼ Sec. 21 T. 24 N., R. 42 W.M.

ng and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) 4
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 8 inches.
Drilled 103 ft. Depth of completed well 103 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 8 " Diam. from +1 ft. to 19 ft.
Threaded ☐ 6 " Diam. from +2 ft. to 103 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Torch
SIZE of perforations ¼ in. by 6 in.
70 perforations from 62 ft. to 95 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .... ft.
Static level 45 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 40-60 gal./min. with ft. drawdown after hrs.
" " " "
" ESTIMATED AIRLIFT " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

7/19/85

(10) **WELL LOG:**

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Sand, gravel, boulder	0	12
Basalt, grey, hard	12	22
Basalt, fractured, porous	22	30
Basalt, grey, hard	30	60
Basalt, grey, brown, porous, fractured, w/water	60	103
NO PVC LINER INSTALLED		
8" DRIVE SHOE INSTALLED		

RECEIVED
JUL 19 1985
DEPARTMENT OF ECOLOGY
SPOKANE

Work started 7/15, 1985 Completed 7/16, 1985

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME PONDEROSA DRILLING & DEVELOPMENT INC. (Person, firm, or corporation) (Type or print)
Address E. 6010 Broadway Spokane, WA 99212

[Signed] W. Joe Close Jr. (Well Driller)

License No. 1040 Date 7/16, 1985

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR81

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ....
Permit No. ....

(1) OWNER: Name Vista Farms #4 Address Route 4, Box 257, Cheney, WA 99004

(2) LOCATION OF WELL: County SPOKANE — SW ¼ NW ¼ Sec. 21 T. 24 N., R. 42E W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) 2
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 280 ft. Depth of completed well 280 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 " Diam. from +1 ft. to 105 ft.
Threaded [ ] 6 " Diam. from +2 ft. to 280 ft.
Welded [X] " Diam. from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used torch
SIZE of perforations 6 in. by 1/16 in.
60 perforations from 240 ft. to 280 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 80 ft. below top of well Date 4/22/87
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: 25 gal./min. with ft. drawdown after hrs.
" ESTIMATED AIRLIFT " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

5/28/87

(USE ADDITIONAL SHEETS IF NECESSARY)

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand & silt	0	12
Basalt, medium hard	12	60
Basalt, fractured	60	70
Basalt, medium	70	80
Basalt, fractured	80	90
Basalt, hard	90	115
Clay, green, hard	115	120
Basalt, hard	120	165
Basalt, fractured w/water 10 GPM	165	170
Clay, tan, hard	170	220
Shale, rust	220	225
Clay, white, sandy	225	230
Clay, orange	230	235
Clay, white, sandy	235	250
Sand w/water 15 GPM	250	255
Basalt, medium	255	275
Granite, tan	275	280
NO PVC Liner Installed		
6" Drive shoe utilized		

Work started 4/16, 19 87 Completed 4/22, 19 87

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME PONDEROSA DRILLING & DEVELOPMENT INC.
(Person, firm, or corporation) (Type or print)

Address E. 6010 Broadway, Spokane, WA 99212

[Signed] James M Doyle (Well Driller)
James M. Doyle

License No. 1287 Date 4/22, 19 87

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 82

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 054238

Water Right Permit No. ____

OWNER: Name Dick Linn Address P.O. Box 4188 Spokane, Wa. 99202

LOCATION OF WELL: County Spokane ne ¼ ne ¼ Sec 21 T 24 N R 42 E.W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) Grove Road

(3) **PROPOSED USE:** [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) ____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [ ] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6" inches.
Drilled 320' feet. Depth of completed well 320' ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6" Diam. from +1' ft. to 159' ft.
Welded [X] Liner installed [ ] Threaded [ ] ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used ____
SIZE of perforations ____ in by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes [ ] No [XX] Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20' ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [XX] No [ ]
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) **PUMP:** Manufacturer's Name ____
Type: ____ H.P. ____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ____ ft.
Static level 110' ft. below top of well Date 5/11/92
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? ____
Yield: ____ gal./min. with ____ ft drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airlest 40 gal./min. with stem set at 320' ft. for 1½ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes [ ] No [X]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and the thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
sand, fine	0	4
basalt, broken with course sand	4	12
basalt, gray & brown, fractured	12	55
basalt, gray & brn., frac. with brown clay seams	55	70
clay, brown & gray, hard	70	100
basalt, gray & brn., med. with tan clay	100	130
basalt, gray, med., with tan clay seams	130	250
basalt, gray, med, slightly fractured, with water	250	320
6" drive shoe installed		
180' sch 40 pvc liner installed		
1½ hrs development		

RECEIVED
MAY 15 1992
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 5/4/92 19. Completed 5/11/92 19.

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Vermillion Well Drilling, inc. (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)
Address 6403 North Perry Spokane, Wa. 99207
(Signed) [signature] (WELL DRILLER) License No. 2012
Contractor's Registration No. VERMIWD126D3 Date 6/8/92 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR83

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Glen Gillson Address P.O. Box 10 Marshall WA 99020

LOCATION OF WELL: County Spokane SW¼ NE¼ Sec. 24 T. 24 N., R. 42 W.M.

, and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well ..... inches.
Drilled ..... ft. Depth of completed well ..... ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8" Diam. from 0 ft. to 125' ft.
Threaded ☐ ..." Diam. from ..... ft. to ..... ft.
Welded ☐ ..." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☐
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☐
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☐ To what depth? ..... ft.
Material used in seal .....
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level... 2340 ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Air Test 150 GPM				

te of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
OVERBURDEN - SAND	0	90
BROKEN BASALT & SAND-WATER	90	94
SAND & BROKEN BASALT-WATER	94	114
COURSE GRAVEL & BROKEN BASALT WATER BEARING	114	120

Air Test 150 GPM

RECEIVED
SEP 11 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

RECEIVED
SEP 1 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 7-10 19 78 Completed 7-16 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C&S Drilling (Person, firm, or corporation) (Type or print)
Address Rt 3 Box 143 Cheney WA
[Signed] Leon A. Clark (Well Driller)
License No. 0959 Date Aug 17, 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

9/1/78 DR

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WW R 84

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 053821

Water Right Permit No.

(1) OWNER: Name GREG HEARD Address 202 WALKER DRIVE CHENEY, WA. 9900

LOCATION OF WELL: County SPOKANE NE ¼ NE ¼ Sec 21 T 24 N., R 42 W.M.

(2) STREET ADDDRESS OF WELL (or nearest address) CHENEY SPOK-GROVE

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [XX] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 280' feet. Depth of completed well 280' ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: [X] Welded [ ] Liner Installed [ ] Threaded
" Diam. from ft. to ft.
" Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [XX]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [XX]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20' ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 120' ft. below top of well Date 2/24/92
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [X] No [ ] If yes, by whom? VERMILLION
Yield: 10 gal./min. with 78' ft. drawdown after 4 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [X] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SAND, COURSE W/CLAY	0	8
SAND, GRAVEL, COURSE, SOME COB-		
BLE	8	84
BASALT, GREY, SOFT, SLI-FRACT.	84	101
BASALT, GREY, SOFT FRACTURED,		
BRN CLAY SEAMS, WITH WATER	101	130
BASALT, GREY, MED., HARD	130	160
CLAY, GREY, HARD	160	181
BASALT, BROWN & RED HIGHLY --		
FRACTURED	181	186
BASALT, GREY, HARD, SLI-FRAC.	186	280
6" DRIVE SHOE INSTALLED		
1½ HOURS DEVELOPMENT		
GOOD RECOVERY		
278' PVC LINER INSTALLED SCH	40	

RECEIVED MAR - 9 1992 DEPARTMENT OF ECOLOGY SPOKANE

Work started 2/22/92 19. Completed 2/24/92 19.

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME VERMILLION WELL DRILLING, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address BOX 637 OTIS ORCHARDS, WA. 99027

(Signed) Keith D. Vermillion (WELL DRILLER) License No. 1079

Contractor's Registration No VERMIWD126D3 Date 2/27/92 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 85

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

No. Appli. 5037

WELL LOG

Date 12-17, 1958

Record by owner

Source driller's record

Location: State of WASHINGTON

County Spokane

Area

Map

W½NW¼ NE¼ sec. 21 T. 24 N., R. 42 E. W.M.

Diagram of Section

Drilling Co. owner

Address

Method of Drilling dug Date Sept., 1958

Owner Harry Smick

Address Marshall, Wash.

Land surface, datum ft. above below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)		
	Clay dirt	11	11
	Pump test:		
	11'x7' (Dim)		
	SWL: 6 ft.		
	DD: 2½ ft.		
	Yield: Unknown		
	Water Temp. 45°		
	Type & size of pump: Centrifical		
	3½ h.p. gas motor		
	CASING: 2" diam. pipe from pump to		
	11 ft. down.		

Sheet ... of ... sheets

Turn up

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

205326

WWR 86

WATER WELL REPORT

ECOLOGY Original & I st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)*

X Construction

0 Decommission ORIGINAL CONSTRUCTION Notice of Intent Number

CURRENT **Notice of Intent No** W206566

unique Ecology Well ID Tag No. ALR-780

Water Right Permit No.

Property Owner Name Jongeward Construction & Development

Well Street Address

City County: Spokane

L,ocation 1/4-1/4 NE 1/4 See 21 Twit 24 R 42 (EWM) *circle or one* WWM

Lat/Long:: (s,t,r still REQUIRED) LatDeg Lat min/sec Long Deg-- Long Min/Sec

Tax Parcel No. 24213.9058

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)

☒ New Well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

Dimensions: Diameter of well 6" inches, drilled 600' ft.

Depth of completed well 600' ft.

CONSTRUCTION Details

Casing Installed: ☒ Welded 6" Diam. from +1' Ft to 142' Ft

☐ Liner installed " diam. from Ft to ft.

☐ Threaded Diam. from ft. to Ft

Perforations: ☐ Yes ☐ No

Type of perforator used

SIZE of Perfs in. by in. and no. of perfs from ft. to Ft

Screens- ☐ Yes ☒ No ☐ K-Pac Location

Manufacturer's Name

Type Model No.

Diam. Slot Size from Ft, to Ft

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand

Materials placed from & to ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20'+ Ft

Materials used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturces Name

Type: HP.

WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 125 ft. below top of well Date 8/30/2006

Artesian pressure Lbs. per square inch Date

Artesian water is controlled by (cap,valve,etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: gal/min. with FT drawdown after hrs.

Yield: gal/min. with Ft- drawdown after Hrs

Yield: gal/min. with ft. drawdown after Hrs.

Recovery data taken taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min. with Ft drawdown after Hrs.

Airtest 2-3approx gal Min. with stem set at 595' ft. for 1 Hrs.

Artesian flow Gpm. Date

Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

RECEIVED SEP 19 2006 DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
sand and gravel	0	5
basalt cobble with sand	5	38
broken basalt with clay	38	88
basalt, medium, fractured	88	93
brown clay	93	95
brown, course sand	95	110
broken basalt with sand	110	121
brown clay	121	127
basalt, broken with sand	127	140
basalt, fractured	140	150
hard grey clay	150	177
yellow clay, hard	177	182
yellow clay with basalt	182	229
fractured basalt	229	242
medium basalt	242	265
fractured basalt	265	282
brown clay	282	287
tan, decomposed granite, with water	287	350
medium, salt and pepper granite	350	402
fractured granite, with green	402	409
medium, salt and pepper granite	409	413
fractured granite, with green	413	426
medium granite	426	475
granite, salt and pepper, fractured	475	600
Liner declined by customer		
6" drive shoe installed		

Start Date 8/10/2006 Completed Date 8/30/2006

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well,,and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Alex R. Vermillion

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2336

If trainee, licensed driller's

Drilling Company Vermillion Water Systems, Inc.

Address 5309 North Lynden Road

City, State, Zip Otis Orchards, WA 99027

Contractor s **Registration** No VermiWSO4206 Date 9/15/2006

WWR 87 (Page 1 of 2)

WATER WELL REPORT
FOR AN EXISTING WELL

WASHINGTON STATE DEPARTMENT OF ECOLOGY

INSTRUCTIONS: *Use this form only if an original water well report was NEVER filed or is MISSING from Ecology records.* Your well must be properly tagged prior to submitting this form. Please fill in all blanks as completely as possible. If information is not known, leave blank. After completing, mail the original form to: Wa State Dept of Ecology, PO Box 47600, Olympia, WA, 98504-7600, ATTN: Marian Bruner.

CURRENT USE: [X] Domestic [ ] Industrial [ ] Municipal. [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

DIMENSIONS: Diameter of well 8 inches. Depth of completed well _____ ft. if known.

CONSTRUCTION DETAILS
Liner Installed [ ] Yes [X] No [ ] Unknown
TYPE: [ ] PVC [ ] Steel [ ] Concrete Liner [ ] Other [ ] Unknown

Perforations: [ ] Yes [X] No [ ] Unknown
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: [ ] Yes [X] No [ ] Unknown Mfr's Name _____
TYPE: [ ] Stainless Steel [ ] PVC [ ] Other
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Unknown
Materials placed from _____ ft. to _____ ft.

Surface Seal: [ ] Yes [ ] No [X] Unknown If known, to what depth _____ ft
Materials used if known: [ ] Bentonite [ ] Cement

PUMP: [ ] Yes [X] No Mfr's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 184 ft. below top of casing Date measured 9-15-09
Artesian pressure N/A lbs. per square inch Date measured _____
Well head has cap? [X] Yes [ ] No Shut off valve? [ ] Yes [X] No

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? [ ] Yes [ ] No If yes, attach copy [ ] Unknown
Yield: 21 gal./min. with 5 ft. drawdown after 4 hrs.

Unique Ecology Well ID Tag No. BBH 905
Water Right? If yes, attach copy [ ] Yes [X] No
Property Owner Name JASON JOWSEWARD
Well Street Address W. Crest View Ln
City Cheney County: Spokane
Tax Parcel No. 2424.9089

LOCATION
An accurate location of your well is very important. The Township, Range, Section and 1/4, 1/4 can be found on your legal description or through your county asessor's office.

Sec. 21 Twn. 24 R. 42 EWM or WWM (circle one)

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

This square represents one section of land, which is approx 640 acres. Within this section, circle the letter that best represents the location of the well within this section.

Latitude/Longitude NOTE: Section, Township, Range still REQUIRED
Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____
[ ] GPS [ ] Survey
[ ] Topographic Map [ ] Computer Generated

Additional Information, if available:
[ ] Location marked on topographic map (please attach)
[ ] Location marked on air photo (please attach)

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JUL 20 2009
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

CERTIFICATION: The information reported above is true to the best of my knowledge and belief.

[ ] Driller [ ] Engineer [X] Property Owner [ ] Other

Name JASON JOWSEWARD
Signature _____
Driller License No. _____
Date Signed N/A

Drilling Company N/A
Address of person completing this form: 6314 W. Crest View Ln.
City, State, Zip CHENEY WA 99004

Original - Ecology

Ecology is an Equal Opportunity Employer.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 87
(Page 2 of 2)

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JUL 20 2009
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Well Tagging Form

Unique Well Tag No: BBH 905

RECORD VERIFICATION (check ✓ one)

☒ Well Report available (please attach this form to the well report and submit it to the Ecology Regional Office near you).

If a well report is not available, please complete a "Water Well Report for an Existing Well" form. This form is available at Ecology's headquarters office. **Do not use this form for wells that do not have a Water Well Report.**

WELL OWNERSHIP, IF DIFFERENT FROM WELL REPORT

First Name: Jason Jongewaard Last Name: JONGEWARD

Street Address: ? W. Crest LANE

City: Cheney State: WA 99004

LOCATION OF WELL, IF DIFFERENT FROM WELL REPORT

Well Address: unknown W. Crest View Ln.

City: Cheney ; WA 99004 County: Spokane

T. 21 N. R. 44 W.M. Sec. 42 SW ¼ of the NE half

Latitude _____ _____ _____ _____"

Longitude _____ _____ _____ _____"

Elevation at land surface unknown (feet)/meters *(circle one)*

SEE BACK SIDE OF PAGE...

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 88.

WATER WELL REPORT

ECOLOGY Original & I st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)* 197774

X Construction

0 Decommission ORIGINAL CONSTRUCTION Notice of Intent Number

CURRENT **Notice of Intent No** W189534

unique Ecology Well ID Tag No. ALR-767

Water Right Permit No.

Property Owner Name Jongeward Construction & Development

Well Street Address Andrus/Grove

City Spokane County: Spokane

L,ocation 1/4-1/4 NE 1/4 See 21 Twit 24 R 42 (EWM) *circle one* WWM

Lat/Long:: (s,t,r still REQUIRED) LatDeg Lat min/sec

Long Deg-- Long Min/Sec

Tax Parcel No.

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)

☒ New Well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☐ Rotary ☐ Jetted

Dimensions: Diameter of well 6" inches, drilled 260' ft.

Depth of completed well 260' ft.

CONSTRUCTION Details

Casing Installed: ☐ Welded 6" Diam. from +1.5' Ft to 18.5 Ft

☒ Liner installed 4" diam. from -7' Ft to 260' ft.

☐ Threaded Diam. from ft. to Ft

Perforations: ☒ Yes ☐ No

Type of perforator used skillsaw

SIZE of Perfs 1/4" in. by 8" in. and no. of perfs 60 from 200' ft. to 255' Ft.

Screens- ☐ Yes ☒ No ☐ K-Pac Location

Manufacturer's Name

Type Model No.

Diam. Slot Size from Ft, to Ft

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand

Materials placed from & to ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18.5' Ft

Materials used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturers Name Goulds

Type: submersible HP. 2

WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 192' ft. below top of well Date 5//2006

Artesian pressure Lbs. per square inch Date

Artesian water is controlled by (cap,valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? ☒ Yes ☐ No If yes, by whom? VWS/Driller

Yield: 25 gal/min. with 0 FT drawdown after 4 Hrs.

Yield: gal/min. with Ft- drawdown after Hrs

Yield: gal/min. with ft. drawdown after Hrs.

Recovery data taken taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min. with Ft drawdown after Hrs.

Airtest 35+ gal Min. with stem set at 255' ft. for 1 Hrs.

Artesian flow Gpm. Date

Temperature of water Was a chemical analysis made? ☒ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
topsoil	0	1
basalt, medium	1	35
tan clay	35	36
basalt, medium with some fractures	36	82
basalt, soft	82	104
basalt, medium	104	150
gray clay	150	160
brown clay	160	220
basalt, very fractured, with water	220	243
basalt, medium, to hard	243	260
6" drive shoe installed		

RECEIVED
JUN 13 2006
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5/8/2006 Completed Date 5/9/2006

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well,,and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Alex R. Vermillion

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2336

If trainee, licensed driller's

Drilling Company Vermillion Water Systems, Inc.

Address 5309 North Lynden Road

City, State, Zip Otis Orchards, WA 99027

Contractor s Registration No VermiWSO4206 Date 5/15/2006

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR89

WATER WELL REPORT

ECOLOGY Original & 1 st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)*

X Construction 197775

0 Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT **Notice of Intent No** W189532

unique Ecology Well ID Tag No. ALR-766

Water Right Permit No.

Property Owner Name Jongeward Construction & Development

Well Street Address Andrus/Grove

City Spokane County: Spokane

L,ocation 1/4-1/4 NE 1/4 Sec 21 Twit 24 R 42 (EWM) *circle one* WWM

Lat/Long:: (s,t,r still REQUIRED) LatDeg Lat min/sec Long Deg-- Long Min/Sec

Tax Parcel No. 24211.9081

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK: Owner's number of well (if more than one)

[X] New Well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [ ] Rotary [ ] Jetted

Dimensions: Diameter of well 6" inches, drilled 260' ft.

Depth of completed well 260' ft.

CONSTRUCTION Details

Casing Installed: [ ] Welded 6" Diam. from +2' Ft to 18' Ft

[X] Liner installed 4" diam. from -7' Ft to 260' ft.

[ ] Threaded Diam. from ft. to Ft

Perforations: [X] Yes [ ] No

Type of perforator used skillsaw

SIZE of Perfs 1/4" in. by 8" in. and no. of perfs 60 from 200' ft. to 255' Ft.

Screens- [ ] Yes [X] No [ ] K-Pac Location

Manufacturer's Name

Type Model No.

Diam. Slot Size from Ft, to Ft

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand

Materials placed from & to ft.

Surface Seal: [X] Yes [ ] No To what depth? 18.5' Ft

Materials used in seal bentonite

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturers Name Goulds

Type: submersible HP 2

WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 192' ft. below top of well Date 5/6/2006

Artesian pressure Lbs. per square inch Date

Artesian water is controlled by (cap,valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? [X] Yes [ ] No If yes, by whom? VWS/Driller

Yield: 25 gal/min. with 0 FT drawdown after 4 Hrs.

Yield: gal/min. with Ft- drawdown after Hrs

Yield: gal/min. with ft. drawdown after Hrs.

Recovery data taken taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min. with Ft drawdown after Hrs.

Airtest 35+ gal Min. with stem set at 255' ft. for 1 Hrs.

Artesian flow Gpm. Date

Temperature of water Was a chemical analysis made? [X] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
topsoil	0	1.5
basalt, hard	1.5	30
basalt, broken w/clay, tan	30	33
basalt, broken	33	110
basalt, medium	110	149
grey clay, firm	149	168
brown clay	168	222
basalt, very fractured, with water	222	246
basalt, medium to hard	246	260
6" drive shoe installed		

RECEIVED
JUN 13 2006
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5/5/2006 Completed Date 5/6/2006

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well,,and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Alex R. Vermillion

Drilling Company Vermillion Water Systems, Inc.

Driller/Engineer/Trainee Signature

Address 5309 North Lynden Road

Driller or Trainee License No. 2336

City, State, Zip Otis Orchards, WA 99027

If trainee, licensed driller's

Contractor s Registration No VermiWSO4206 Date 5/15/2006

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

ECOLOGY Original & I st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)* 272901

X Construction

0 Decommission ORIGINAL CONSTRUCTION Notice of Intent Number

CURRENT **Notice of Intent No** W226459

unique Ecology Well ID Tag No. APS-119

Water Right Permit No.

Property Owner Name Jongeward Construction & Development

Well Street Address

City Cheney County: Spokane

L,ocation 1/4-1/4 NE 1/4 See 21 Twit 24 R 42 (EWM) circle or one WWM

Lat/Long:: (s,t,r still REQUIRED) LatDeg Lat min/sec Long Deg-- Long Min/Sec

Tax Parcel No. 24211.9082

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK: Owner's number of well (if more than one)

[X] New Well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

Dimensions: Diameter of well 6" inches, drilled 440' ft. Depth of completed well 440' ft.

CONSTRUCTION Details

Casing Installed: [ ] Welded 6" - [X] Liner installed 4" [ ] Threaded — Diam. from 1.5' Ft to 18.5' Ft; diam. from -7' Ft to 440' ft.; Diam. from ft. to Ft

Perforations: [X] Yes [ ] No

Type of perforator used skillsaw

SIZE of Perfs 1/4" in. by 8" in. and no. of perfs 70 from 380' ft. to 435' Ft.

Screens- [ ] Yes [X] No [ ] K-Pac Location

Manufacturer's Name

Type Model No.

Diam. Slot Size from Ft, to Ft

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: [ ] Yes [ ] No [X] Size of gravel/sand

Materials placed from & to ft.

Surface Seal: [X] Yes [ ] No To what depth? 18.5' Ft

Materials used in seal

Did any strata contain unusable water? [X] Yes [ ] No

Type of water? silt with wood Depth of strata 230'-236'

Method of sealing strata off shale trap w/ bentonite

PUMP: Manufacturers Name Goulds

Type: submersible HP 2

WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 234' ft. below top of well Date 8/25/2007

Artesian pressure Lbs. per square inch Date

Artesian water is controlled by (cap,valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? [X] Yes [ ] No If yes, by whom? Driller/VWS

Yield: 16.5 gal/min. with 25' FT drawdown after 4 Hrs.

Yield: gal/min. with Ft- drawdown after Hrs

Yield: gal/min. with ft. drawdown after Hrs.

Recovery data taken taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min. with Ft drawdown after Hrs.

Airtest 20+ gal Min. with stem set at ft. for Hrs.

Artesian flow Gpm. Date

Temperature of water Was a chemical analysis made? [X] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
topsoil	0	6"
basalt, hard to medium	6"	23
basalt, fractured	23	127
basalt, hard	127	152
basalt, with tan clay	152	195
tan, clay, firm	195	230
tan, clay with silt & wood, w/5 gpm	230	236
basalt. hard	236	302
basalt, medium	302	342
basalt, fractured, medium	342	365
basalt, fractured,	365	390
basalt. medium	390	405
basalt. medium with fractures	405	410
basalt. vescular with water	410	428
basalt. medium to hard	428	440
6" drive shoe installed		
6" X 4" formation packer installed @ 260'		

RECEIVED
SEP - 4 2007
DEPARTMENT OF ECOLOGY
EASTERN REGION

Start Date 8/23/2007 Completed Date 8/25/2007

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print)

Driller/Engineer/Trainee Signature Alex R. Vermillion

Driller or Trainee License No. 2336

If trainee, licensed driller's

Drilling Company Vermillion Water Systems, Inc.

Address 5309 North Lynden Road

City, State, Zip Otis Orchards, WA 99027

Contractor s Registration No VermiWSO4206 Date August 29, 2007

WWR91

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

ECOLOGY Original & 1 st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)*

X Construction

0 Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* 358050

CURRENT **Notice of Intent No** W206595

unique Ecology Well ID Tag No. BBC-070

Water Right Permit No. _____

Property Owner Name Kory Borjessan

Well Street Address _____

City Cheney County: Spokane

L,ocation- ___ 1/4-1/4 NE 1/4 Sec 21 Twit 24 R 42 (EWM) *circle one* WWM

Lat/Long:: (s,t,r still REQUIRED) LatDeg _____ Lat min/sec _____ Long Deg-- Long Min/Sec _____

Tax Parcel No. 24211.9089

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New Well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

Dimensions: Diameter of well 6" inches, drilled 260' ft. Depth of completed well 260' ft.

CONSTRUCTION Details

Casing Installed: ☐ Welded 6" Diam. from +1.5' Ft to 18.5' Ft

☐ Liner installed 4" diam. from -5' Ft to 260' ft.

☐ Threaded ___ Diam. from ___ ft. to ___ Ft

Perforations: ☒ Yes ☐ No

Type of perforator used skillsaw

SIZE of Perfs 1/4" in. by 8" in. and no. of perfs 60 from 200' ft. to 255' Ft.

Screens- ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot Size _____ from _____ Ft, to _____ Ft

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ & to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18.5' Ft

Materials used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturers Name J-Class

Type: submersible HP 2

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 192' ft. below top of well Date 9/24/09

Artesian pressure _____ Lbs. per square inch Date _____

Artesian water is controlled by _____ (cap,valve; etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? ☒ Yes ☐ No If yes, by whom? _____

Yield: 25 gal/min. with 0 FT drawdown after 4 Hrs.

Yield: _____ gal/min. with _____ Ft- drawdown after _____ Hrs

Yield: _____ gal/min. with _____ ft. drawdown after _____ Hrs.

Recovery data taken taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal/min. with _____ Ft drawdown after _____ Hrs.

Airtest 30-40 gal Min. with stem set at 255' ft. for 1 Hrs.

Artesian flow _____ Gpm. Date _____

Temperature of water ____ Was a chemical analysis made? ☒ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
topsoil	0	1
basalt, medium to soft	1	24
basalt, with some clay	24	36
basalt, fractured	36	67
basalt, fractured, soft	67	77
basalt, medium with fractures	77	110
basalt, medium	110	141
clay, brown	141	168
basalt, soft	168	173
void.....broken basalt	173	197
highly fractured basalt, with water	197	255
6" drive shoe installed		
cemented well @173-197 in order to		
continue drilling through the void		

RECEIVED
OCT 28 2009
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 9/21/2009 Completed Date 9/23/2009

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well,,and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Alex R. Vermillion

Driller/Engineer/Trainee Signature _____

Driller or Trainee License No. 2336

If trainee, licensed driller's _____

Drilling Company Vermillion Water Systems, Inc.

Address 5309 North Lynden Road

City, State, Zip Otis Orchards, WA 99027

Contractor s Registration No VermiWSO4206 Date 9/28/2009

The Dep. The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 92
(page 1 of 3)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. G 7146 A
Permit No.

(1) OWNER: Name Marshall-Town Address Marshall, Wash 99020

(2) LOCATION OF WELL: County Spokane — NE ¼ NE ¼ Sec 21 T 24 N., R 42E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 240 ft. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 67 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 70 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Air test approx. 150+ G.P.M. " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

7/29/86

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil	0	1
Sand-med	1	65
Basalt, grey, fractured	65	67
Basalt, grey, med	67	100
Basalt, grey, fractured w/br clay	100	110
Basalt, hard, grey	110	140
Basalt, fractured, grey w/water 1g.p.m.	140	145
Basalt, grey, fractured w/water 150g.p.m.	145	205
Basalt, grey, hard w/water 150+	205	240

JUL 25 1986

Work started 11-3 19 84 Completed 11-5 19 84

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J & J DRILLING INC (Person, firm, or corporation) (Type or print)

Address S 5613 Linke RD. Greenacres, 99016

[Signed] Keith D. Sumillion (Well Driller)

License No. 1079 Date 6-16, 1986

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

WWR 92
(Page 2 of 3)

Well Tagging Form

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Unique Well Tag No: AHC 170

RECORD VERIFICATION (check ✓ one)

- ☐ Well Report available *(please attach this form to the well report and submit it to the Ecology Regional Office near you)*
- ☐ Verification inconclusive PWS51845 SOURCE 02
- ☐ Well Report not available

WELL OWNERSHIP, IF DIFFERENT FROM WELL REPORT

First Name: Marshall Community Water Assn Last Name: _____

Street Address: _____

City: _____ State: _____

LOCATION OF WELL, IF DIFFERENT FROM WELL REPORT

Well Address: _____

City: _____ County: Spokane

T. _____ N. R. _____ _____ W.M. Sec. _____ _____ 1/4 of the _____

FOR AGENCY USE ONLY

Latitude 47° 33 . 52.672 "

Longitude 117° 29 . 52.464 "

- ☒ GPS
- ☐ Topographic Map
- ☐ Survey
- ☐ Computer generated

Elevation at land surface _____ feet/meters *(circle one)*

- ☐ Digital Altimeter
- ☐ Topographic Map
- ☐ Other _____

Additional information, if available:

- ☐ Location marked on topographic map *(please attach)*
- ☐ Location marked on air photo *(please attach)*

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

FOR AGENCY USE ONLY

WELL CHARACTERISTICS

Physical Description of well (size of casing, type of well, housing, etc.)

6" steel casing 12" above ground

Location of Well Identification Tag:

on elec. conduit at well head

Was supplemental tag needed for ease of identifying well? ☐ Yes ☐ No

If yes, where was tag placed? _____

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Scale 1:24,000 (1"=2,000')

Indicate the location of the well within the Section by drawing a dot at that point.

SECTION _____

COMMENTS:

FOR ECOLOGY WATER RESOURCES PROGRAM ONLY

Water Right # _____ Date Issued _____

Circle One: Application Permit Certificate Claim Exempt

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 93

Appl. 10736
Per. 10033
Cert. 7146

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

WELL LOG

Record by Driller
Source Driller's record

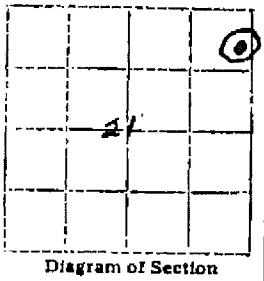


Diagram of Section

Location: State of WASHINGTON
County Spokane
Area
Map
E½NE ¼ NE ¼ sec. 21 T. 24 N., R. 42 E. W.
Drilling Co. Zenkgraf's Well Drilling
Address spokane, Washington
Method of Drilling rotary Date ....., 19.....
Owner Marshall Community Water Association
Address Marshall, Washington ~~WRX~~ 99020
Land surface, datum ..... ft. above / below
SWL: ..... Date ....., 19..... Dims.: .....

CORRELATION	MATERIAL	From (feet)	To (feet)
	(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)		
	Municipal supply		
	top soil	0	1½
	sand, course & gravel & rocks	1½	12
	clay w/gravel & some sand	12	13
	Rock ledge with gr. & br. shale	13	17
	hard side br. clays w/ fractured bl. basalts	17	21
	hard basalt with gr. shale	21	28
	" " with occ. frac.	28	36½
	" " grey	36½	40
Very	" " grey basalt	40	51
	hard grey black basalt	51	59
	hard bl, frac, grey bl. basalt	59	71
	hard grey bl basalt	70	75
	" " " " Occ. Fr.	75	79
	" " " "	79	85

Turn up

Sheet ..... of ..... sheets

WWR 94

WATER WELL REPORT

STATE OF WASHINGTON ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)*
(X) Construction
( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* 188643

CURRENT Notice of Intent No. W206465

Unique Ecology Well ID Tag No. ALR852

Water Right Permit No. _____

Property Owner Name Randall Gillingham

Well Street Address Andrus RD.

City N/A County: Spokane

Location ____ 1/4 - 1/4 NE 1/4 Sec 21 Twn 24 R 42 (EWM) circle one or WWM

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 24211.9052

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
[X] New Well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft.
Depth of completed well 180 ft.

CONSTRUCTION DETAILS
Casing [X] Welded 6 " Diam. from +1 ft. to 19 ft.
Installed: [X] Liner installed 4 " Diam. from 6 ft. to 180 ft.
[ ] Threaded ____ " Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No
Type of perforator used _____
SIZE of perfs ____ in by ____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [ ] Yes [X] No [ ] K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 19 ft
Materials used in seal Bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 18 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? [ ] Yes [ ] No If yes, by whom? _____
Yield. _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Approx. 12-13 GPM by Airtest				

Date of test _____
Bailer test ____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 12-13 gal./min. with stem set at 180 ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil & Fract. Basalt	0	1
Basalt-H,Fracts.w/Clay	1	12
Basalt-H,Fract.Layers	12	145
w/clay,5 GPM @50'-60'		
Brn. Clay-F to H	145	150
Tan Clay-F to H	150	160
Brn. Clay-F to H	160	180

RECEIVED
JAN 25 2006
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 11/15/05 Completed Date 11/16/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Benson Carpenter

Driller/Engineer/Trainee Signature _____

Driller or Trainee License No. 1278

Drilling Company Carpenter Drilling Co.Inc.

Address 8918 N. Forker Rd.

City, State, Zip Spokane, Wa. 99217

Contractor's Registration No CARPEDCO22JT Date 11/17/05

If trainee, licensed driller's Signature and License no. _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

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(page 1 of 2)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

195920

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W101869

UNIQUE WELL I.D. # AEC119

Water Right Permit No. _____

(1) **OWNER:** Name Randy Gillingham Address 222 W. Paradise Rd., Cheney, WA 99004

(2) **LOCATION OF WELL:** County Spokane - NW 1/4 NE 1/4 Sec 21 T. 24N N., R 42E W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) Andrus Rd. West of Grove Rd.

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) 2

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 180 feet. Depth of completed well 180 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 19 ft. Welded ☒
Liner installed ☐ " Diam. from ft. to ft.
Threaded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 20 ft. below top of well Date 6/18/98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" Air Test 14 gpm " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	1
Decomposed Basalt	1	5
Basalt, Hard	5	35
Basalt, Hard & Fractured - Water 7gpm	35	40
Basalt, Hard	40	95
Basalt, Hard & Fractured - Water 3gpm	95	100
Basalt, Hard	100	150
Basalt, Soft & Fractured - Water 4gpm	150	180
Customer opted not to have the PVC liner installed.		

RECEIVED
AUG 27 1998
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work Started 6/17/98, 19. Completed 6/18/98, 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J Drilling, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S. 5613 Linke Greenacres, WA 99016

(Signed) Marty Rusco J+J (WELL DRILLER) License No. 2038

Contractor's Registration No. JJDRII-177KU Date 6/23/98, 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

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(Page 2 of 2)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WELL LOG CHANGE FORM

Instructions: Record any change made to the well log record on this form. Then always append this form to the well log image. File with the original.

WCL Log ID (Required) 162511 Well Log ID 195920

Regional Office: ☐CRO ☒ERO ☐NWRO ☐SWRO

Type of Well: ☒ Water ☐ Resource
Notice of Intent: W101869 Ecology Well ID Tag No. ALR639
Property (Well) Owner's Name RANDALL GILLINGHAM
Well Street Address ANDRUS ROAD
City CHENEY County SPOKANE Zip Code 99004
Location: NW 1/4-1/4 NE 1/4 Sec 21 Twn 24N R 42 (E) or W (Circle One)
Lat./Long: (Required) Lat. Deg. _____ Lat. Min/Sec _____
Long. Deg. _____ Long. Min/Sec _____
Horizontal Collection Method Code _____
Tax Parcel No 24212.9065
Type of Work: ☒New Well ☐ Reconditioned ☐ Deepened
Well Log Received Date 8/27/1998
Well Diameter 6 (in inches) Well Depth 180 (in feet) Well Completed Date 6/18/1998
Driller's Ecology License No. 2038-M. RUGD
Trainee's Ecology License No: _____

Reason/Source of Change (Required)
Address update, Well Tag replacements after thefts, and parcel number updates.

Signature of Well Log Tracker (Required) Alix J Mills Date 5/25/2006

ECY-WR-WLCF Rev. 10/02/02

WWR 96
(Page 1 of 2)

Start Card No. W101884

UNIQUE WELL I.D. # AEC140

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

66258

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) **OWNER:** Name Randy Gillingham Address 222 W Paradise Cheney, WA 99004

(2) **LOCATION OF WELL:** County Spokane NW 1/4 NE 1/4 Sec 21 T. 24N N., R. 42E W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) Andrus Rd. West of Grove Rd.

(3) **PROPOSED USE:** [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) 1

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 220 feet. Depth of completed well 190 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6" Diam. from +1 ft. to 19 ft. Welded [X]
Liner installed [ ] _____" Diam. from _____ ft. to _____ ft.
Threaded [ ] _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 20 ft. below top of well Date 6/17/98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" Air Test 5gpm " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	3
Basalt, Hard	3	95
Broken Basalt - Water 3gpm	95	100
Basalt, Hard & Slightly Fractured	100	150
Basalt, Soft - Water 2gpm	150	190
Basalt, Medium	190	198
Void	198	200
Basalt, Medium	200	220

RECEIVED
AUG 27 1998
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work Started 6/16/98 19. Completed 6/17/98 1998

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S. 5613 Linke Greenacres, WA 99016

(Signed) Martin Ruiz J+J License No. 2038
(WELL DRILLER)

Contractor's Registration No. JDRII-177KU Date 6/25/98 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 96
(Page 2 of 2)

WELL LOG CHANGE FORM

Instructions: Record any change made to the well log record on this form. Then always append this form to the well log image. File with the original.

WCL Log ID (Required) 162522 Well Log ID 66258

Regional Office: ☐CRO ☒ERO ☐NWRO ☐SWRO

Type of Well: ☒ Water ☐ Resource
Notice of Intent: W101884 Ecology Well ID Tag No. ALR638
Property (Well) Owner's Name RANDALL GILLINGHAM
Well Street Address ANDRUS ROAD
City CHENEY County SPOKANE Zip Code 99004
Location: NW 1/4-1/4 NE 1/4 Sec 21 Twn 24N R 42 (E) or W (Circle One)
Lat./Long: (Required) Lat. Deg. _____ Lat. Min/Sec _____
Long. Deg. _____ Long. Min/Sec _____
Horizontal Collection Method Code _____
Tax Parcel No 24212.9065
Type of Work: ☒New Well ☐ Reconditioned ☐ Deepened
Well Log Received Date 8/27/1998
Well Diameter 6 (in inches) Well Depth 190 (in feet) Well Completed Date 6/17/1998
Driller's Ecology License No. 2038-M. RUGD
Trainee's Ecology License No: _____

Reason/Source of Change (Required)
Address update, Well Tag replacements after thefts, and parcel number updates.

Signature of Well Log Tracker (Required) Alix J Mills Date 5/25/2006

ECY-WR-WLCF Rev. 10/02/02

WWR 97

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent ____

UNIQUE WELL I.D. # AEH081

Water Right Permit No. W112187

(1) **OWNER:** Name Randy Gillingham Address 222 Paradise Rd Cheney, WA 99004

(2) **LOCATION OF WELL:** County Spokane NW 1/4 NE 1/4 Sec 21 T 24N N.R. 42E WM

(2a) **STREET ADDRESS OF WELL:** (or nearest address) Andrus Rd. between Grove & Spotted

TAX PARCEL NO.: unknown

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) ____
☒ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission
Method: ☐ Dug ☐ Cable ☒ Rotary ☐ Bored ☐ Driven ☐ Jetted

(5) **DIMENSIONS:** Diameter of well 6 inches
Drilled 280 feet. Depth of completed well 280 ft.

(6) **CONSTRUCTION DETAILS**
Casing Installed:
☒ Welded 6 " Diam. from +1 ft. to 19 ft.
☒ Liner installed 4 " Diam. from ____ ft. to 280 ft.
☐ Threaded ____ " Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) **PUMP:** Manufacturer's Name ____
Type: ____ H.P. ____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ____ ft.
Static level 170 ft. below top of well Date 5/12/99
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 50+ gal./min. with ____ ft. drawdown after ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Topsoil	0	1
Basalt Boulders & Sand	1	10
Basalt, Very Hard	10	165
Basalt, Slightly Fractured	165	170
Shale, Brown & Hard	170	210
Shale, Hard	210	237
BAsalt, Hard	237	239
Basalt, Slightly Fractured - Water 20gpm Some loss of circulation	239	243
Basalt, Med. to Hard	243	250
Basalt, Fractured - Water 30+gpm some loss of circulation	250	270
Basalt, Medium	270	280
Recommended pump depth is 265 feet.		

JUN 2 0 1999

Work Started 5/10/99 Completed 5/12/99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Don Anderson License No. 1447
(Licensed Driller/Engineer)

Trainee Name - License No. -

Drilling Company J & J Drilling, Inc.

(Signed) ____ License No. 0215
(Licensed Driller/Engineer)

Address S. 5613 Linke Greenacres, WA 9901

Contractor's Registration No. JJDRII-177KU Date 5/14/99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR98

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ....
Permit No. ....

(1) OWNER: Name David Countryman Address Rt. 3 Box 73 Cheney 99004

(2) LOCATION OF WELL: County Spokane — SE ¼ SE ¼ Sec. 21 T 24 N., R. 42 W.M.

Bearing and distance from section or subdivision corner

PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 102 ft. Depth of completed well 102 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 40 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 40 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 4 gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
top soil	0	2
boulders	2	4
sand with mica in it	4	8
boulders and granite	8	11
clay and sand	11	33
granite	33	102

Work started 7/29/75, 19.... Completed 7/31/75, 19....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Bartholomew Drilling
(Person, firm, or corporation) (Type or print)
Address Nine Mile Falls, Wa. 99026
[Signed] D.E. Bartholomew (Well Driller)
License No. 0027 Date 8/12/75, 19....

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71)
ECY-070-28

10/30/16

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 99

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy
62365

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W095551
UNIQUE WELL I.D. # ABV249
Water Right Permit No. _____

OWNER: Name Karolyn Burrell Address 3308 East 11th Ave, #A301, Spokane, WA 99202

(2) LOCATION OF WELL: County Spokane - Parcel#34214-977 1/4 SE 1/4 Sec 21 T 24 N.R 42E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: XX Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary XX Jetted ☐

(5) DIMENSIONS: Diameter of well 10 - 6 inches
Drilled 65 feet Depth of completed well 60 ft

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam from +2 ft to 55 ft
Welded XX " Diam from _____ ft. to _____ ft
Liner installed ☐ " Diam from _____ ft to _____ ft.
Threaded ☐

Perforations: Yes ☐ No XX
Type of perforator used _____
SIZE of perforations _____ in by _____ in.
_____ perforations from _____ ft to _____ ft.
_____ perforations from _____ ft to _____ ft.
_____ perforations from _____ ft to _____ ft.

Screens: Yes XX No ☐
Manufacturer's Name Johnson
Type stainless steel Model No _____
Diam 5 Slot size 12 from 55 ft to 60 ft.
Diam ____ Slot size _____ from _____ ft to _____ ft

Gravel packed: Yes ☐ No XX Size of gravel _____
Gravel placed from _____ ft to _____ ft.

Surface seal: Yes XX No ☐ To what depth? 40 ft
Material used in seal Bentonite casing seal
Did any strata contain unusable water? Yes ☐ No XX
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type _____ H P _____

(8) WATER LEVELS: Land surface elevation above mean sea level _____ ft
Static level 40 ft below top of well Date _____
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (Cap valve etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No XX If yes by whom? _____
Yield 10-15 gal/min with _____ ft drawdown after _____ hrs
" Estimated air lift at time of drilling "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal/min with _____ ft drawdown after _____ hrs
Airtest _____ gal/min with stem set at _____ ft for _____ hrs
Artesian flow _____ g p m Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Bron top soil	0	3
Brown sand and silt	3	28
Medium sand with some gravel	28	58
Coarse sand/gravel with water	58	65

Work Started 4/21/97 19 Completed 4/23/97 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME INLAND PACIFIC DRILLING, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 5014 N Chase Road, Newman Lake, WA 99025
(Signed) _____ (WELL DRILLER) License No 1030
Contractor's Registration No INLANPDO66DD Date 5/21/97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR100

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 10 inches, drilled 280 ft. Depth of completed well 280 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 10" Diam. from +2 ft. to 178 ft.

Installed: ☒ Liner installed 4" Diam. from -7 ft. to 230 ft.

☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Johnson

Type PVC Model No. Tri-Lock

Diam. 4 Slot size .020 from 230 ft. to 270 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No *To what depth?* 20 ft.

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name Berkeley

Type: Sqpm H.P. 3/4

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 210 ft. below top of well Date 5-10-16

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 5 gal./min. with stem set at 270 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date 5-10-16

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE 23929

Unique Ecology Well ID Tag No. BJD-379

Water Right Permit No. _____

Property Owner Name Alisha Crowell

Well Street Address 10609 S. Spotted Rd.

City Cleney County Spokane

Location SW 1/4-1/4 SW 1/4 Sec 21 Twn 24 R 42 E/W ☒ or WWM ☐

(s, t, r Still REQUIRED)

Lat/Long Lat Deg ____ Lat Min/Sec ____

Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24213.9058

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	1
Cobble	1	5
Basalt medium	5	21
Basalt Gravel	21	30
Sand medium Fine	30	45
Sand w/ Basalt Gravels	45	124
Sand w/ Little gravel	124	152
Granite decomp Soft Tan	152	167
Granite Tan Light	167	244
" " w/ water	244	268
" " Soft	268	280
Shale trap set @ 220		

RECEIVED

JUN 08 2016

Department of Ecology
Eastern Washington Office

Start Date 5-10-16 Completed Date 5-10-16

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Alex Vermillion

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2336

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company Vermillion Pump & Drilling

Address 6, 16516 Temple Rd

City, State, Zip Spokane, WA. 99217

Contractor's Registration No. VERMIPD887CE Date _____

ECY 050-1-20 (Rev 02/10) *If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

WWR 101

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy -- Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Bruce Burris Address W. 1711 8th Ave, Spokane, Wa. 99204

(2) LOCATION OF WELL: County Spokane NW¼ SW¼ Sec 16 T. 24 N., R 42 W.M.

ng and distance from section or subdivision corner 21

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 540 ft. Depth of completed well 540 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 95 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 160 ft. below top of well Date 8/14
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" Air test Approx. " "

Recovery data (time taken is zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

ate of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

9/15/86

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Basalt boulders, cobble, sand	0	20
Basalt cobble, gravel + sand	20	60
Sand + gravel, course	60	90
Granite, tan, decomposed	90	96
Granite, tan, soft	96	360
Granite, tan, med. fractured	360	400
Granite, grey, med., fract.	400	440
Granite, tan, soft	440	490
Granite, grey, med., slightly Fra	490	540

RECEIVED
SEP 15 1986
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 8/12, 19 86 Completed 8/14, 19 86

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J & J Drilling, Inc. (Person, firm, or corporation) (Type or print)

Address S. 5613 Linke Rd, Greenacres Wa.

[Signed] Keith D Jermillion (Well Driller)

License No. 1079 Date 8/26, 19 86

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 102

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Bruce Burris Address W. 1711 8th Ave., Spokane, Wa. 99204

(2) LOCATION OF WELL: County Spokane — NW¼ SW¼ Sec 16 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) 2
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 440 ft. Depth of completed well 440 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 146 ft.
Threaded [ ] " Diam. from ft. to ft.
Welded [X] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 140 ± ft. below top of well Date 2/25
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: 1 gal./min. with ft. drawdown after hrs.
" " " "
" Air test approx. " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

9/15/86

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Basalt cobble + gravel w/sand; course	0	40
Basalt gravel	40	80
Sand + gravel; course	80	160
Granite, tan, soft, fractured	160	310
Granite, extremely hard, grey	310	315
Granite, grey, hard	315	330
Granite grey, med. fractured	330	400
Granite, salt + pepper, med. frac.	400	440

RECEIVED
SEP 15 1986
DEPARTMENT OF ECOLOGY
SPOKANE

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME J + J Drilling, Inc. (Person, firm, or corporation) (Type or print)

Address S. 5613 Linke Rd, Greenacres, Wa

[Signed] Keith D. Vermillion (Well Driller)

License No. 1079 Date 9/15, 19 86

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 103

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

OWNER: Name Glenn Gillson Address P.O. Box 10, Marshall, WA 99202

LOCATION OF WELL: County Spokane — ¼ SW ¼ Sec. 21 T. 24 N., R. 42 W.M.

g and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 240 ft. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 " Diam. from +1 ft. to 210 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level 2300 ft.
Static level 120' ft. below top of well Date 12/31/80
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: 150 gal./min. with ..... ft. drawdown after ..... hrs.
" Estimated "Airlift " " "
" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

e of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand	0	30
Sand, Gravel, & Boulders	30	208
Decomposed Granite w/Water	208	240
No PVC Liner Installed		
8" Drive Shoe Installed		

RECEIVED
JAN 13 1981
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started Dec. 17, 1980 Completed Dec. 31, 1980

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Ponderosa Drilling & Development, Inc.
(Person, firm, or corporation) (Type or print)
Address E. 6010 Broadway, Spokane, WA 99206

[Signed] Truman R. Langton (Well Driller)
Truman R. Langton
License No. 1027 Date Jan. 7, 1981

1/13/81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR104

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W 18460
UNIQUE WELL I.D. #
Water Right Permit No.

OWNER: Name Judeth Ann Crosby Address P O Box 152 Nine Mile Falls, WA 99206

LOCATION OF WELL: County Spokane NW 1/4 SW 1/4 Sec 21 T. 24 N. R 42 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) Spotted Rd., Spokane, WA

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 660 feet. Depth of completed well 660 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from +1 ft. to 106 ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: ½ gal./min. with ft. drawdown after hrs.
"Air test approx. ½ G.P.M." " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Topsoil	0	4
Sand-gravel-dark brn.	4	25
Sand-gravel-brn.	25	100
Granit-soft-tan	100	240
Granit-hard	240	260
Granit-med.-water-½-G.P.M.	260	280
GRanit-soft	280	300
Granit-salt & pepper-hard	300	660

Work Started 5/27/94 19. Completed 6/2/ 19 94

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J DRILLING INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S 5613 Linke Rd. Greenacres, WA 99016

(Signed) (WELL DRILLER) License No. 2038

Contractor's Registration No. JJDRII-177KU Date 6/8/ 19 94

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 060-1-20 (9/93) * * *

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 105

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W-051060

UNIQUE WELL I.D. # AAK-980

Water Right Permit No.

(1) OWNER: Name Stan Horton Address E.5218 Sharp. Spokane, Wa. 99212

LOCATION OF WELL: County Spokane S½, W½ NE 1/4 SW 1/4 Sec 21 T. 24 N., R. 42 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) 1
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 475 feet. Depth of completed well 475 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +1 ft. to 135 ft.
Welded [X] Liner installed [X] Threaded [ ] 4" Diam. from 115 ft. to 475 ft.
" Diam. from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used Saw Cut
SIZE of perforations 1/8 in. by 6 in.
360 perforations from 115 ft. to 475 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 173 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 3 gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Gravel & Boulders	0	36
Sand Fine	36	129
Clay Brown	129	134
Granite Med. Soft	134	230
" Soft	230	236
" Med. Hard	236	272
" Soft	272	279
" Med. Hard	279	358
" Soft	358	366
" Med. Hard	366	372
" Soft	372	377
" Med. Hard	377	424
" Soft	424	427
" Med. Hard	427	457
" Soft	457	459
" Med. Hard	459	475
Aquifer		375

RECEIVED
JUL 25 1994
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work Started 7-14-94 19 Completed 7-16-94 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME SAMS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address N.36809 Conklin Rd. Elk, Wa. 99009

(Signed) David Wines (WELL DRILLER) License No. 2224

David Wines

Contractor's Registration No. SAMSD103L2 Date 7-19 19 94

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 106

WATER WELL REPORT

ECOLOGY Original & I st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)* 500466

X Construction

0 Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT **Notice of Intent No** W206594

unique Ecology Well ID Tag No. BBC-069

Water Right Permit No.

RECEIVED JUL 22 2013 DEPARTMENT OF ECOLOGY EASTERN REGION

Property Owner Name Ken Collins

Well Street Address

City Cheney County: Spokane

L,ocation ___ 1/4-1/4 ___ 1/4 Sec ___ Twit ___ R ___ (EWM) *circle one* WWM

Lat/Long:: (s,t,r still REQUIRED) LatDeg ___ Lat min/sec ___ Long Deg-- Long Min/Sec ___

Tax Parcel No. 24211.9087

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK: Owner's number of well (if more than one)

[X] New Well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

Dimensions: Diameter of well 6" inches, drilled 260' ft.

Depth of completed well 260' ft.

CONSTRUCTION Details

Casing Installed: [ ] Welded [X] Liner installed [ ] Threaded — 6" Diam. from +1.5' Ft to 18.5' Ft; 4" diam. from -5' Ft to 260' ft. Diam. from ___ ft. to ___ Ft

Perforations: [X] Yes [ ] No

Type of perforator used skillsaw

SIZE of Perfs 1/2" in. by 8" in. and no. of perfs 80 from 200' ft. to 250' Ft.

Screens- [ ] Yes [X] No [ ] K-Pac Location

Manufacturer's Name

Type Model No.

Diam. Slot Size from Ft, to Ft

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravelsand

Materials placed from & to ft.

Surface Seal: [X] Yes [ ] No To what depth? 18.5' Ft

Materials used in seal bentonite

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturers Name Franklin

Type: submersible HP 2

WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 192' ft. below top of well Date 9/14/2009

Artesian pressure Lbs. per square inch Date

Artesian water is controlled by (cap,valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? [X] Yes [ ] No If yes, by whom? Driller/VWS

Yield: 25 gal/min. with 0 FT drawdown after four Hrs.

Yield: gal/min. with Ft- drawdown after Hrs

Yield: gal/min. with ft. drawdown after Hrs.

Recovery data taken taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min. with Ft drawdown after Hrs.

Airtest 20-30 gal Min. with stem set at 250' ft. for Hrs.

Artesian flow Gpm. Date

Temperature of water Was a chemical analysis made? [X] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
topsoil	0	1
basalt, broken	1	17
basalt, hard	17	22
basalt, medium, with some fractures	22	70
basalt, highly fractured	70	112
basalt, medium	112	115
basalt, medium, with some fractures	115	143
basalt, soft, with clay	143	175
basalt, fractured	175	196
basalt, highly fractured with water	196	247
basalt, medium	247	260
6" drive shoe installed		

Start Date 9/11/2009 Completed Date 9/11/2009

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well,,and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Alex R. Vermillion

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2336

Drilling Company Vermillion Water Systems, Inc.

Address 5309 North Lynden Road

City, State, Zip Otis Orchards, WA 99027

Contractor s Registration No VermiWSO4206 Date 9/23/2009

If trainee, licensed driller's

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 107

24/42-21E1

Well Number: 24/42-21E1 County: SPO

Owner or Tenant WESTERN POULTRY

Application No. _____ Permit No. _____ Cert. No. _____

Type of Well: DRILLED Date Drilled: JULY, 1968

Depth of Well: 290' Production: 50 GPM

Diameter: 6"

Altitude: 2345

Static Water Level _____ Date _____ Type of Meas: _____

Depth of Casing: 27'

Pump HP: _____

Pump Intake Depth: _____

Use: COMMERCIAL, DOMESTIC

DRILLING CONTRACTOR: SPOKANE DRILLING CO.

MATERIAL	FROM	TO
BASALT GRAVEL & BOULDERS	0	20
BASALT - HARD	20	170
CLAY	170	215
GRANITE - DECOMPOSED, SOFT	215	240
GRANITE - DECOMPOSED, MEDIUM	240	270
GRANITE - BLACK, HARD	270	290
270-280 WATER		
283-285 WATER		

WWR 108

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No

Duane Crisp

(1) OWNER: Name Marshall Address Box 109 Marshall, WA 99020

LOCATION OF WELL: County Spokane — NW ¼ NW ¼ Sec 22 T 24 N., R 42 W.M.

g and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☑ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 107 ft. Depth of completed well 310 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ..." Diam. from .. ft. to .. ft.
Threaded ☐ ..." Diam. from .. ft. to .. ft.
Welded ☐ ..." Diam. from .. ft. to .. ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations .. in. by .. in.
.. perforations from .. ft. to .. ft.
.. perforations from .. ft. to .. ft.
.. perforations from .. ft. to .. ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☐ No ☑ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2350 ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

e of test
B.. test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Existing well	0	243
Basalt Gray Med (water)	243	355
Basalt Gray Hard	255	290
Clay Brown/w Brown silt Med Hammer	290	300
Granate Hard	300	310
Granate Decomposed Med w/clay in spots Brown	310	325
Decomposed Granite w/patches of blue/Gray clay Med	325	350
Reamed 200'		
Airtest 60 GPM		

RECEIVED
SEP 12 1979
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started Aug 4th, 19.. Completed Aug 7, 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME CTS Drilling
(Person, firm, or corporation) (Type or print)

Address W 7724 Luke Spokane WA 9920[illegible]

[Signed] Allen Dodgen
(Well Driller)

License No 1004 Date Aug 21, 19 79

9/12/79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR109

24/42-22A1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Unit Number: 24/42-22A1 County: SPO

Original Tenant: ELBERT WILKE

Application No. _____ Permit No. _____ Cert. No. _____

Type of Well: DRILLED Date Drilled: AUG. 1972

Depth of Well: 175' Production: 15 GPM

Diameter: 6"

Address: 2275

Static Water Level ? Date _____ Type of Meas: _____

Depth of Casing: 20'

Pump HP: _____

Pump Intake Depth: _____

Use: DOMESTIC

Drilling Contractor: SPOKANE DRILLING CO.

Material	From	To
OVERBURDEN	0	2
BASALT	2	10
CLAY	10	40
BASALT - SOFT, BROWN	40	55
BASALT - MEDIUM HARD	55	60
BASALT - HARD	60	68
BASALT - MEDIUM HARD	68	74
BASALT - HARD	74	129
CLAY - HARD	129	161
BASALT - SOFT	161	172
BASALT - MEDIUM HARD, 15 GPM	172	175

WWR 11D

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Gustav W. Albertson Address P.O. Box 80, Marshall, WA 99020

LOCATION OF WELL: County Spokane — ¼ NW ¼ Sec. 22 T. 24 N., R 42E W.M.

Quarter | distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 180 ft. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 38 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2120 ft.
Static level 40 ft. below top of well Date 10/16/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 35 gal./min. with ft. drawdown after hrs.
" Est. Airlift " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

D test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Overburden	0	10
Basalt, Gravel & Sand	10	38
Basalt, Black, Fractured	38	75
Clay, Red, & Gravel	75	82
Clay, White, & Gravel	82	90
Clay, Black	90	93
Clay, White	93	97
Basalt, Black, Fractured, Hard, Water	97	180
180' PVC Liner Installed		
6" Drive Shoe Installed		

RECEIVED
OCT 22 1980
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started October 15 19 80 Completed October 16, 1980

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Ponderosa Drilling & Development, Inc.
(Person, firm, or corporation) (Type or print)

Address E. 6010 Broadway, Spokane, WA 99206

[Signed] Truman R. Langton
Truman Langton (Well Driller)

License No. 1027 Date October 20, 1980

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

10/22/80

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR111

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 056521

UNIQUE WELL I.D. #

Water Right Permit No.

(1) OWNER: Name Howard Roach Address Rt. 2 Box 137 G, Harrison, ID 83833

LOCATION OF WELL: County Spokane NE ¼ NW ¼ Sec. 22 T. 24 N., R. 42E W.M.

(2) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 260 feet. Depth of completed well 260 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 49 ft.
Welded ☒ Liner installed ☒ Threaded ☐ PVC 4 " Diam. from 10 ft. to 260 ft.
" Diam. from ft. to ft.

Perforations: Yes ☒ No ☐ PVC Liner
Type of perforator used
SIZE of perforations 1/8 in. by 7 in.
240 ft. to 260 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 180 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 35 gal./min. with ft. drawdown after hrs.
" ESTEMATED AIRLIFT " " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	2
Clay, Brown, Soft	2	10
Weathered Basalt	10	22
Clay, Brown, Soft	22	60
Weathered Basalt	60	80
Basalt, Black, Medium Hard	80	200
Weathered Broken Basalt, Medium to Soft	200	260
6" Drive Shoe Utilized		
2 - 4" to 6" Formation Packers		

RECEIVED JUN 15 1993 ECOLOGY REGIONAL OFFICE

Work started 6-3-93 19. Completed 6-4-93 19

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Ponderosa Drilling & Development, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address E. 6010 Broadway, Spokane, WA 99212
(Signed) Brad Forman (WELL DRILLER) License No. 2100
Contractor's Registration No. PO-ND-EI*248JE (Brad Forman) Date June 9 19 93

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 112

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W100551

UNIQUE WELL I.D. # ACV-919

Water Right Permit No. _____

OWNER: Name Jay Horton Address S.9716 Gardner Rd. Cheney, Wa. 99004

(2) LOCATION OF WELL: County Spokane NW 1/4 1/4 Sec 22 T. 24 N., R 42 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 356 feet. Depth of completed well 356 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 60'6" ft.
Welded [X] 4" Diam. from 46 ft. to 356 ft.
Liner installed [X]
Threaded [ ] " Diam. from _____ ft. to _____ ft.

Perforations: Yes [X] No [ ]
Type of perforator used Saw
SIZE of perforations 1/8 in. by 6 in.
310 perforations from 46 ft. to 356 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18# ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 134 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 40 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL		FROM	TO
Basalt	Broken	0	9
Sand		9	58
Clay	Brown	58	60
Basalt	Med. Hard	60	198
"	Soft	198	212
"	Hard	212	351
"	Soft	351	352
"	Hard	352	356
Aquifers	212' 351'		

Work Started 8-6 19 98 Completed 8-7 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME SAMS DRILLING Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address N.36009 Conklin Rd. Elk, Wa. 99009

(Signed) David Wines (WELL DRILLER) License No. 2224

Contractor's Registration No. SAMSDI*022JZ Date 8-14 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * 1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR113

WATER WELL REPORT

ECOLOGY Original & 1st copy Ecology 2nd copy owner 3rd copy driller

Construction/Decommission (x in circle)
- [X] Construction
- [ ] Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* 144096

CURRENT Notice of Intent No W174277

Unique Ecology Well ID Tag No AHJ713

Water Right Permit No

Property Owner Name Jay Horton

Well Street Address 9716 S. Gardner

City Cheney County Spokane

Location ___1/4 1/4 NW 1/4 Sec 22 Twn 24N R 42E EWM or WWM *circle one*

Lat/Long (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No

PROPOSED USE [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK Owner's number of well (if more than one)
[X] New Well [ ] Reconditioned *Method* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS Diameter of well 6 inches drilled 300 ft
Depth of completed well 300 ft

CONSTRUCTION DETAILS
Casing Installed: [X] Welded 6 Diam from +1 ft to 132 ft
[X] Liner installed 4 Diam from 7 ft to 300 ft
[ ] Threaded ____ Diam from ____ ft to ____ ft

Perforations [X] Yes [ ] No
Type of perforator used Spade Bit
SIZE of perfs 3/8 in by ____ in and no of perfs ____ from 200 ft to 300 ft

Screens [ ] Yes [X] No [ ] K Pac Location
Manufacturer's Name
Type Model No
Diam ____ Slot Size ____ from ____ ft to ____ ft
Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed [ ] Yes [X] No [ ] Size of gravel/sand
Materials placed from ____ ft to ____ ft

Surface Seal [X] Yes [ ] No To what depth? 18+ ft
Materials used in seal Bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

PUMP Manufacturer's Name
Type HP

WATER LEVELS Land surface elevation above mean sea level ____ ft
Static level 140 ft below top of well Date 9/12/03
Artesian pressure ____ lbs per square inch Date
Artesian water is controlled by (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes by whom?
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test ____ gal/min with ____ ft drawdown after ____ hrs
Airtest 100+ gal/min with stem set at ____ ft for ____ hrs
Artesian flow ____ g p m Date
Temperature of water ____ Was a chemical analysis made? [ ] Yes [X] No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Basalt, Cobble w/ Sand	0	4
Sand & Gravel	4	16
Basalt, Broken	16	27
Basalt Boulder	27	29
Sand w/ Basalt Cobble	29	102
Sand, Coarse	102	121
Basalt, Soft	121	127
Basalt, Medium w/	127	152
Fractures		
Shale, Brown w/ Basalt	152	160
Fractures		
Basalt, Fractured -	160	162
Water 6gpm		
Basalt, Medium w/	162	235
Fractures		
Shale, Black & Medium	235	239
Basalt, Medium w/	239	253
Fractures		
Basalt, Fractured -	253	254
Water 4gpm		
Basalt, Medium w/	254	288
Fractures		
Basalt, Highly	288	290
Fractured - WAter 90+		
gpm		
Shale, Grey & Medium	290	300

Start Date 9/9/03 Completed Date 9/12/03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Brian Mosset

Drilling Company J & J Drilling, Inc

Driller/Engineer/Trainee Signature Brian T. Mosset

Address S. 5613 Linke Rd

Driller or Trainee License No 2139

City State Zip Greenacres, WA 99016

If trainee, licensed driller's Signature and License no

JAN 2 8 2005

Contractor's Registration No JJDRII-177KJ Date 9/22/03

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR114

Please print, sign and return to the Department of Ecology

158835

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. WE02234

Unique Ecology Well ID Tag No. AKM030

Water Right Permit No. _____

Property Owner Name Jeremy & Becky Thompson

Well Street Address Gardner Road

City Spokane **County** Spokane

Location ___ 1/4-1/4 NW 1/4 Sec 22 Twn 24 R 42 EWM or WWM ☑ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 24225.9054

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 260 ft. Depth of completed well 260 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 99 ft.

☑ Liner installed 4 " Diam. from 6 ft. to 260 ft.

☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☑ Yes ☐ No

Type of perforator used 3/8" Spade Bit

SIZE of perfs ____ in. by ____ in. and no of perfs ____ from 200 ft. to 260 ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 57 ft. below top of well Date 9/17/04

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs

Airtest 15 gal./min. with stem set at _____ ft. for _____ hrs

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Sand w/ Basalt Cobble	0	21
Broken Basalt w/ Sand	21	29
Basalt Boulder	29	31
Broken Basalt w/ Sand	31	44
Clay, White w/ Sand Strips	44	58
Granite, Soft & Decomposed	58	94
Granite, Medium to Soft	94	145
Granite, Medium w/ Fractures - Water 1gpm	145	215
Granite, Broken - Water 12gpm	215	231
Granite, Medium	231	245
Granite, Fractured - Water 2gpm	245	248
Granite, Medium	248	260

NOV 12 2004

Start Date 9/16/04 Completed Date 9/17/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset

Driller/Engineer/Trainee Signature Brian T. Mosset

Driller or trainee License No. 2139

Drilling Company J & J Drilling, Inc.

Address S. 5613 Linke Rd.

City, State, Zip Greenacres, WA 99016

Contractor's Registration No JJDRIL-177KU Date 9/24/04

IF TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 115
Cp. 1 of 4)
24/42-22R

WELL No. 1

Well Number: 24/42-22R County: SPO

Owner or Tenant L.K. HARDING (VALLEY OF THE HORSES SUBDIVISION)

Application No. 12471 Permit No. _____ Cert. No. _____

Type of Well: DRILLED Date Drilled: MARCH, 1973

Depth of Well: 246 Production: 42 GPM

Diameter: 6" DD. 22' @ 6 HRS. OPEN DISCHG.

Altitude: 2300

Static Water Level 196 (EL: 2104) Date DEC 73 Type of Meas: _____

Depth of Casing: _____

Pump HP: 3 SINGLE PHASE 3450 SUBMERSIBLE

Pump Intake Depth: _____

Use: _____

DRILLING CONTRACTOR: _____

MATERIAL	FROM	TO
OVERBURDEN	0	15.9
BASALT	15.9	167
SHALE-BROWN	167	192
BASALT-FRACTURED	192	220
BASALT-	220	246

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Disclaimer: This Well Log is 'As Is' with NO Warranty of Any Kind. Well Log WWR.115. (p. 2 of 4) 1)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

ART FRANKE PUMP SALES
Route 4 Spokane, Wa.

Big Bend Land Co.
W. 1507 - 4th
Spokane, Wa.

Re: Well test on two wells
Site - Marshall Addition

#1 Well 24/42-22 R
Depth 246'
Casing 6"
Static 196'
Pump - 3HP, Single Phase 3450 Submersible
Size 4" O.D.
Pipe 1¼"
6 hr. test @ 42GPM open discharge - clear, no discoloration
Draw down - 22' @ 42GPM

#2 Well
Depth 127'
Casing 6"
Static 28'
Pump - 3/4HP, Single Phase 3450 Submersible
Size 4" O.D.
Pipe 1"
6 hr. test @ 12GPM, clear
Draw down to 111' and held

Art Franke Pump Sales
Route 4 Box 219
Spokane, Wa. 99204

Department of Ecology Well Log Image System

WWR 115 (p. 3 of 4)

24/43-22

WELL LOG

Started	Finished	Customer Name	Size	Depth	
-73	4-6-73	Lloyd K. Harding Well #4 2	6	127	P300???
Tested G.P.M.		Permit No.	Casing 6" 250 wall		

0---5	Overburden	caseing to 11'
5---10	Basalt broken	
10---40	Basalt	
40---52	Broken basalt with serpentine	
52---927	Broken basalt	6--G.P.M. at 40'
		2--G.P.M. at 92'
		2--G.P.M. at 98'

Static H2O 7'

G.P.M. ~~mst~~ air test 10

Total depth 127'

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR115
(1 of 4)

WELL LOG

North Well Lot 1 Block

Started	Finished	Customer Name	Size	Depth	
3-22-73	3-23-73	Lloyd K. Harding Well #1	6"	246	P 300 ??
Tested G.P.M. 30		Permit No.	Casing 6" 250 wall		

0---15.9	overburden	trace H2o C 14°
15.9---151	Basalt	
151----167	Basalt fractured	
167----192	Brown shale	
192----220	Basalt fractured	
226----246	Basalt	

196---10gal H2o
225---20gal H2o

Total depth 246
30 G.P.M. on air test
Blew for 3 hrs.

30 gpm flw

60 gpm
10 hr
pump

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR116

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 380 ft.
Depth of completed well 380 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 37 ft.
☒ Liner installed 4" Diam. from 10 ft. to 380 ft.
☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used Bit
SIZE of perfs 3/8 in. by _____ in. and no. of perfs _____ from 250 ft. to 380 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 152 ft. below top of well Date 11/22/16
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 30 gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE25878

Unique Ecology Well ID Tag No. BJG673

Water Right Permit No. _____

Property Owner Name Lowell and Shelly Guske

Well Street Address West Taylor Road

City Cheney County Spokane

Location SE1/4-1/4 NW1/4 Sec 22 Twn 24N R 42E EWM ☒ Or WWM ☐
(s, t, r Still REQUIRED)

Lat/Long
Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____

Tax parcel No. (Required) 24222.9033

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	1
Clay, brown	1	3
Sand w/ cobble	3	9
Clay, brown w/ sand	9	15
Clay, gray	15	24
Clay, tan	24	31
Basalt, medium	31	46
Basalt, medium w/ clay-brown	46	55
Basalt, fractured w/ clay-brown	55	67
Basalt, medium w/ clay-brown	67	91
Clay, brown	91	106
Clay, dark brown	106	117
Basalt, medium	117	166
Basalt, medium to hard w/ fractures	166	269
(WB 2 GPM)		
Basalt, medium to soft w/ fractures	269	337
(WB 4 GPM)		
Basalt, fractured (WB 24 GPM)	337	350
Basalt, medium	350	380
Recommended pump set at 360-370 ft		

RECEIVED
DEC 15 2016
Department of Ecology
Eastern Washington Office

Start Date 11/18/16 Completed Date 11/22/16

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) David Primmer
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 3153
IF TRAINEE: Driller's License No:
Driller's Signature:

Drilling Company J & J Well Drilling, Inc.
Address 13011 E. Palouse Hwy
City, State, Zip Valleyford , WA, 99036
Contractor's Registration No. JJWELJW843DS Date 11/22/2016

ECY 050-1-20 (Rev 02-2010) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

WWR117

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name PAUL J. DEHNER (SHIRLEY I) Address E. 2429 - 35TH Ave. SPOKANE

(2) LOCATION OF WELL: County SPOKANE, WASHINGTON NE ¼ N.W. ¼ Sec 22 T 24 N., R 42 E W.M

Bearing and distance from section or subdivision corner SOUTH 330 FEET OF THE NORTH 900 FT

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [X] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 193 ft. Depth of completed well 193 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 16 ft.
Threaded [ ] ..... " Diam. from ..... ft. to ..... ft.
Welded [X] ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal CLAY
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name MYERS SUPPA
Type: SUBMERSIBLE H.P. ½

(8) WATER LEVELS: Land-surface elevation above mean sea level. 2300 ft.
Static level 41 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by .....
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 10 gal./min. with 90 ft. drawdown after 3 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Top Soil	0	3
Basalt, Broken Brown	3	11
Basalt, hard Blue	11	16
Basalt, Decomposed	16	19
Basalt, hard Grey	19	69
Basalt, hard Black	69	140
Basalt, Decomposed	140	143
Basalt, hard Blue	143	160
Basalt, Broken Bzlt	160	193

RECEIVED
JUN 10 1974
DEPARTMENT OF ECOLOGY
SPOKANE OFFICE

Work started 5/18, 19 74. Completed 5/22, 19 74

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME [illegible] (Person, firm, or corporation) (Type or print)

Address [illegible]

[Signed] [illegible] (Well Driller)

License No. 0101 Date 6/12, 19 74

S. F. No. 7356—OS—(Rev. 4-71). 5/13/74 (USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 118

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) **OWNER:** Name PECK TURNER Address .....

(2) **LOCATION OF WELL:** County Spokane NW ¼ NW ¼ Sec. 22 T. 24 N., R. 42 W.M.
ring and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 125 ft. Depth of completed well 115 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from 1 ft. to 109 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name JOHNSON
Type STAINLESS Model No. .....
Diam. 6 Slot size 020 from 110 ft. to 115 ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) **PUMP:** Manufacturer's Name .....
Type: ..... H.P. .....

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .....
Static level 95 ft. below top of well Date 5/13/83
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
...er test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG:**
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
TOP SOIL	0	3
SAND, GRAVEL, BOULDERS &	3	90
SOME CLAY (BROWN)	90	125
SAND & SOME GRAVEL		
Est 10-15 GPM		

JUN 5 1983
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

[redacted]

Work started 5/10/ 19 83 Completed 5/13 19 83

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME BERAN DRILLING INC.
(Person, firm, or corporation) (Type or print)

Address BOX BENTON CITY, WASH.

[Signed] David K. Beran
(Well Driller)

License No. 0291 Date 5/13/ 19 83

6/6/83

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 119

274611

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 300 ft. Depth of completed well 300 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 33'6 ft.

☒ Liner installed 4" Diam. from _ ft. to 300 ft.

☐ Threaded _____" Diam. From _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used bit

SIZE of perfs 3/8 in. by _____ in. and no. of perfs _____ from 240 ft. to 300 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 80 ft. below top of well Date 9/14/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 150+ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE07345

Unique Ecology Well ID Tag No. BAC591

Water Right Permit No. _____

Property Owner Name Peter Dragnya

Well Street Address Gardner Road

City Spokane County Spokane

Location 1/4-1/4 NW1/4 Sec 22 Twn 24N R 42E **(s, t, r Still REQUIRED)** EWM ☐ Or WWM ☐

Lat/Long Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. (Required) 24222.9016

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Basalt Cobble & Boulders	0	9
Basalt, Highly Fractured	9	21
Basalt, Medium w/ Fractures	21	78
Shale, Brown & Fractured	78	80
w/ Some Sand		
Shale, Black & Hard	80	83
Basalt, Fractured	83	85
Basalt, Highly Fractured	85	118
w/ Shale, Green, Perched		
Water		
Basalt, Medium	118	131
Basalt, Hard	131	160
Basalt, Fractured -	160	161
Water 1gpm		
Basalt, Very Hard	161	192
Shale, Grey & Hard	192	201
Basalt, Medium w/ Fractures	201	290
Basalt, Highly Fractured	290	293
Water 150+gpm		
Basalt, Hard	293	300
Recommended pump depth is		
280 feet.		

RECEIVED
OCT 29 2007
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 9/12/07 Completed Date 9/14/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature Don Anderson

Driller or trainee License No. 1447

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres , WA, 99016

Contractor's Registration No. JJDRII-177KU Date 9/20/07

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 120

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 8561

Water Right Permit No. _____

) OWNER: Name Stan Horton Address P.O.Box 3384, Spokane, Wa, 99220

LOCATION OF WELL: County Spokane ¼ NW ¼ Sec. 22 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 175 feet. Depth of completed well 175 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 170 ft. Welded ☒ Liner installed ☐ Threaded ☐

_____ " Diam. from _____ ft. to _____ ft.

_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☐

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☒ No ☐ Manufacturer's Name Johnson

Type Stainless steel Model No. _____

Diam. _____ Slot size 40 from 170 ft. to 175 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.

Material used in seal Cement & bentonite

Did any strata contain unusable water? Yes ☐ No ☐

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 140 ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow 20 _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Topsoil	0	1
Sand, gravel & boulders	1	10
Soft Br. clay	10	12
Sand & clay mix	12	16
Br. sand	16	18
Broken basalt	18	19
Br. sand & gravel	19	38
Br. soft clay	38	39
Br. sand & gravel	39	60
Broken basalt	60	61
Br. sand & gravel	61	122
Broken basalt	122	124
Coarse br. sand	124	167
" " " and basalt mix	167	175

RECEIVED
NOV 30 1988
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 9/26 19. Completed 9/29 19 88

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME SAMS DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address N.36009 Conklin Rd. Elk, WA 99009

(Signed) _____ (WELL DRILLER) License No. 1294

Contractor's Registration No. 223-02 SA-MS*RD Date 11/18 19 88

345ME

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 121

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name Vly. of the Homes Water Dist. Address [illegible] Veney, Wa. 91

(2) LOCATION OF WELL: County Spokane — ¼ ¼ Sec. 22 T. 24 N., R. 42E W.M.
ng and distance from section or subdivision corner 4 mi north of Hartmer on into Rd.

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☒ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 293 ft. Depth of completed well 293 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ..." Diam. from ... ft. to ... ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☐ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type ... Model No.
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? ... ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ... Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: ... H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2180 ft. 2300
Static level 60 ft. below top of well Date 1/20/81
Artesian pressure ... lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Type of test
Bailer test 20–25 gal./min. with ... ft. drawdown after 3 hrs.
Artesian flow ... g.p.m. Date
Temperature of water 51 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
original well was 127 ft. deep.		
hard basalt	127	196
lutah sediments brown/ black some old wood	196	203
fractured grey basalt	203	245
grey basalt some fractures old basalt somewhat decomposed	245	285
hard black basalt	285	293

RECEIVED
JAN 1981
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 1/15 19 81 Completed 1/20 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Acme Drilling Co. Inc.
(Person, firm, or corporation) (Type or print)

Address Rt. 1 Box 185 Deer Park, Wn. 99006

[Signed] Ron S Kennedy
(Well Driller)

License No. 0712 Date 1/21 19 80

5/15/81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 122

WELL LOG

Started	Finished	Customer Name	Size	Depth	
-73	4-6-73	Lloyd K. Harding Well #2	6	127	P300PT
Tested G.P.M.		Permit No.	Casing 6" 250 wall		

0---5	Overburden	caseing to 11'
5---10	Basalt broken	
10---40	Basalt	
40---52	Broken basalt with serpentine	
52---927	Broken basalt	6--G.P.M. at 40'
		2--G.P.M. at 92'
		2--G.P.M. at 98'

Static H2O 7'

G.P.M. ~~mst~~ air test 10

Total depth 127'

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR123
(p.1 of 2)

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 194366
- (X) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT
Notice of Intent No. W206467

Unique Ecology Well ID Tag No. ALR857

Water Right Permit No.

Property Owner Name Randall Gillingham

Well Street Address Gardner Rd.

City N/A County: Spokane

Location ___1/4- 1/4 SW 1/4 Sec 22 Twn 24 R 42 (EWM) or WWM

Lat/Long: (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. 24223.9036

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK: Owner's number of well (if more than one)
[X] New Well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 80 ft.
Depth of completed well 80 ft.

CONSTRUCTION DETAILS
Casing [X] Welded 6 " Diam. from +1 ft. to 79 ft.
Installed: [ ] Liner installed ____ " Diam. from ____ ft. to ____ ft.
[ ] Threaded ____ " Diam. from ____ ft. to ____ ft.

Perforations: [ ] Yes [X] No
Type of perforator used
SIZE of perfs ___in. by ___in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: [ ] Yes [X] No [ ] K-Pac Location
Manufacturer's Name
Type Model No.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand
Materials placed from ____ ft. to ____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 20+ ft
Materials used in seal Bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name
Type H.P.

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 0 ft. below top of well Date
Artesian pressure ____ lbs per square inch Date
Artesian water is controlled by (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? [ ] Yes [ ] No If yes, by whom?
Yield ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 0 gal./min with stem set at 80 ft. for ____ hrs.
Artesian flow ____ g.p.m. Date
Temperature of water Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Sandy Topsoil	0	1
Brn.Sand,Gravel,Cobbles w/ clay strips	1	80

RECEIVED
MAY - 1 2006
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 12/12/05 Completed Date 12/13/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Benson Carpenter, Drilling Company Carpenter Drilling Co. Inc.

Driller/Engineer/Trainee Signature

Address 8918 N. Forker Rd.

Driller or Trainee License No. 1278

City, State, Zip Spokane, Wa. 99217

If trainee, licensed driller's Signature and License no.

Contractor's Registration No CARPEDCO22JI Date 1/24/06

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 123
(p. 2 of 2)

WATER WELL REPORT

Construction/Decommission ("x" in circle)
☒ Construction
☐ Decommission ORIGINAL CONSTRUCTION Notice of Intent Number W 215567

197776

CURRENT
Notice of Intent No. W 215567
Unique Ecology Well ID Tag No. ALR 857
Water Right Permit No. _____

Property Owner Name RANDALL GILLINGHAM
Well Street Address GARDNER RD.
City NA County: SPOKANE
Location ____ 1/4- 1/4 SW 1/4 Sec 22 Twn 24 R 42 EWM or WWM (circle one)
Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 24223.9036

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☐ New Well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☒ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft.
Depth of completed well 180 ft.

CONSTRUCTION DETAILS:
Casing ☐ Welded ____" Diam. from ____ ft. to ____ ft.
Installed: ☒ Liner installed 4" Diam. from -10 ft. to 240 ft.
☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used SKILL SAW
SIZE of perfs 6 in. by 1/8 in. and no. of perfs 65 from 200 ft. to 240 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No ☐ To what depth? _____ ft.
Materials used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 180 ft. below top of well Date 5-27-06
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 151 gal./min. with stem set at 239 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
SOFT DECOMPOSE GRANITE	60	69
MED/GREY/FRAC/GRANITE	69	140
HARD/GREY/GRANITE	140	189
MED/GREY/FRAC/GRANITE	189	211
BROKEN GRANITE/W/GRAVEL	211	240

RECEIVED
JUN - 6 2006
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5-25-06 Completed Date 5-27-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to the best knowledge and belief.

☐ Driller ☐ Engineer ☐ Trainee Name (Print) JEFF SHARP
Driller/Engineer/Trainee Signature _____
Driller or Trainee License No. 2586

Drilling Company GREEN MT CONST. DRILLING
Address N 18918 GREEN MT LN
City, State, Zip NEWMAN LK WA 99025
Contractor's Registration No. GREENMC002PJ Date _____

If trainee, licensed driller's Signature and License no. _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 124

Start Card No. 056413

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

OWNER: Name Charles F & Clydene Cannon Address 46R Woodrow Ave Vallejo Ca. 94591

LOCATION OF WELL: County Spokane West of Scribner Rd S½ of N½ of NW¼ ¼ ¼ Sec. 27 T. 24 N., R. 42 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) west of Scribner Rd. Marshall Area

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 265 feet. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 19 ft.
Welded [X] PVC 4" Diam. from 5 ft. to 180 ft.
Liner installed [ ]
Threaded [ ] _____ Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [X] No [ ] 4" PVC
Manufacturer's Name _____
Type _____ Model No. _____
Diam. 4" Slot size .012 from 170 ft. to 180 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [X] No [ ] Size of gravel 8/10
Gravel placed from 160 ft. to 180 ft.

Surface seal: Yes [X] No [ ] To what depth? 19 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 45 ft. below top of well Date 11/1/90
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft drawdown after _____ hrs.
" " " " " "
" " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 6 gal./min. with stem set at 175 ft. for 3 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOPSOIL	0	5
BASALT, GREY, DECOMPOSED	5	16
BASALT, BLACK, MED. HARD	16	71
CLAY, BROWN, HARD	71	73
CLAY, GREEN, HARD	73	74
BASALT, BLACK, MED. HARD	74	122
BASALT, BROWN, DECOMPOSED	122	170
BASALT, BLACK GREEN	170	174
SAND, TAN, FINE WATER BEARING (6 GPM)	174	175
CLAY, TAN, MIX WITH QUARTZ GRAVEL, SOFT, MOIST	175	180

RECEIVED
NOV 6 1990

Work started 10/30/90, 19 Completed 11/1/90, 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

NAME Tip Top Waterwell Drilling (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)

Address 5511 Blanchard Rd Elk 99009

(Signed) Anthony Grant (WELL DRILLER) License No 1796

Contractor's Registration No TIPTOWW101JB Date 11-4, 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10-87) 1729-

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 125

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 000180

Water Right Permit No. _____

1) **OWNER:** Name David A. Raczykawski Address Box 809 Air way Heights Spokane WA 99(

/ **LOCATION OF WELL:** County Spokane NE ¼ NW ¼ Sec. 27 T. 24 N., R. 42 W.M

(2a) **STREET ADDDRESS OF WELL** (or nearest address) Cheney Rd.

(3) **PROPOSED USE:** [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [X] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 240 feet. Depth of completed well 240 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 19 ft.
Welded XX
Liner installed [ ]
Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 80 ft below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: ½-1 gal./min. with _____ ft drawdown after _____ hrs.
Estimated airlift " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Basalt, Top soil	0	4
Granite, Hard, Gray	4	15
Basalt broken, Black	15	19
Decomposed Granite, Medium	19	60
Fractured granite, Hard w/water	60	130
Granite w/ Black seams, Hard	130	240

No PVC Liner Installed
lea. 6" Drive shoe utilized

JUN 14

Work started 06/01/88 19. Completed 06/03/88 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME PONDEROSA DRILLING & DEVELOPMENT INC. (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 Broadway Spokane, WA 99212

(Signed) Douglas E. Lane (WELL DRILLER) License No 1030

Contractor's Registration No. PO-ND-EI*248 JE Date 06/03/88 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1 20 (10-87) 1329

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR126

Well Number: 24/42-27 G County: [illegible]

Name of Tenant S. D. CLAY

Application No. _____ Permit No. _____ Cert. No. _____

Type of Well: ~~[illegible]~~ DRILLED Date Drilled: AUGUST 1971

Depth of Well: 385' Production: 3 GPM

Diameter: 6"

Altitude: 2260

Static Water Level 90' (EL: 2170 Date _____ Type of Meas: _____

Depth of Casing: 94'

Pump HP: _____

Pump Intake Depth: _____

Use: DOMESTIC

Drilling Contractor: SPOKANE DRILLING CO.

MATERIAL	FROM	TO
BASALT	0	87
GRANITE - SOFT	87	160
GRANITE - MEDIUM	160	295
GRANITE - SOFT	295	360
GRANITE - MEDIUM	360	385

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR127

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Larry Carpenter Address B1 Medical Lake Wash.

LOCATION OF WELL: County Spokane NW ¼ * ¼ Sec 27 T 24 N., R 42 E.W.M.

ng and distance from section or subdivision corner South ½ of North ½ of NW¼ except W of Scribner Rd & exce

East of RR Right of Way

(2) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☑
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled ..... ft. Depth of completed well 386 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 106' 6" ft.
Threaded ☐ 5" Diam. from 0 ft. to 170 ft.
Welded ☒ PVC" Diam. from 160 ft. to 385 ft.

Perforations: Yes ☒ No ☐
Type of perforator used Hand
SIZE of perforations ¼" in. by 2" in.
perforations from 106' 6" ft. to 170 ft.
perforations from 170 ft. to 385 ft.
perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite & Cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata. .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 40 ft. below top of well Date 6/23/76
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 7-2-76
Bailer test 10 gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water 50° Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Broken Basalt	0	10
Yellow clay	10	21
Brown Clay	21	46
Red & Brown Clay	46	57
Brown Clay	57	93
Broken Basalt	93	100
Firm Basalt	100	103
Basalt	103	106
coase sand	106	126
Decomposed Granite Sand	126	145
clay	145	147
sand & Clay	147	166
Decomposed Granite & Sand	166	185
Coase Sand (Some water)	185	206
Sand	206	245
yellow shale	245	286
coase sand & Green Granite	286	292
shale	292	305
Granite	305	321
shale	321	351
Decomposed Granite	351	359
yellow shale with Brown	359	386

RECEIVED
JUL 23 1976
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 6/16 1976 Completed 6-24 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME American Drilling & Development Co
(Person, firm, or corporation) (Type or print)

Address 2512 Valleyway Spokane

[Signed] Bill E Mercer
(Well Driller)

License No. C-332 Date June 25, 1976

1/23/76

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 128

Fee Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No

(1) OWNER: Name Mildred Mandarino Address Rt.4,Box 656,~~Spangle~~ Spokane,WA.99204

(2) LOCATION OF WELL: County Spokane S½ SW ¼ ¼ Sec. 27 T. 24 N., R. 42E W.M.

ng and distance from section or subdivision corner Tract B

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 325 ft. Depth of completed well 325 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 35 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 25 ft below top of well Date 4/4/86
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? driller
Yield: 12 gal./min. with 275 ft. drawdown after 1 hrs.
" " "
" " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brn silty top soil	0'	2'
Basalt sands & brn silts	2'	10'
Basalt,heav fract,brownish black, hev brn clay sed,med hrd,loose, water 1 GPM	10'	32'
Basalt,occas fract,blk w/brn sed, med hrd	32'	44'
Basalt,heav fract,brownish black, brn sed,med hrd,water 5 GPM	44'	49'
Basalt,occas fract,drk grey,med hrd	49'	112'
Basalt,lite grey,hrd	112'	153'
Basalt,fract,blk,hard grey sed, med hrd	153'	157'
Basalt,lite grey,hrd	157'	163'
Basalt,fract to heav xfract,w/moist yell & grn sed,med hrd	163'	170'
Clay,moist,tan & reddish brn w/hev wood chips,firm	170'	177'
Basalt,fract,drk gray w/hrd brn & grey sed,med hrd	177'	256'
Basalt,occas fract,drk grey,med hrd	256'	313'
Basalt,fract,blk w/fine brn silty sand,med hrd	313'	317'
Clay,moist,orange & tan w/seams of fine grey & brn sands,water 2GPM	317'	319'
Sand,fine,brownish orange,water 8 GPM	319'	320'
Clay,moist,drk brn,firm	320'	325'

APR 28 1986

Work started March 28, 1986 Completed April 4, 1986

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO. (Person, firm, or corporation) (Type or print)

Address P.O.BOX 4341, SPOKANE,WA. 99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0544 Date April 25, 1986

4/25/86

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 129

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name RICHARD J. NORBERT Address RT. 1 Box 103 CHENEY, WA 99004

(2) LOCATION OF WELL: County SPOKANE — ¼ ¼ Sec. 27 T. 24 N., R. 42 E W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 82 ft. Depth of completed well 82 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 22 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☐ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☒ No ☐ 10 4" P.V.C. LINER
Type of perforator used SKILL SAW
SIZE of perforations ⅛ in. by 7 in.
50 perforations from 25 ft. to 30 ft.
100 perforations from 62 ft. to 82 ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? SURFACE Depth of strata 13'-17'
Method of sealing strata off CASING

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ~2300 ft.
Static level 10 ft. below top of well Date 9-10-84
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a AIR test made? Yes ☒ No ☐ If yes, by whom? DRILLER
Yield: 30 gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 30 gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date 9-10-84
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

10/12/84 (USE ADDITIONAL SHEETS IF NECESSARY)

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
CLAY - BASALT MIX	0'	1'
BASALT (BLACK - MED)	1'	13'
BASALT (BROWN - BROKEN) WATER BEARING	13'	17'
BASALT (BLACK - MED)	17'	28'
BASALT (BROWN - FRACTURED) 15 G.P.M.	28'	32'
CLAY (GRAY - SOFT)	32'	41'
BASALT (BLACK - MED)	41'	65'
BASALT (BLACK - SOFT) 15 G.P.M.	65'	82'

RECEIVED
OCT 12 1984
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 9-10 19 84 Completed 9-10 19 84

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ALLBERY DRILLING CORP.
(Person, firm, or corporation) (Type or print)

Address 6227 N. CANNON SPOKANE, WA 99205

[Signed] Steven L Allbery
(Well Driller)

License No. 4 Date 9-15 19 84

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

WWR 130
Application No. .....
Permit No. .....

(1) OWNER: Name RICK WARRINGTON Address RT 3 CHENEY (W)

(2) LOCATION OF WELL: County SPOKANE — ¼ ¼ Sec 27 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 73 ft. Depth of completed well 73 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 11 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 11 ft.
Material used in seal PORTLAND CLAY
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 22 ft. below top of well Date 7-1-76
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	400	X	35		

Date of test .....
er test ..... gal./min. with ..... ft. drawdown after ..... hrs.
esian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
TOP BURDEN	0	11
BLUE BROWN	10	21
BASALT BROWN WET WATER BEARING	21	73

Work started 7-11, 19 76 Completed 7-11, 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ..... (Person, firm, or corporation) (Type or print)
Address .....
[Signed] ..... (Well Driller)
License No. 0572 Date 7-11, 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71)
ECY 070 28

2/22/16

WWR 131

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) **OWNER:** Name Art Madland Address Route 2, Box 254D, Cheney, Wa. 99004

(2) **LOCATION OF WELL:** County Spokane — ¼ ¼ Sec. 28 T 24 N. R 42E W.M.

Bearing and distance from section or subdivision corner Tract G SW¼

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 295 ft. Depth of completed well 295 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 20 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 2246 ft.
Static level 146 ft. below top of well Date 8/22/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? driller
Yield: 75 gal./min. with 149 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
er test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG:**

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Basalt rks,brn silts,loose	10'	11'
Basalt,fract,drk gray,m hrd	11'	18'
Basalt,occas fract,m hrd	18'	28'
Shale,drk gray,m hrd	28'	38'
Basalt,fract,drk gray w/tan sed,m hrd	38'	46'
Basalt,occas fract,drk gray,m hrd to hrd	46'	112'
Basalt,fract,drk gray w/rusty brn sed,m hrd,seepage	112'	118'
Basalt,drk gray,m hrd	118'	124'
Basalt,heav fract,drk gray w/hev tan sed,hon comb,m hrd,loose	124'	139'
Basalt,drk gray,m hrd	139'	142'
Basalt,fract,drk gray w/hrd brn sed,m hrd	142'	171'
Basalt,fract,drk gray w/olive grn sed,m hrd,water 1 GPM	171'	176'
Basalt,drk gray,m hrd	176'	185'
Basalt,heav fract,blk w/hrd tan sed, m hrd,water 2 GPM	185'	187'
Basalt,occas fract,drk gray,m hrd to hrd	187'	236'
Basalt,fract,blk,m hrd,water 1 GPM	236'	238'
Basalt, occas fract,drk gray, m hrd to hrd	238'	283'
Basalt,heav fract,blk,hon comb,w/ yell sed,m hrd,lpose,water 55 GPM	283'	284'
Basalt,drk gray,m hrd	284'	291'
Basalt,heav fract,drk gray,m hrd, water 15 GPM	291'	293'
Basalt,occas fract,drk gray,m hrd	293'	295'

Work started Aug. 20 19 80 Completed Aug 22 19 80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp,Box 4341,Spokane,Wa,99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0544 Date 8/27 19 80

9/5/80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 132
(P. 1 of 3)

Start Card No 255630

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Ken Wilk Address W. 4115 4th Spok. Wa

LOCATION OF WELL: County Spokane NW¼ NE¼ Sec. 22 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Scribner Rd Mayton Wa.

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 400 feet. Depth of completed well 400 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 99 ft.
Welded [X] Liner installed [X] Threaded [ ] 4" Diam. from 6 ft. to 400 ft.
_____" Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20' ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 95 ft. below top of well Date 9/19/90
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: 6 gal./min. with _____ ft. drawdown after _____ hrs.
APPROX. BY AIRTEST " " " "
" " " " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOPSOIL	0	1
BRN. CLAY - SAND	1	7
BRN. CLAY & GRAVEL	7	9
BASALT - HARD	9	14
BASALT - FRAG. W/CLAY	14	25
SANDY GRAY CLAY - SOFT	25	75
DECOMP. GRANITE - SOFT	75	90
GRANITE - MED. FRACTS.	90	115
DECOMP. GRANITE - SOFT	115	125
GRANITE - MED., FRACTS.	125	150
GRANITE - HARD	150	275
GRANITE - MED., FRACTS. 60 GPM @ 300'-320'	275	340
GRANITE - HARD	340	400

Work started 9/17 19. Completed 9/19 1990

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Jay C. Williams Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 5613 S Flint Rd. Edwonsburg WA 99214

(Signed) _____ (WELL DRILLER) License No. 1278

Contractor's Registration No. JAMEFI 122KA Date 9/23 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10-87) 1729

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 132
(P.2 of 3)

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 055630

Water Right Permit No.

Rick Grain

(1) OWNER: Name Ken Wilk Address W. 2115 ??? Spok. WA

LOCATION OF WELL: County Spokane NW¼ NE¼ Sec. 25 T. 24 N., R. 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Scribner Rd Mead WA

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 400 feet. Depth of completed well 400 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 99 ft.
Welded ☒ Liner installed ☒ Threaded ☐ 4" Diam. from 6 ft. to 400 ft.
Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 95 ft below top of well Date 9/19/90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: 6 gal./min. with ft drawdown after hrs.
APPROX BY ARTEST " " "
" " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min with ft drawdown after hrs.
Airtest gal./min with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOPSOIL	0	1
BRN. CLAY - SOFT	1	7
BRN. CLAY & GRAVEL	7	9
BASALT - HARD	9	14
BASALT - FRACT. W/CLAY	14	25
SANDY CLAY CLAY - SOFT	25	75
DECOMP. GRANITE - SOFT	75	90
GRANITE - MED. FRACTS.	90	115
DECOMP GRANITE - SOFT	115	125
GRANITE - MED., FRACTS.	125	150
GRANITE - HARD	150	275
GRANITE - MED., FRACTS.	275	340
WBRM @ 300' - 320'		
GRANITE - HARD	340	400

RECEIVED
OCT 22 2011
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 9/17 19. Completed 9/19 1990

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J McGillis Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 5213 S Flint Rd. Spokane WA 99224

(Signed) [signature] (WELL DRILLER) License No. 1278

Contractor's Registration No. JJMCGIJ122KA Date 9/23 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 132
(p. 3 of 3)

437997

Northwest Hydro-Fracturing
Increasing Water Well Yield

RECEIVED
OCT 20 2011
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Original Notice if Intent 055630
TAG No. APC 824
Fracturing Notice WE13741
Parcel No. 24281.9033
Latitude 47 33 2
Longitude 117 29 53

FRACTURING LOG

1. OWNER NAME Richard Graham
ADDRESS: PO Box 93 Marshall, WA 99020

TOTAL DEPTH : 400 DIAMETER: 6"

2. LOCATION OF WELL: COUNTY Spokane
NE ¼ NE ¼ SEC. 28 TWP 24N R 42E

3. TYPE OF WORK: Hydrofracturing Date 10-10-2011

4. WELL TESTS:

Yield: gal./min. with ft. drawdown after Hrs.
Pre-frac:

Post-frac:

5. HYDROFRACTURING LOG:

105' - 168'
168' - 231'
231' - 294'
294' - 357'
357' - 400'

6. FRACTURER'S STATEMENT:

This well was hydro-fractured under my jurisdiction and this report is true to the best of my knowledge and belief.

Company Name: **Northwest Hydro-Fracturing**
Address 13812 W Lincoln RD Spokane, WA 99224
Signed
License No. 0028 Date 10-20-11

WWR 133

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. [redacted]

Water Right Permit No. _____

(1) **OWNER:** Name Mark Eckerich Address Route 4, Box 252, Cheney, WA 99004

(2) **LOCATION OF WELL:** County Spokane portion of the west ½ ¼ ¼ Sec 28 T. 24 N., R. 42 W.M.

(2a) **STREET ADDDRESS OF WELL** (or nearest address) parcel 28425-9041

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 180 feet. Depth of completed well 170 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 4 " Diam. from 30 ft. to 150 ft.
Welded ☒ _____ " Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☐
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name [redacted]
Type _____ Model No. _____
Diam. 4 Slot size 10 from 150 ft. to 180 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level _____ ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand & clay material appeared to be larger towards bottom of hole	150	180

RECEIVED
AUG 1 [redacted]
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 7/20 19 88 Completed 7/29 19 88

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Bartholomew Drilling, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address N. 11525 Nine Mile Rd., Nine Mile Falls WA 99026

(Signed) Ken Munden (WELL DRILLER) License No. 971

Contractor's Registration No. BARTHI 24903 Date 7/29/88 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

WWR 134

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Morlan Homes Address 1717 2nd Ave.,Box 97,Cheney,Wa.99004

LOCATION OF WELL: County Spokane —¼ ¼ Sec 28 T.24 N., R.42E W.M.

ng and distance from section or subdivision corner Tract "D" SW ½

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 190 ft. Depth of completed well 190 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 19 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type Model No.
Diam Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2240 ft.
Static level 74 ft. below top of well Date 9/29/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? driller
Yield: 20 gal./min. with 116 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

ate of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brn silty top soil	0'	3'
Broken basalt w/brn silts,loose	3'	9'
Basalt,fract,brn & blk w/tan sed, m hrd	9'	22'
Basalt,heav fract,blk w/rusty brn sed,m hrd,water ½ GPM	22'	24'
Basaltmheav fract,hon comb,w/heav moist brn & gray sed,m hrd to los	24'	34'
Basalt,drk gray,m hrd	34'	38'
Basalt,fract,brn-gray w/brn sed, hon comb,m hrd,water ½ GPM	38'	49'
Basalt,occas fract,drk gray,m hrd	49'	91'
Basalt,fract,hon comb,brn-blk w/gray sed,m hrd,water 1 GPM	91	98'
Basalt,occas fract,drk gray,m hrd	98'	104'
Basalt,fract,hon comb,brn-blk w.heav brn sed,m hrd, water 9 GPM	104'	122'
Basalt,drk gray,m hrd	122'	128'
Basalt,heav fract,blk w/heav gray & tan sed,m hrd to loose,W 6 GPM	128'	135'
Basalt,drk gray,m hrd	135'	143'
Clay,yell w/seams qrtz sand & mica flks,firm,water 1 GPM	143'	148'
Claylayers of ten-yell-rusty brn, occas basalt rks,dry,m hrd	148'	176'
Clay,moist,lite brn& gray,firm	176'	181'
Quartz,heav fract,clear-pink-rusty brn sed & mica flks,loose sluff, water 2 GPM	181'	190'

RECEIVED
OCT 08 1980
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started Sept. 26, 1980 Completed Sept. 29, 1980

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING COMPANY
(Person, firm, or corporation) (Type or print)
Address E. 1606 Sharp,Box 4341,Spokane,Wa.99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0544 Date October 6, 1980

10/8/80

(USE ADDITIONAL SHEETS IF NECESSARY)

FCY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 135

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Terry & Susan Nelson Address Route 3, Box 113 D - Cheney, WA 99021

) LOCATION OF WELL: County Spokane — NW ¼ NE ¼ Sec. 28 T 24 N., R 42E W.M.

ng and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 80' ft. Depth of completed well 80' ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1' ft. to 59' ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2200 ft.
Static level 60' ft. below top of well Date 08/02/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 10 gal./min. with ft drawdown after hrs.
Airlift " "
" "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Top Soil	0	1
Clay & Boulders	1	45
Basalt	45	60
Broken Basalt / Water	60	80
60' of 4" PVC Liner Installed		
6" Drive Shoe Installed		

RECEIVED

Work started 08/02 19 79 Completed 08/02 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Ponderosa Drilling & Development, Inc.
(Person, firm, or corporation) (Type or print)

Address East 6010 Broadway - Spokane, WA 99206

[Signed] Joseph Booth
(Well Driller)

License No. 0564 Date 08/03 19 79

8/10/79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR136

209299

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. WE05706

Unique Ecology Well ID Tag No. APP543

Water Right Permit No. _____

Property Owner Name Todd Rothrock

Well Street Address Scribner Road

City Spokane County Spokane

Location ___ 1/4-1/4 NE 1/4 Sec 28 Twn 24 R 42 EWM or WWM ☒ check one

(Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 280 ft.
Depth of completed well 280 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from +1 ft. to 239 ft.
☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 208 ft. below top of well Date 9/19/06
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Cobble	0	3
Basalt, Hard	3	57
Basalt, Fractured w/ Clay, Brown	57	60
Basalt, Hard	60	70
Basalt, Highly Fractured, Water Perched	70	73
Basalt, Medium	73	77
Basalt, Highly Fractured w/ Clay, Green	77	81
Basalt, Medium	81	98
Basalt, Fractured	98	103
Basalt, Hard	103	112
Basalt, Highly Fractured	112	118
Basalt, Medium	118	122
Basalt, Slightly Fractured w/ Shale, Brown	122	198
Basalt, Very Hard	198	211
Basalt, Highly Fractured	211	213
Basalt, Very Hard	213	218
Basalt, Fractured	218	220
Basalt, Very Hard	220	225
Basalt, Highly Fractured - Some Loss of	225	230
Circulation		
Basalt, Medium	230	250
Basalt, Fractured - Water 25gpm	250	265
Basalt, Hard	265	270
Shale, Brown and Hard	270	280
Set pump 250 feet from top of steel casing.		

NOV 27 2006

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 9/15/06 Completed Date 9/19/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☐ Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature Don Anderson

Driller or trainee License No. 1447

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres, WA 99016

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Contractor's Registration No. JJDRII-177KU Date 9/27/06

ECY 050-1-20 (Rev 3/05)

Ecology is an Equal Opportunity Employer.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 137

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

Gene Ball

(1) OWNER: Name Gene Ball Address Rt 2 Box 118 Otis Orchards, WA 99027

(2) LOCATION OF WELL: County Spokane — NE¼ NW¼ Sec 28 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 180 ft. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from -1½ ft. to 184 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☐ ." Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used PVC 4"
SIZE of perforations 11/32 in. by Holes
50 perforations from 0 ft. to 20 ft.
50 perforations from 20 ft. to 40 ft.
0 perforations from 40 ft. to 120 ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18½ ft.
Material used in seal Puddling Clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2200 ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Overburden Soil	0	2
Basalt Gray Med (Water)	2	15
Basalt Gray Hard	15	85
Basalt + Clay Gray + Green Med + Soft (Water)	85	132
Basalt Gray Med	132	178
Clay Brown Soft	178	180

Artest 10 GPM

RECEIVED
AUG 20 1979
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started July 5 19 79 Completed July 6 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & S Drilling
(Person, firm, or corporation) (Type or print)

Address 6224 Lake Blvd Spokane, WA 99208

[Signed] Allen Dodgen
(Well Driller)

License No. 1004 Date July 30, 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 138

File Original and First Copy with Department of Ecology
Second Copy -- Owner's Copy
Third Copy -- Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name James Dobbins Address Cheney

(2) LOCATION OF WELL: County Spokane SW ¼ NW ¼ Sec. 28 T. 24 N., R. 42 E W.M.
ng and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS: 28' of Casing 195' of 4" PVC
Casing installed: 6 " Diam. from +1 ft. to 27 ft.
Threaded ☐ PVC 4 " Diam. from 5 ft. to 200 ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18½ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2300 ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

ate of test
Bailer test gal./min with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Overburden	0	12
Basalt Med Soft Gray	12	21
Clay Soft Brown	21	27
Basalt Med Gray	27	54
Basalt Hard Gray	54	80
Basalt Med Soft Gray	80	85
Basalt Med Gray	85	95
Basalt Med Soft Gray	95	105
Basalt Med [redacted] Gray	105	120
Basalt Med Soft Gray	120	130
Basalt Med [redacted] Gray	130	152
Clay Soft Brown	152	181
Basalt Med Gray	181	185
Basalt Med Gray Fractured W/water	185	198
Basalt Med Hard Gray	198	200
RECEIVED		
Air test at 200 PM		

Work started Sept 6 19 78 Completed Sept 11 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & S Drilling, Inc.
(Person, firm, or corporation) (Type or print)

Address RT 3 Box 43 Cheney, Wa 99004

[Signed] Ron E Brown
(Well Driller)

License No. 0773 Date Sept 18, 1978

(USE ADDITIONAL SHEETS IF NECESSARY)

2/1/79

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 139

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Jerry Shumaker Address E. 14710 Rockwell, Spokane, Wa. 99216

(2) LOCATION OF WELL: County Spokane SW 1/4 of NE 1/4 NW 1/4 Sec 28 T. 24 N., R. 42E W.M

Bearing and distance from section or subdivision corner Tract F

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 325 ft. Depth of completed well 325 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 39 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2280 ft.
Static level 139 ft. below top of well Date 5/22/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a air pump test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 18 to 20 gal./min. with 186 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Brn silty top soil	0'	2'
Basalt, heav fract, brn-blk w/tan sed, m hrd	2'	5'
Basalt, fract, drk grey, m hrd	5'	17'
Shale, lite grey & blue, firm	17'	30'
Basalt, heav fract, blk w/lite grn, moist sed, loose, seepage	30'	34'
Basalt, occas fract, drk grey, m hrd	34'	110'
Basalt, heav fract, brn-grey, hon comb, w/brn & grey moist sed, m hrd, loose	110'	130'
Basalt, occas fract, drk grey, m hrd	130'	142'
Basalt, fract, drk grey w/hrd yell sed, m hrd, water 1 GPM	142'	145'
Basalt, occas fract, drk grey, m hrd to hrd	145'	153'
Shale, hrd, grey	153'	161'
Shale, hrd, drk brn, bad odor	161'	166'
Basalt, fract, blk w/drk brn sed, m hrd, water 2 GPM	166'	169'
Basalt, occas fract, drk grey, m hrd	169'	238'
Basalt, fract, drk grey, m hrd, water 4 GPM	238'	240'
Basalt, drk gret, m hrd	240'	256'
Basalt, fract, drk grey, m hrd, water 4 GPM	256'	257'
Basalt, occas fract, drk grey, m hrd	257'	311'
Basalt, heav fract, blk w/moist grey silty clay, m hrd	311'	317'
Basalt, heav fract, blk w/moist brn sed, m hrd, water 7 GPM	317'	318'
Clay, grey w/fine wht & tan snd mixed, moist, firm	318'	325'

Work started May 16 19 79 Completed May 22 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Box 4341, Spokane, Wa. 9920

[Signed] James J. Zinkgraf
(Well Driller)

License No. 0544 Date May 29 19 79

6/7/79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 140

Spotted Rd.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Morland Address Rt 2 Cheney Wa. 99004

(2) LOCATION OF WELL: County ..... SE ¼ NW ¼ Sec 28 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 200 ft. Depth of completed well 195 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from -1 ft. to +19 ft.
Threaded ☐ PVC 4" Diam. from 15 ft. to 195 ft.
Welded ☒ ..." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☒ (X) No ☐
Type of perforator used Saw
SIZE of perforations ⅛ in. by 6 in.
60 perforations from 175 ft. to 195 ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level 2260 ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Over Burden - Dirt	0	3
Basalt Med - Gray	3	65
Basalt Hard gray	65	143
Basalt Soft Porus Brown	143	170
Decomposed Granit Gray	170	200
WATER at 180 - 190		

Test
Air
GPM
20

Work started 7-3 19 82 Completed 7-6 19 82

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Coffey Corp.
(Person, firm, or corporation) (Type or print)
Address Rt. 4 Box 448 Cheney

[Signed] Ben L Woodard
(Well Driller)

License No. 1157 Date 7 29 82

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 4/12/83

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 141

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 056820

Water Right Permit No. _____

(1) OWNER: Name P.K. Contractors Address P.O. Box 3384, Spokane, WA 99220

LOCATION OF WELL: County Spokane ¼ NW ¼ Sec. 28 T. 24 N., R 42 W.M.

(2) STREET ADDDRESS OF WELL (or nearest address) S 12601 Spotted Rd., Cheney, WA

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 240 feet. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from +1 ft. to 19 ft.
Welded [X] Liner installed [X] Threaded [ ] 4 " Diam. from _____ ft. to 240 ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 70 ft. below top of well Date 8/20/92
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: 40 gal./min with _____ ft drawdown after _____ hrs.
Air test approx. 40-G.P.M.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft drawdown after _____ hrs.
Airtest _____ gal./min with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Clay-w/basalt -cobble	0	7
Basalt-med. w/fracts.	7	37
Basalt-fract. w/caly-tan	37	46
Basalt-fract. w/clay-grey	46	50
Basalt-med. w/fracts.	50	119
Basalt-fract. w/clay	119	126
Basalt-med.	126	158
Basalt-highly fract. w/clay	158	184
Basalt-med.-water bearing 7-G.P.M.	184	203
Basalt-fract. w/clay water bearing 33-G.P.M.	203	222
Basalt-med. w/fracts.	222	240

Work started 8/19/92 19. Completed 8/20/ 1992

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

NAME J & J DRILLING INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S 5613 Linke Rd. Greenacres, WA 99016

(Signed) _____ (WELL DRILLER) License No 1962

Contractor's Registration No. JJDRII-177KU Date 8/20/ 1992

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) 1329

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 142

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name PAT PRENTICE Address E3732 Westwood Chattaroy, Wa 99003

(2) LOCATION OF WELL: County Spokane SW¼ SW¼ NW¼ Sec. 28 T. 24 N., R. 42E W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 276 ft. Depth of completed well 276 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" " Diam. from +2 ft. to 19 ft.
Threaded ☐ " Diam. from ..... ft. to ..... ft.
Welded ☐ " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18½ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2500-2280 ft.
Static level 45 ft. below top of well Date 5-1-78
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
OVERBURDEN	0	12
Med Hard Gray Basalt	12	20
Med BROWN Basalt	20	27
Med Gray Basalt w/water	27	33
Med Gray Basalt + Clay	33	44
Med Hard Gray Basalt	44	110
Med Gray Basalt + Clay w/water	110	130
Med Hard Gray Basalt	130	142
Med Gray Fractured Basalt	142	152
Med Hard Gray Basalt	152	196
Brown Clay	196	210
Med Hard Gray Basalt	210	240
Med Gray Fractured Basalt w/water	240	276

AIR TEST 8 GPM

RECEIVED
MAY 8 - 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 4-26 19 78 Completed 4-28 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C + S Drilling Inc
(Person, firm, or corporation) (Type or print)
Address RT 3 Box 143 Cheney, Wa
[Signed] Ronald C Adams
(Well Driller)
License No. 773 Date May 2, 1978

5/8/78

(USE ADDITIONAL SHEETS IF NECESSARY) Four Lots 7½

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 143

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Wally Pharness Address E 2211 Everett Spokane 99207

LOCATION OF WELL: County Spokane NE ¼ NW ¼ Sec 28 T 24 N., R 42 W.M.

Bearing and distance from section or subdivision corner

(2) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 163 ft. Depth of completed well 160 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 20 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☐
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☐
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2245' ft.
Static level 114 ft. below top of well Date 9-26-78
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 20 gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Over burden.	0	3
Basalt very Hard.	3	65
" Scoria	65	74
" med.	74	114
" scoria.	114	160

Work started 9-19 19 78 Completed 9-26 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Craig Nielsen Drilling (Person, firm, or corporation) (Type or print)

Address Box 772 Deer Park Wa.

[Signed] Leo C. Graham (Well Driller)

License No. 156 Date 10-4 19 78

10/11/78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

WWR 144

Application No. .....

Permit No. .....

(1) OWNER: Name Bill Lovyn Address 119 - 7th Ave. San Francisco, Calif.

(2) LOCATION OF WELL: County Spokane Part NW¼ of NW¼ Sec. 29 T. 24 N., R. 42 E.W.M.

ring and distance from section or subdivision corner

PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: (Owner's number of well (if more than one)) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 205 ft. Depth of completed well 205 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 1 ft. to 21 ft.
Threaded [ ] ..... " Diam. from ..... ft. to ..... ft.
Welded [X] ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Puddling Clay
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? ..... Depth of strata .....
Method of sealing strata off Cover Bore

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? .....
Yield: 7 gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
test ..... gal./min. with ..... ft. drawdown after ..... hrs.
...ian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown Top Soil, Light Brown Broken Granite	0	4
Light Brown Granite With Seams, Hard & Soft	4	85
Black, Some Brown Granite Firm	85	95
Brown Granite with Hard & Soft	95	115
Black, Some Brown Granite Firm	115	157
" " " " " H_2O	157	175
Black Granite Hard	175	182
Brown Firm Granite, Some Black	182	195
Black Granite Hard	195	202
Black Granite Firm, Some Mica	202	205

RECEIVED
MAR ... 1975
...GY
...E

Work started 3-7 19 75 Completed 3-8 19 75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Coeur d'Alene Drilling
(Person, firm, or corporation) (Type or print)

Address P.O. Box 232, Hayden Lake, Idaho

[Signed] ..... (Well Driller)

License No. 214 Date 3-10 19 75

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

3/26/75

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 145

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Billings - Miller Address Rt 2 Cheney Wash.

(2) LOCATION OF WELL: County Spokane NE ¼ SW ¼ Sec. 29 T. 24 N., R. 42 W.M.
SW NE
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 305 ft. Depth of completed well 305 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1½ ft. to 18½ ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18½ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2350 ft.
Static level 10 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Air test @ 13 GPM				

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Overburden	0	10
Granite Soft light brown	10	28
Granite Brown soft like sand	28	32
Granite Med light brown	32	45
Granite Med hard light brown	45	77
Granite soft brown	77	79
Granite Hard light brown &gray	79	90
Granite Med hard brown&gold w/water	90	120
Granite Hard white	120	130
Granite Med Hard white brown	130	145
Granite Med hard white & brown	145	175
Granite Soft Brown & whte like sand	175	182
Granite Med hard white & brown	182	220
Granite Hard white & gray & brown	220	305
STATIC WATER LEVEL 10'		
AIR TEST @ 305' is 13 GPM		

RECEIVED
JUL 25 1977
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started July 19, 19 77 Completed July 21, 19 77

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & S Industries Inc (Person, firm, or corporation) (Type or print)
Address Rt 3 Box 148 Cheney, 99004
[Signed] O.P. Coffey (Well Driller)
License No. 0572 Date 7-26, 19 77

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1 20

3/1/79

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 146

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) **OWNER:** Name Bob Lantz Address N. 2321 Maple 99206

(2) **LOCATION OF WELL:** County Spokane SE ¼ NE ¼ Sec. 29 T. 24 N., R 42E W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 34 ft. Depth of completed well 34 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 33 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 2256 ft.
Static level 11 ft. below top of well Date 9-8-78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 18 gal./min. with 65 ft. drawdown after 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG:**

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation*

MATERIAL	FROM	TO
Brown sand and silt	0	8
Grey fractured basalt	8	31
Grey water bearing fractured bas.	31	34

RECEIVED
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 9-1 19 78 Completed 9-8 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Spokane Drilling Co (Person, firm, or corporation) (Type or print)

Address E. 2710 Garland, Spokane, Wa.

[Signed] (Well Driller)

License No. 408 Date 9-18 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

2/7/79

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Please print, sign and return to the Department of Ecology

WWR 147
158991

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. W181123
Unique Ecology Well ID Tag No. AKM013
Water Right Permit No. _____
Property Owner Name Clinton & Patty Hunt
Well Street Address 11811 S. Andrus Rd
City Cheney **County** Spokane
Location ___ 1/4-1/4 NE 1/4 Sec 29 Twn 24 R 42 EWM ☑ or WWM ☐ circle one
Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 3
☑ New well ☐ Reconditioned ☐ Deepened *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 500 ft.
Depth of completed well 500 ft.

CONSTRUCTION DETAILS
Casing Installed: ☐ Welded 6 " Diam. from +1 ft. to 19 ft.
☑ Liner installed 4 " Diam. from 13 ft. to 500 ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☑ Yes ☐ No
Type of perforator used 3/8" Spade Bit
SIZE of perfs ___ in. by ___ in. and no of perfs ___ from 260 ft. to 500 ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 155 ft. below top of well Date 8/4/04
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____
Yield _____ gal /min. with _____ ft. drawdown after _____ hrs.
Yield _____ gal /min. with _____ ft. drawdown after _____ hrs.
Yield _____ gal /min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs
Airtest 12 gal./min. with stem set at _____ ft. for _____ hrs
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Granite, Decomposed w/ Cobble	0	8
Granite, Medium w/ Fractures - Water 1/2gpm	8	474
Granite, Fractured - Water 11-1/2gpm	474	477
Granite, Medium w/ Fractures	477	500

NOV 12 2004

Start Date 8/2/04 Completed Date 8/4/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset
Driller/Engineer/Trainee Signature Brian T. Mosset
Driller or trainee License No 2139

Drilling Company J & J Drilling, Inc.
Address S 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRIL-177KU Date 8/12/04

☐ TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 148

206592

Original Notice of Intent n/a
TAG No. AGG029

Fracturing Notice of Intent ~~W148143~~

RECEIVED
NOV 0 4 2002
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

FRACTURING LOG

1. **OWNER NAME** ~~Cookie's Retreat Center~~
ADDRESS: P.O. Box 19471 Spokane, WA 99219
Total depth 310' Diameter 6''

2. **LOCATION OF WELL: COUNTY** Spokane
SW ¼ NE ¼ SEC. 29 TWP 24 R 42

3. **TYPE OF WORK:** Hydrofracturing Date ~~10/29/02~~

4. **WELL TESTS:**

Yield: gal./min. with ft. drawdown after Hrs.
Pre-frac:

Post-frac:

5. **HYDRO-FRACTURING LOG**

63'	TO	126'
126'	TO	189'
189'	TO	252'
252'	TO	Bottom

6. **FRACTURER'S STATEMENT:**

This well was hydro-fractured under my jurisdiction and this report is true to the best of my knowledge and belief.

Company Name: **Northwest Hydro-Fracturing**
Address 13812 W Lincoln RD, Spokane, WA 99224
Signed Lynn Bartholomew
License No. 0028 Date 10-31-02

RECEIVED
NOV - 7 2002
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

WWR 149

318143

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one) ____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 1100 ft. Depth of completed well 1100ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 59 ft. ☒ Liner installed 4" Diam. from _ ft. to 1100 ft. ☐ Threaded ____" Diam. From ____ ft. to ____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used bit

SIZE of perfs 3/8in. by ____ in. and no. of perfs ____ from _ft. to _ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____

Manufacturer's Name ____

Type ____ Model No. ____

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No Size of gravel/sand ____

Materials placed from ____ ft. to ____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18+ft.

Material used in seal Baroid Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? ____ Depth of strata ____

Method of sealing strata off ____

PUMP: Manufacturer's Name ____

Type: ____ H.P. ____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 45ft. below top of well Date 7/31/08

Artesian pressure ____ lbs. per square inch Date ____

Artesian water is controlled by ____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest 5 gal./min. with stem set at ____ ft. for ____ hrs.

Artesian flow ____ g.p.m. Date ____

Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. WE08802

Unique Ecology Well ID Tag No. BAS100

Water Right Permit No. ____

Property Owner Name Denise Cumming

Well Street Address Andrus Road

City ____ County Spokane

Location SW1/4-1/4 NE1/4 Sec 29 Twn 24N R 42E (s, t, r Still REQUIRED) EWM ☐ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 24291.9046

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Sand w/ Granite Cobble	0	8
Granite, Decomposed	8	52
Granite, Medium w/ Fractures	52	247
Granite, Fractured	247	249
Water 1/2gpm		
Granite, Medium w/ Fractures	249	831
Granite, Hard w/ Slight	831	1100
Fractures		
Well air tested at 1/2 gpm		
prior to hydro fracturing.		
Well air tested at 5gpm		
post hydro fracturing. A		
pump test is recommended		
to determine accurate gpm's.		
PVC Perforations: 100-120,		
220-240,340-360,460-480,		
580-600,720-740,840-860,		
980-1000, 1090-1100		
Recommended pump depth is		
980 feet.		

OCT 22 2008

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 7/22/08 Completed Date 7/31/08

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Don Anderson

Driller/Engineer/Trainee Signature

Driller or trainee License No. 1447 Don Anderson

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company J & J Drilling, Inc.

Address 17313 East Linke Road

City, State, Zip Greenacres , WA, 99016

Contractor's Registration No. JJDRII-177KU Date 8/6/08

ECY 050-1-20 (Rev 4/07)

Ecology is an Equal Opportunity Employer

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR150

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 022054

Water Right Permit No. _____

*) OWNER: Name Don Kennedy Address Rt 4/Box 311/Cheney

LOCATION OF WELL: County Spokane NW ¼ NE ¼ Sec 29 T 24 N., R 42 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Spotted Road

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 400' feet. Depth of completed well 400' ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1½' ft. to 38½' ft.
Welded [X] Liner installed [ ] Threaded [ ] _____ Diam. from _____ ft. to _____ ft.
_____ Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 38½' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? Surface Depth of strata 5'-15'
Method of sealing strata off Cased

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 15' ft. below top of well Date 6-14-89
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield 1½ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " " " " "
" Air Test Approx. " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top soil	0	1
Dk brown decomposed granite	1	20
Brown hard granite	20	32
Soft tan granite	32	38
Hard tan granite	38	42
Soft tan granite	42	80
Med tan/slightly frac granite	80	90
med lt tan " " "	90	92
Soft tan fract granite	92	110
Soft lt grey frac granite	110	130
Med green frac granite	130	135
Med lt grey frac granite	135	145
Med grey slightly frac gran.	145	180
Firm grey slight.frac quartz	180	185
Hard grey frac granite	185	325
Med lt tan slight. frac gran.	325	400
400' perforated 4" PVC liner installed		
6" Drive Shoe Installed		
1 Hour Developement		

Work started 6-13-89 19 Completed 6-14-89 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Vermillion Well Drilling, Inc. (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)

Address N.5309 Lynden Otis Orchards, Wa.

(Signed) Keith D. Vermillion (WELL DRILLER) License No 1079

Contractor's Registration No. VERMIWD126D3 Date 6-17-89 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10-87) 1339

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 151

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 022054

Water Right Permit No.

OWNER: Name Don Kennedy Address Rt. 4/ Box 311 Cheney, Wa. 9900

LOCATION OF WELL: County Spokane NW ¼ NE ¼ Sec 29 T. 24 N., R. 42E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Spotted Rd.

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 2

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 400' feet. Depth of completed well 400' ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" ' Diam. from 1½' ft. to 27½' ft.
Welded ☒ Liner installed ☐ Threaded ☐ ' Diam. from ft. to ft.
' Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 27½' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 30' ft. below top of well Date 6-16-89
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 2-3 gal./min. with ft. drawdown after hrs.
" " " " " "
" Air Test Approx. " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top soil	0	3
Broken cobble	3	23
Broken tan Quartzite	23	30
Tan clay and sand	30	40
Yellow & orange clay	40	46
Orange clay/decomposed Quartz	46	50
Brn decomposed quartzite	50	65
Tan " "	65	80
Grey slightly frac granite	80	120
Grey frac granite	120	150
Soft tan granite very frac	150	160
Soft white & green very frac granite	160	190
Hard lt grey quartzite with 1 gpm	190	230
Hard grey granite	230	280
Grey frac granite W/ 2 gpm	280	300
Grey hard granite	300	400

6" Drive Shoe Installed
400' 4" Sch 40 PVC liner Installed
1 Hour Developement

Work started 6-15-89 19 Completed 6-16-89 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Vermillion Well Drilling, Inc. (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)

Address N. 5309 Lynden/Otis Orchards, Wa.

(Signed) Keith D. Vermillion (WELL DRILLER) License No 1079

Contractor's Registration No. VERMIWD126D3 Date 6-17-89 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 152

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Don Kennedy Address Rt. 1, Box 2, Medical Lake, Wa. 99022

(2) LOCATION OF WELL: County Spokane — NW ¼ NE ¼ Sec. 29 T. 24 N., R. 42E W.M.
Bearing and distance from section or subdivision corner Tract P

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 410 ft. Depth of completed well 410 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 81 ft.
Threaded [ ] " Diam. from ... ft. to ... ft.
Welded [ ] " Diam. from ... ft. to ... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes [X] No [ ] To what depth? 21 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ... Depth of strata. ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 17 ft. below top of well Date 9/29/76
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a ~~pump~~ air test made? Yes [X] No [ ] If yes, by whom? Driller
Yield: 5 gal./min. with 393 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
... test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil, brn, silty	0'	3'
Quartz, heav fract w/tan silt	3'	7'
Quartz, fradt, ornge-gray-brn, loose	7'	12'
Quartz, fract, ornge-white, m hrd	12'	26'
Quartz, fract, Ornge-wht-gray, m hrd	26'	34'
Quartz, fract, tan-wht-mica flks, m hrd, water # GPM	34'	57'
Quartz, occas fract, ornge-tan-wht, m hrd	57'	86'
Quartz, occas fract, ornge-wht, hrd	86'	102'
Quartz, occas fract, gray-wht-grn, m hrd, water 1 GPM	102'	128'
Quartz, occas fract, gray-wht-grn, hrd	128'	137'
Quartz, fract, ornge-tan-wht, m hrd, water 1 GPM	137'	153'
Granite, occas fract, s&p-grn, m hrd	153'	181'
Quartz, occas fract, wht-grn-gray, hrd	181'	226'
Quartz, occas fract, wht, grn-gray, m hrd	226'	271'
~~Quartz~~		
Granite, occas fract, s&p, m hrd	271'	283'
Quartz, occas fract, wht, grn-pink, mica flks, m hrd	283'	302'
Quartz, drk gray, m hrd	302'	312'
Quartz, fract, wht-gray-grn, m hrd, water 2# GPM	322'	356'
Quartz, gray-grn, hrd	356'	396'
Quartz, occas fract, wht-grn, m hrd	396'	410'

Work started Sept. 24 19 76 Completed Sept. 29 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Box 4341, Spokane, Wa. 99202

[Signed] James J. Zinkgraf (Well Driller)

License No. 0544 Date Oct. 11, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

10/12/76

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 153

WATER WELL REPORT

State of Washington Date Printed 01-Apr 2003 Log No 4803

Construction/Decommission **Construction** Original Construction Notice of Intent # 129843

PROPOSED USE **DOMESTIC**

TYPE OF WORK Owners s Well Number (If more than one well) **1**

NEW WELL Method **ROTARY**

DIMENSIONS Diameter of well **6** inches

Drilled **280** ft Depth of completed well **280** ft

CONSTRUCTION DETAILS

Liner installed

4 Dia from **5** ft to **280** ft

Casing installed **WELDED**

6 Dia from **+2** ft to **18** ft

Dia from ft to ft

Dia from ft to ft

Perforations **Yes** Used In **Liner**

Type of perforator used **SKILL SAW**

SIZE of perforations **6** in by **1/8** in

10 Perforations from **40** ft to **60** ft

60 Perforations from **240** ft to **280** ft

Perforations from ft to ft

Screens **No** K Pac Location

Manufacture s Name

Type Model No

Diam slot size from ft to ft

Diam slot size from ft to ft

Gravel/Filter packed **No** Size of Gravel

Material placed from ft to ft

Surface seal **Yes** To what depth **18** ft

Seal method Material used in seal **BENTONITE**

Did any strata contain unusable water? **No**

Type of water Depth of strata

Method of sealing strata off

PUMP Manufacture s name

Type H P **0**

WATER LEVELS Land surface elevation above mean sea level **0** ft

Static level **20** ft below top of well Date **03/28/2003**

Artesian Pressure lbs per square inch Date

Artesian water controlled by

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? **No** If yes by whom?

Yield ____ gal/min with ____ ft drawdown after ____

Yield ____ gal/min with ____ ft drawdown after ____

Yield ____ gal/min with ____ ft drawdown after ____

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal/min ft drawdown after hrs

Air test **7** gal/min w/ stem set at **280** ft for **1** hours

Artesian flow gpm Date

Temperature of water Was a chemical analysis made? **No**

CURRENT

Notice of Intent No **W153216**

Unique Ecology Well I D No **AHF990**

Water Right Permit Number

OWNER **VAUGHN JIM & LISA**

OWNER ADDR **1004 E NEWARK SPOKANE WA 99202**

Well Street Address **ANDRUS RD SPOKANE**

City County **SPOKANE**

Location **SW** 1/4 **NE** 1/4 Sec **29** T **24** R **42E** EWM

Lat/Long (s t r still REQUIRED) Lat Deg Lat Min/Sec

Long Deg Long Min/Sec

Tax Parcel No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure Show thickness of aquifiers and the kind and nature of the material in each stratum penetrated Show at least one entry for each change in formation

Material	From	To
TOPSOIL	0	1
DECOMPOSED GRANITE	1	3
GRANITE SOFT FRACTURED W/WATER	3	60
GRANITE MEDIUM	60	170
GRANITE HARD	170	255
GRANITE HARD FRAC W/WATER	255	265
GRANITE HARD	265	280

RECEIVED
APR - 7 2003
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Notes

Work started **03/27/2003** Completed **03/28/2003**

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported are true to my best knowledge and belief

☑ Driller ☐ Engineer ☐ Trainee

Name **MARTY RUGO** License No **2038**

Signature Marty Rugo / gs

If trainee Licensed driller is License No

Licensed Driller Signature

Drilling Company

NAME **FOGLE PUMP & SUPPLY INC** Shop **AIRWAY HEI**

ADDRESS **PO BOX 1450**

Airway Heights WA 99001

Phone **5092440846** Toll Free **8883439355**

E Mail **akk@foglepump com**

FAX **5092442875** WEB Site **WWW FOGLEPUMP COM**

Contractor's Registration No **FOGLEPS095L4** Date Log Created **04/01/2003**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR154

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name Jim Andrews Address 2-5905 Woodard Wa.

(2) LOCATION OF WELL: County Spokane N½ S½ SE¼ NE¼ Sec. 29 T. 24 N., R. 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 140 ft. Depth of completed well 115 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 31 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? Sandy Depth of strata 5 & 25
Method of sealing strata off Steel Casing

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2300 ft.
Static level 10 ft. below top of well Date 6-6-84
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
Air Test + 20 Elm. Sandy "
(Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil	0	1
Brn Clay	1	10
Sandy Gravel	10	25
Basalt - Fractured	25	120
Fine Sand - water	120	140

RECEIVED
JUN 11 1984
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 6-1 19 84 Completed 6-6 19 84

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Jay J Billis Inc (Person, firm, or corporation) (Type or print)
Address 5613 S Link Rd Greenacres
[Signed] (Well Driller)
License No. 0215 Date 6-7- 84

9/11/84

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR155

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 054219

Water Right Permit No _____

OWNER: Name John Harmon Address W. 14707 Cameron Cheney Wa.

LOCATION OF WELL: County Spokane ¼ ne¼ ¼ Sec 29 T 24 N R 42

(2a) STREET ADDDRESS OF WELL (or nearest address) Andrus Road, Cheney

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 340' feet. Depth of completed well 340' ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam from +2' ft to 18' ft.
Welded [ ] Liner installed [ ] Threaded [ ] _____ Diam. from _____ ft to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No _____
Diam. _____ Slot size _____ from _____ ft to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18' ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 35' ft below top of well Date 6-23-92
Artesian preasure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min with _____ ft drawdown after _____ hrs.
Airtest 5 gal./min with stem set at 340' ft for 1½ hrs.
Artesian flow _____ g.p.m Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation. Describe by color, character, size of material and structure and sh... thickness of aquifers and the kind and nature of the material in each stratum penetrat... with at least one entry for each change of information.

MATERIAL	FROM	TO
clay with sand	0	4
granite, tan & white, decomposed	4	10
granite, tan, gray & white, soft	10	55
granite, gray & white, med. sli-frac.	55	145
granite, gray, med., fractured	145	195
granite, tan & white, soft, fract.-- with water	195	205
granite, gray & white, med., frac	205	300
granite gray & white, hard. frac.	300	340
6" drive shoe		
340' pvc liner installed bottom 20' blanck		
1½ hours development		

RECEIVED
JUL - 1 1992
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 6/19/92 19. Completed 6/23/92 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Vermillion Well Drilling, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address N. 6403 Perry Spokane, Wa. 99207

(Signed) _____ (WELL DRILLER) License No 2012

Contractor's Registration No. VERMIWD126D3 Date 6/30/92

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 156

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name John Meredith Address E 8001 Nora Spokane Wn.

(2) LOCATION OF WELL: County Spokane NE ¼ NE ¼ Sec. 22 T. 24 N., R. 42 E. WM.

aring and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 420 ft. Depth of completed well 420 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 37 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite Co
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ~2269 ft.
Static level 65 ft. below top of well Date 6-25-79
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
Air Test Approx 5 GPM "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
...er test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sandy Loam	0	2
Broken Basalt	2	18
Gravel	18	36
Red Granit	36	145
Salt & Pepper Granit	145	420

RECEIVED
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started 6-21 19 79 Completed 6-25 19 79

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Jay J Builis Exc. (Person, firm, or corporation) (Type or print)
Address 5613 S Link Rd Greenacres
[Signed] Jay J Builis (Well Driller)
License No. 0215 Date 6-29 19 79

8/6/79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 157

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ....
Permit No. ....

(1) OWNER: Name Kenneth Perkins Address Rt.2 Box 251-D,Cheney,Wa.99004

LOCATION OF WELL: County Spokane NE ¼ NE ¼ Sec. 29 T. 24 N., R. 42E W.M.

ring and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒X Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒X Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒X Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 225 ft. Depth of completed well 225 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +2 ft. to 61 ft.
Threaded ☐ " Diam. from .... ft. to .... ft.
Welded ☒X " Diam. from .... ft. to .... ft.

Perforations: Yes ☐ No ☒X
Type of perforator used ....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☐ No ☒X
Manufacturer's Name ....
Type .... Model No. ....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☒X Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☒X No ☐ To what depth? 13 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? .... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: .... H.P. ....

(8) WATER LEVELS: Land-surface elevation above mean sea level 2300 ft.
Static level 100 ft. below top of well Date 7/17/73
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒X No ☐ If yes, by whom? Driller
Yield: .... gal./min. with 125 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
....	....	....	....	....	....
....	....	....	....	....	....
....	....	....	....	....	....

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brn silty top soil	0'	2'
Brn silty snd,basalt gravel	2'	16'
Basalt gravel,snd,tan sed	16'	24'
Basalt,heav fract,brn-blk w/tan sandy sed,loose	24'	44'
Sand & gravel,basalt rocks	44'	60'
Granite,fract,yell-wht mica flks, m hrd	60'	68'
Granite,fract,yell-ornge-wht-mica flks,seepage 1/2 GPM	68'	96'
Granite,occas fract,gray w/wht grtz, mica flks,m hrd	96'	159'
Granite,fract,gray-wht-char, m hrd, water 1 GPM	159'	160'
Granite-ornge-yell-wht,m hrd	160'	168'
Quartz,fract,wht-char-grn,m hrd, water ½ GPM	168'	169'
Quartz,wht-char-grn,m hrd	169'	173'
Granite,fract,drk gray w/mica specks,m hrd,water 1 GPM	173'	178'
Granite, s&p,occas layer grn, m hrd	178'	201'
Quartz,wht-yell w/mica flks,m hrd	201'	212'
Granite,drk gray & grn,m hrd	212'	225'

Work started July 13 19 73m Completed July 17 19 73

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME SINKGRAF'S WELL DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp,Box 432,Spokane,Wa.99202

[Signed] James J. Sinkgraf
(Well Driller)

License No. 0544 Date July 25, 19 73

8/2/78 Four Lots 7½

(USE ADDITIONAL SHEETS IF NECESSARY)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 158

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W080255

UNIQUE WELL I.D. # SAME AS ABOVE

Water Right Permit No. _____

OWNER: Name KEVIN MASSENGALE Address 7623 W. WHITE Rd. CHENEY, WA.

LOCATION OF WELL: County SPOKANE NE 1/4 NE 1/4 Sec 29 T 24 N, R 42 E WM.

(2a) STREET ADDRESS OF WELL (or nearest address) SPOTTED Rd.

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 525 feet. Depth of completed well 525 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 24 ft.
Welded [X] 8" Diam. from 12 ft. to 525 ft.
Liner installed [X]
Threaded [ ] _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 25 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 40 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
APPROX. 2½" -30PM BY AIRTEST
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information

MATERIAL	FROM	TO
TOPSOIL	0	1
BRN. CLAY	1	6
SAND, GRAVEL, BOULDERS	6	23
DECOMPOSED GRANITE - M	23	50
GRANITE - H, AUTOMA. AREAS W/ FRACTS	50	525

Work Started 9/23 19 Completed 9/26 1996

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME CARPENTER DRILLING Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 8918 N. FORKER Rd. SPOKANE, WA.

(Signed) _____ (WELL DRILLER) License No 1278

Contractor's Registration No. CARPEDC947P2 Date 9/28 1996

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 159

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

State of Washington Water Well Report

Washington Water Right Permit No: 194367

Unique Well ID: ALF-706

Notice of Intent: WE04862

(1) Owner: MASSENGAL, KIT Address: 11502 S SPOTTED RD. SPOKANE WA 99202

(2) Location of Well: County SPOKANE NE 1/4: NE 1/4 SEC: 29 T 24N NR 42E E

(2a) Street Address of Well: SAME City: SPOKANE Tax/Parcel No 24291.9033

(3) Proposed Use: DOMESTIC

(4) Type of Work: NEW WELL Previous Tag No.

Drilling Method: ROTARY Owner's number of well (if more than one):

(5) Dimensions Diameter of well: 6 inches

Drilled: 365 feet Depth of completed well:

(6) Construction Details

Casing Installed	Diameter	From	To
WELDED	6	+2	81
THREADED PVC	4	-5	365

Perforations ☑ Screens ☐

Type of Perforator Used: SKILL SAW

Screen Type:

K-Pac Location:

Diam: 4 *Slot* 1/4 X 8 *From* 320 *To* 360

Gravel/Filter packed ☐ Size of gravel/sand:

Material placed from: ft. to

Surface seal used ☐ To what depth: ft.

Did any strata contain unusable water? ☐

Type of water: Depth of strata:

Method of sealing strata off:

(7) Pump Pump Manufacturer:

Pump Type: H.P.

(8) Water Levels

Land-surface elevation above mean sea level: ft.

Static level: 150 Date: 4/3/2006

Artesian Pressure: Date:

Artesian water is controlled by:

(9) Well Tests Drawdown is amount water level is lowered below static

Was a pump Test performed? ☐

Yield	Drawdown	Pumping Level	Hours
6			

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Level	Time	Level	Time	Level

Bailer Test: gal per min drawdown: after

Airtest gal/min: 6 gal per min

Artesian flow gpm: ☐ Chemical test

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of informaiton. Indicate all water encountered.

☑ Construction ☐ Decommission Drive Shoe ☐ Ring Bit ☐

From	To	Remarks: Lithology, Water Quality, Temperature
0	3	Top Soil
3	80	Black Sand
80	103	Tan Decomposed Granite
103	230	Soft Tan Granite
230	250	Dark Gray Granite
250	330	Salt & Pepper Med. Granite
330	337	Black Granite
337	365	Lt Gray & White Granite

RECEIVED
MAY - 2 2006
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date: 3/31/2006 Completed 4/3/2006

Well Construction Certification

I constructed and/or accept responsiblity for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name: JIM McLESLIE License No: 2257

Trainee Name License No:

Drilling Company: H20 Well Service, Inc.

(signed) Jim McLeslie License No: 2257

(Licensed Driller/Engineer)

Address: 582 W. Hayden Ave, Hayden Lake, ID 83835

Contractor's Registration No: H20WESI101DW Date: 4/3/06

WWR160

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 079552
UNIQUE WELL I.D. #
Water Right Permit No.

(1) OWNER: Name Larry Winters Address 11921 S Andrus Rd. Cheney, WA 99004

(2) LOCATION OF WELL: County Spokane SW 1/4 NE 1/4 Sec 29 T 24 N. R 42 WM.

(2a) STREET ADDRESS OF WELL (or nearest address) Same

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 340 feet. Depth of completed well 340 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from +1 ft. to 19 ft.
Welded ☒ 4 " Diam. from ft. to 340 ft.
Liner installed ☒
Threaded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 100 ft below top of well Date 10/18/95
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 2 gal./min. with ft. drawdown after hrs.
Air test 2-G.P.M. " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Topsoil-drk. brn.	0	3
Granit-med. multi. colored	3	110
Granit-med.-fracts.-water	110	117
Granit-hard	117	160
Granit-hard-slightly fract.	160	165
Granit-hard	165	200
Granit-very hard	200	340

Work Started 10/17/95 19. Completed 10/18/ 19 95

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME J & J DRILLING INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address S 5613 Linke Rd. Greenacres, WA 99016

(Signed) (WELL DRILLER) License No. 2038

Contractor's Registration No. JJDRII-177KU Date 10/20/ 19 95

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * *

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 161

153501

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. W173588

Unique Ecology Well ID Tag No. AKM005

Water Right Permit No. _____

Property Owner Name Larry Winters

Well Street Address 11921 S. Andrus Rd

City Cheney **County** Spokane

Location SW 1/4-1/4 NE 1/4 Sec 29 Twn 24 R 42 EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☑ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 440 ft.
Depth of completed well 440 ft.

CONSTRUCTION DETAILS
Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 19 ft.
☑ Liner installed 4 " Diam. from 10 ft. to 440 ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☑ Yes ☐ No
Type of perforator used 3/8" Spade Bit
SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from 200 ft. to 440 ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 75 ft. below top of well Date 7/22/04
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 5 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Granite, Cobble	0	3
Granite, Soft	3	6
Granite, Medium w/ Fractures	6	247
Granite, Fractured - Water 1gpm	247	249
Granite, Medium w/ Fractures	249	286
Granite, Fractured - Water 2gpm	286	290
Granite, Medium w/ Fractures	290	386
Granite, Fractured - Water 2gpm	386	392
Granite, Medium w/ Fractures	392	440

RECEIVED
AUG 16 2004
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 7/21/04 Completed Date 7/22/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset
Driller/Engineer/Trainee Signature Brian T. Mosset
Driller or trainee License No. 2139

IF TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRIL-177KU Date 7/30/04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 162

153509

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. WE02186

Unique Ecology Well ID Tag No. AKO650

Water Right Permit No. _____

Property Owner Name Patty Hunt

Well Street Address 11811 S. Andrus

City Cheney **County** Spokane

Location ___1/4-1/4 NE 1/4 Sec 29 Twn 24 R 42 EWM ☑ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) 2

☑ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 320 ft.
Depth of completed well 320 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1 ft. to 27 ft.
☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☑ No
Type of perforator used _____
SIZE of perfs _____ in. by ____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18+ ft.
Material used in seal Baroid Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 100 ft. below top of well Date 5/21/04
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 1-1/2 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	1
Clay, Brown w/ Sand	1	3
Granite Sands & Cobble	3	15
Granite, Soft	15	22
Granite, Medium to Soft	22	77
Granite, Medium w/ Fractures	77	173
Granite, Fractured - Water 1gpm	173	174
Granite, Medium w/ Fractures Water 1/2gpm	174	320

RECEIVED
AUG 18 2004
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 5/20/04 Completed Date 5/21/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brian Mosset
Driller/Engineer/Trainee Signature Brian T. Mosset
Driller or trainee License No. 2139

IF TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company J & J Drilling, Inc.
Address S. 5613 Linke Rd.
City, State, Zip Greenacres, WA 99016
Contractor's Registration No. JJDRIL-177KU Date 5/28/04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR163

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 053734

Water Right Permit No. _____

(1) OWNER: Name Peter & Charlotte Yocom Address S. 17818 Aspen Mead Dr., Cheney, WA 99004

LOCATION OF WELL: County Spokane SW ¼ NE ¼ Sec 29 T 24 N., R 42 W.M.

STREET ADDDRESS OF WELL (or nearest address) Parcel # 24291.9042

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 105 feet. Depth of completed well 105 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +2 ft. to 50 ft.
Welded ☒ Liner installed ☒ 4" Diam. from 5 ft. to 105 ft.
Threaded ☐ _____ Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used Skill saw
SIZE of perforations 1/8" in. by 6" in.
21 perforations from 85 ft. to 105 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? Muddie/Murkie Depth of strata 20'
Method of sealing strata off Cased off

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 50' ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: 20 gal./min. with _____ ft. drawdown after _____ hrs.
"Estimated air lift 20 GPM" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top soil	0	2
Dirt & Gravel	2	8
Loose decomposed granite	8	47
Firm decomposed granite	47	105

6" Drive shoe utilized

RECEIVED JAN 19 1993

Work started 1/13/93 19 Completed 1/14 1993

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Ponderosa Drilling & Development, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 Broadway Spokane, WA 99212

(Signed) Bob Dehle (WELL DRILLER) License No. 2059

Contractor's Registration No. PO-ND-EI*248JE (Bob Dehle) Date 1/14 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

The Department of Ecology does NOT Warranty the Data and/or the information on this Well Report.

WWR 164

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Robert GADD Address Rt 2 Box 98A Cheney WN 99004

(2) LOCATION OF WELL: County Spokane SW ¼ NE ¼ Sec. 29 T. 24 N., R. 42 W.M.

Bearing and distance from section or subdivision corner 24

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 300 ft. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 19 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☐ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ~2,252 ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
OVER BURDEN	0	3
GRANITE w/soft spots	3	135
GRANITE w/soft fracture w/water	135	136
GRANITE w/soft spots	136	245
GRANITE w/soft fracture	245	247
GRANITE	247	300
Air test 7½ GPM.		

RECEIVED
OCT 7 1982
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started May 28, 19 81 Completed May 31, 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Coffey Drilling (Person, firm, or corporation) (Type or print)
Address Rt 4 Box 448 Cheney
[Signed] C.P. Coffey (Well Driller)
License No. 0572 Date , 19

(USE ADDITIONAL SHEETS IF NECESSARY)

10/7/82

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 165

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name ROBERT WOODRUFF Address RT 3 BOX 52 CHENEY

(2) LOCATION OF WELL: County SPOKANE ¼ ¼ Sec. 29 T. 24 N., R. 42 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 20 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☐ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal PUDDLING CLAY
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 75 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	APROX. 12 GPM				

Date of test .....
..... gal./min. with ..... ft. drawdown after ..... hrs.
..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
OVERBURDEN	0	11
DECOMPOSED GRANITE	11	29
DECOMPOSED GRANITE w/ SEAMS OF GRANITE	29	87
DECOMPOSED GRANITE WATER - 2GPM	87	90
DECOMPOSED GRANITE w/ SEAMS OF GRANITE	90	170
FRACTURED GRANITE WATER -	170	190
GRANITE	190	200

RECEIVED
APR 23 1976
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started Feb 3 19 76 Completed Feb 9 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C + S Industries Inc
(Person, firm, or corporation) (Type or print)
Address RT 3 Box 143 Cheney

[Signed] C P Coffey
(Well Driller)

License No. 572 Date Feb. 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—GS—(Rev 4-71)
ECY-070-28

4/26/76

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR166
(P.1 of 2)

The Dep. The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Spokane Log Homes % Dan Wilson Address W. 7217 45th, Spokane, Wa. 99204

LOCATION OF WELL: County Spokane NE ¼ NE ¼ Sec. 29 T. 24 N., R. 42E W.M.

aring and distance from section or subdivision corner

(3) PROPOSED USE: Domestic XX Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well XX Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary XX Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 400 ft. Depth of completed well 400 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 " Diam. from +1 ft. to 41 ft.
Threaded ☐ 6 " Diam. from +1 ft. to 104 ft.
Welded XX " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No XX
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No XX
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No XX Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes XX No ☐ To what depth? 19 ft.
Material used in seal Bentinite
Did any strata contain unusable water? Yes ☐ No XX
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 38 ft. below top of well Date 12/12/77
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level 230 ø
Was a air pump test made? Yes XX No ☐ If yes, by whom? Driller
Yield: 20 gal./min. with 362 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No XX

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Top soil, brn silty	0'	4'
Granite, decomp, Brn-tan-wht, loose	4'	16'
Clay, moist brn, firm	16'	18'
Quartz, gravel & sand, brn-tan-wht, lse	18'	29'
Quartz, decomp, brn-wht, loose	29'	48'
Quartz, heav fract, brn-wht-ornge, lse	48'	59'
Quartz, fract, brn-wht, m hrd	59'	63'
Quartz, heav fract, tan-ornge-wht, lse	63'	69'
Quartz, occas fract, tan-wht, m hrd	69'	74'
Quartz, heav fract, tan-wht-brn, loose	74'	82'
Quartz, fract, grey-brn, wht, ornge, m hrd	82'	88'
Quartz, heav fract, brn-yell-ornge, lse	88'	96'
Quartz, occas fract, tan-wht-ornge, m hrd	96'	116'
Quartz, fract, grn-cream, mica flk, m hrd	116'	131'
Quartz, grn-grey-wht, m hrd	131'	134'
Quartz, fract, grn-cream, wht, m hrd, water ½ GPM	134'	139'
Quartz, occas fract, grn-cream, m hrd	139'	162'
Quartz, grn-clear, mica flks, m hrd	162'	169'
Quartz, fract, drk grn-wht-brn, m hrd, water ½ GPM	169'	173'
Granite s&p, m hrd	173'	181'
Quartz, occas fract, grn-wht-grey, mica flks, m hrd	181'	224'
Quartz, occas fract, grn-clear, m hrd	224'	284'
Quartz, fract, clear, lt grn, mica flks, m hrd, water ½ GPM	284'	286'
Quartz, ornge-clear-wht-drk grey, m hrd	286'	332'
Granite, heav fract, s&p, m hrd, water 1½ GPM	332'	343'
Quartz, grn, clear, m hrd	343'	364'
Granite, heav fract, brn, w/grey & wht specks, loose, m hrd, water 10 GPM	364'	374'
Granite, drk grey, w/wht specks, m hrd	374'	377'

Work started Nov. 30 19 77 Completed Dec. 12, 19 77

WELL DRILLER'S STATEMENT: WELL LOG CONT ON BACK

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ZINKGRAF'S WELL DRILLING COMPANY
(Person, firm, or corporation) (Type or print)

Address E. 1606 Sharp, Box 4341. Spokane, Wa. 99202

[Signed] James J. Zinkgraf
(Well Driller)

License No. 0544 Date Dec. 30 19 77

1/9/78

(USE ADDITIONAL SHEETS IF NECESSARY) Four Liters 7½ Flat 117 7½ gpm

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR 166
(P. 2 of 2)

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JAN 9 1978
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

WELL LOG CONTINUED

Quartz,heav fract,grn-clear,mica flks m hrd,water 7 GPM	377'	391'
Granite,occas frac, s&p, m hrd	391'	400'

WWR 167

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No .....

(1) OWNER: Name Steven Bailey Address Rt #2 Cheney, WN

(2) LOCATION OF WELL: County Spokane NE ¼ NE ¼ Sec 29 T. 24 N., R. 42 W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 89 ft. Depth of completed well 89 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 39 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal PUDDLING CLAY
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level. 2346 ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with — ft. drawdown after hrs.
" AIR TEST 18 GPM " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

ate of test
test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand + Gravel	0	37
Basalt fractured w/ water	37	58
Basalt Soft Brown	58	75
Basalt fractured	75	81
Clay	81	89

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OCT 7 1982
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

Work started ....., 19 ..... Completed ....., 19 .....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C+S DRILLING
(Person, firm, or corporation) (Type or print)
Address Rt 3 Cheney, WN
[Signed] C P Coffey
(Well Driller)
License No. 0572 Date 12/15, 19 77

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WWR168

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

Corrected

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No 9411

(1) OWNER: Name William I. LaVan Address 119 - 7th Ave. San Francisco Ca. 94

(2) LOCATION OF WELL: County Spokane Portion of N ½ Sec. 29 T. 24 N., R. 4 E.W.M.

ring and distance from section or subdivision corner

PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 205 ft. Depth of completed well 205 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 1 ft. to 21 ft.
Threaded [ ] ..... " Diam. from ..... ft. to ..... ft.
Welded [X] ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Puddling Clay
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? ..... Depth of strata .....
Method of sealing strata off over Bore

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? .....
Yield: 10 gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
test ..... gal./min. with ..... ft. drawdown after ..... hrs.
sian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown Top Soil, Light Brown Broken Granite	0	4
Light Brown Granite with Seams, Hard & Soft	4	85
Black some Brown Granite, Firm	85	95
Brown Granite with Hard & Soft	95	115
Black, Some Brown Granite, Firm	115	157
" " " " " H_2O	157	175
Black Granite Hard	175	182
Brown Firm Granite some Black	182	195
Black Granite, Hard	195	202
Black Granite Firm, some mica	202	205

RECEIVED

Work started 3-7 , 19 75 Completed 3-8 , 19 75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Coeur d'Alene Drilling INC
(Person, firm, or corporation) (Type or print)

Address P.O. Box 231 Hayden Lake Idaho

[Signed] .....
(Well Driller)

License No. 214 Date 3-10 , 19 75

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

APPENDIX E
Field Methods and Explorations

APPENDIX E
FIELD METHODS AND EXPLORATIONS

Explorations

Explorations associated with GeoEngineers' Remedial Investigation (RI) include the following:

- Six new groundwater monitoring wells (designated MW-7D, MW-14, MW-15, MW-15A, MW-16 and MW-16A). Groundwater monitoring well locations are shown in Figure 2.
- 33 landfill borings (designated LFB-1 through LFB-6, LFB-6A, LFB-7, LFB-7A, LFB-8 through LFB-17, MW-13, SB-1 through SB-3, SB-3A, SB-4 through SB-7, and SB-9 through SB-13). Ten of the landfill borings were completed as landfill gas monitoring wells (LFB-3 through LFB-5, LFB-8 through LFB-11, and LFB-15 through LFB-17. Landfill boring locations associated with the Main Landfill are presented in Figure 6. Landfill boring locations associated with the Five-Acre Landfill are presented in Figure 7.
- 71 test pits (designated TP-1, TP-2, TP-3E, TP-3W, TP-4, TP-5A, TP-5B, TP-6, TP-7, TP-8, TP-9A, TP-9B, TP-10A, TP-10B, TP-11A, TP-11B, TP-12A, TP-12B, TP-13, TP-14, TP-15A, TP-15B, TP-F-1N, TP-F-1S, TP-F-2N, TP-F-2S, TP-F-3N, TP-F-3S, TP-F-4A, TP-F-4B, TP-F-4C, TP-F-5A, TP-F-5B, TP-F-6, TP-F-7A, TP-F-7B, TP-F-7C, TP-F-7D, TP-F-8A, TP-F-8B, TP-F-9, TP-F-10, TP-F-11A, TP-F-11B, TP-F-11C, TP-F-11D, TP-F-12A, TP-F-12B, TP-F-13A, TP-F-13B, TP-F-14A, TP-F-14B, TP-F-15A, TP-F-15B, TP-F-16A, TP-F-16B, TP-FE-1, TP-FE-2, TP-FE-3, TP-F-TOP1, TP-F-TOP2, TP-M-1A, TP-M-1B, TP-M-2, TP-M-3, TP-M-4A, TP-M-4B, TP-M-5, TP-M-6, TP-Test-1 and TP-Test-2). Test pit locations are shown in Figures 6 and 7.

We classified soil encountered in project explorations in general accordance with the Unified Soil Classification System described in Figure E-1. The exploration logs for the monitoring wells, borings and test pits listed above are provided in Figures E-2 through E-111.

Soil Sampling Procedures

General

Samples were obtained using disposable nitrile gloves, which were discarded after each use. Samples were placed in laboratory-supplied sample containers.

Sample containers were filled to minimize headspace and labeled with a unique identification. Samples analyzed for volatile organic compounds (VOCs) were obtained using Environmental Protection Agency (EPA) Method 5035 sampling procedures. Samples were temporarily stored in an iced cooler before transfer to TestAmerica's laboratory in Spokane Valley, Washington for analysis. Chain-of-custody protocols were followed.

Drilled Samples

Soil borings and monitoring wells were completed by GeoEngineers' drilling subcontractor using air rotary, sonic, hollow-stem auger, or direct-push drilling methods. Drilling and well installation activities were continuously monitored by a geologist or engineer from our firm who collected, examined, and classified representative soil samples and maintained a detailed log of the explorations. During drilling, soil samples were collected at a variable interval using methods consistent with the respective drilling method.

Test Pit Samples

Samples collected via a backhoe were obtained from the middle of the bucket (not touching the bucket sides) using new nitrile gloves.

Field Screening

Soil

Field screening tasks were performed during Site exploration activities to evaluate the presence of contaminants in soil. Soils were field screened during drilling and test pit activities for evidence of petroleum or VOCs using a photoionization detector (PID). Soils and waste materials encountered during installation of test pits, landfill gas borings, landfill gas and groundwater monitoring wells were field-screened for the presence/absence of landfill gas and VOCs.

Initial screening was based on visual examination; if warranted, water sheen screening and headspace vapor screening using a PID also was conducted. Visual screening consisted of inspecting the soil for discoloration indicative of the presence of petroleum material in the sample. Water sheen screening was conducted by placing soil in water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen	No visible sheen on the water surface;
Slight Sheen	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil might produce a slight sheen;
Moderate Sheen	Light to heavy sheen; might have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface; and
Heavy Sheen	Heavy sheen with color/iridescence; spread is rapid; entire water surface might be covered with sheen.

Headspace vapor screening was conducted by the following procedure. The soil sample is placed in a plastic bag. Air is captured in the sealed bag, and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted into the bag, and the PID measures VOC vapor concentrations in parts per million (ppm). The PID is calibrated to isobutylene. The PID is designed to quantify VOC vapor concentrations in the range between 1 ppm and 2,000 ppm with an accuracy of 10 percent of the reading, and between 2,000 ppm and 10,000 ppm with an accuracy of 20 percent of the reading.

Landfill Gas

Landfill gas was screened in the field using a handheld GEM 2000+ meter or equivalent, capable of measuring concentrations of methane, carbon dioxide, oxygen and hydrogen sulfide. Readings were collected upon parameter stabilization, if possible. Multiple readings were recorded if relative stabilization did not occur.

Well Construction and Development

GeoEngineers installed landfill gas monitoring wells and groundwater monitoring wells during this supplemental RI investigation.

- Landfill gas monitoring wells were constructed using approximate 1-inch-diameter Schedule 80 PVC casing and well screen material. Well screen slot size was about 0.010 inches.
- Groundwater monitoring wells were constructed using approximate 2-inch-diameter Schedule 80 PVC casing and well screen material.

For both well types, screen slot size was 0.010 inches. Processed 10-20 Colorado silica sand was used as filter pack. Bentonite seal material was installed above filter pack as impermeable backfill. At the ground surface, the wells are protected by steel flush-mount monuments.

After installation, groundwater monitoring wells were developed by a combination of pumping and surging until purge water was relatively clear and free of suspended sediment.

Groundwater Monitoring

General

GeoEngineers collected groundwater samples from project monitoring wells during three groundwater monitoring events, conducted during August 2016, November 2016 and February 2017. Sampling methods generally were performed in compliance with the project Work Plan (GeoEngineers 2015).

Monitoring Headspace Vapor Measurements

Headspace vapor measurement involved placing the tip of the PID into the headspace of the monitoring well and covering the top of the monitoring well to prevent the exchange of ambient air with air in the monitoring well. Headspace vapor measurements targeted volatile petroleum hydrocarbon compounds. In this application, the PID measured concentration of organic vapors ionizable by a 10.6 electron volt (ev) lamp in the range between 1.0 and 2,000 ppm, with a resolution of +/- 2 ppm.

Groundwater Elevations

Depths to groundwater were measured relative to the monitoring well casing rim using an electric water level indicator. The probe of the water level indicator was decontaminated between wells using a detergent wash, followed by two distilled water rinses.

Low-Flow Sampling Procedures

Groundwater sampling generally was performed consistent with the EPA's low-flow groundwater sampling procedure, as described by EPA (1996) and Puls and Barcelona (1996). Monitoring well purging and sampling activities were accomplished using a QED Environmental Systems Sample Pro portable bladder pump with disposable bladders. During purging activities, water quality parameters, including pH, conductivity, temperature, turbidity, oxidation-reduction potential and dissolved oxygen, were measured using an In-Situ Troll 9500 multi-parameter meter equipped with a flow-through cell; measurements were recorded approximately every three minutes. The meter calibration was verified at the beginning of each work day consistent with manufacturer recommendations prior to purging and sampling activities.

Groundwater samples were collected after (1) water quality parameters had stabilized; or (2) a maximum purge time of 30 minutes was achieved. During purging and sampling, purge rate was not allowed to exceed 500 milliliters per minute. Water quality parameter stabilization criteria include the following:

- Turbidity: ±10 percent or ±10 nephelometric turbidity units (NTU);
- Dissolved oxygen: ±10 percent;
- Conductivity: ±3 percent;
- pH: ±0.1 unit;
- Temperature: ±3 percent; and
- Oxidation reduction potential: ±10 percent or ±10 millivolts (mV).

After groundwater quality stabilization criteria were reached, the pump's discharge tubing was disconnected from the flow-through cell and groundwater samples were collected for analysis.

Each sample was pumped directly into sample containers supplied by the laboratory. Groundwater samples collected for chemical analysis were kept cool during on-Site storage and transport to the laboratory. Chain-of-custody procedures were observed during transport of the groundwater samples.

Surface Water Sampling

Surface water samples were collected from one location on Marshall Creek. The surface water sampling location is shown in Figure 1. Samples were collected by direct filling of laboratory-supplied containers. Surface water samples collected for chemical analysis were kept cool during on-Site storage and transport to the laboratory. Chain-of-custody procedures were observed during transport of surface water samples.

Landfill Gas Monitoring

Landfill Gas Sampling

Landfill gas samples were collected at each location using the following protocol:

- The landfill gas meter was connected to the petcock on the landfill gas monitoring well. The petcock was opened to obtain a measurement of the static pressure in the gas probe. The barometric pressure measured by the gas meter also was recorded.
- The gas meter pump was turned on to evacuate the gas probe and allow measurement of methane, hydrogen sulfide, oxygen, carbon monoxide and carbon dioxide. A PID also was connected to the sample train to collect field readings for VOCs. Readings were recorded in the field notes. After the readings stabilized, the lab petcock on the gas probe was closed.
- A landfill gas sample was collected using a one-liter Summa® canister set to a flow rate of less than or equal to approximately 200 milliliters per minute. The canister was connected to the petcock on the landfill gas monitoring well such that connections are air tight. The petcock was opened, and the canister filled with landfill gas for approximately 5 minutes or until the vacuum remaining in the canister was approximately 5 inches of mercury. The initial and final canister vacuum were recorded.

Landfill Gas Pressure Monitoring

GeoEngineers retrofit ten landfill gas monitoring wells (LFB-3 through LFB-5, LFB-8 through LFB-11, and LFB-15 through LFB-17) for measurement of intra-well pressure using sealed well caps and valving for pressure gage installation. During the December 2017 monitoring event, we measured stabilized landfill

gas pressure at each well location and recorded those data in our daily field logs. Pressure was measured using Dwyer Instruments Magnehelic pressure gauges (pressure range of 0.01 to 100 inches of water).

Decontamination Procedures

The objective of our decontamination procedures was to minimize the potential for cross contamination between exploration locations and between individual samples within a specific exploration. A designated decontamination area was established for decontamination of drilling equipment and reusable sampling equipment. Drilling equipment was cleaned using pressure washing equipment.

Sampling or measurement equipment was decontaminated in accordance with the following procedures before each sampling attempt or measurement:

- Brush equipment with a wire brush, if necessary, to remove large particulate matter.
- Rinse with potable tap water.
- Wash with non-phosphate detergent solution (LiquiNox® and potable tap water).
- Rinse with potable tap water.
- Rinse with distilled water.

Handling of Investigation-Derived Waste (IDW)

IDW, which consisted primarily of drill cuttings and decontamination/purge water, was placed in Washington State Department of Transportation (DOT)-approved 55-gallon drums or roll-off boxes (soil) and poly tanks (water). Each drum was labeled with the project name, general contents, date and source location (boring number) of contents. The drummed IDW was stored on-Site pending analysis and disposal.

Disposable items, such as sample tubing, direct-push sampler acrylic sleeves, gloves and paper towels, etc., were placed in plastic bags after use and deposited in trash receptacles for disposal.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	TS	Topsoil/ Forest Duff/Sod

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

A "WOH" indicates sampler pushed using the weight of the hammer.

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
PPM	Parts per million
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
NT	Not Tested

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

KEY TO EXPLORATION LOGS

GeoEngineers

FIGURE E-1

Rev. 02/16

Drilled: Start 6/26/2015 End 6/26/2015	Total Depth (ft): 41	Logged By: JML Checked By: JER	Driller: Environmental West Explorations, Inc.	Drilling Method: Sonic	
Surface Elevation (ft) Vertical Datum: 2346.89		Hammer Data: NA		Drilling Equipment: Speedstar Sonic Rig	
Easting (X): 2460404 Northing (Y): 220788		System Datum: WA State Plane,North NAD83 (feet)		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft): None Observed	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2345	0		65			1		GP	Brown fine to coarse gravel with sand (loose, moist) (fill)			
								CL	Brown silty clay (medium stiff, moist) (fill)	NS	<1	
	5							SM	Gray silty sand (loose, moist) (fill)	NS	<1	
2340			38			2		MSW	MSW (wood, plastic, paper)	NS	<1	
	10							SP	Brown fine to coarse sand with trace silt and occasional gravel (medium dense, moist) (fill)			
2335								MSW	MSW	NS	<1	
								SP	Brown fine to coarse sand with trace silt and occasional gravel (medium dense, moist) (fill)			
	15							MSW	MSW (wood, cloth, plastic) with gravel			
2330			54			3				NS	<1	
	20							SM	Brown silty fine to medium sand with gravel (medium dense, moist) (fill)	NS	<1	
2325								MSW	MSW (plywood, paper, insulation, plastic)	NS	<1	
	25											
2320			120			4		SM	Gray silty sand with gravel (medium dense, moist)	NS	<1	
	30							ML	Light gray silt with trace sand and occasional gravel (loose, moist)			
2315								BASALT	Basalt			
	35											

Note: See Figure E-1 for explanation of symbols.

Log of Boring LFB-1

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-2
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2310	35									
	40									

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring LFB-1 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-2
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 6/26/2015	End 6/29/2015	Total Depth (ft)	67	Logged By JML / Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Surface Elevation (ft) Vertical Datum	2343.78		Hammer Data	NA		Drilling Equipment	Speedstar Sonic Rig		
Easting (X) Northing (Y)	2460402 220398		System Datum	WA State Plane,North NAD83 (feet)		Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:							None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1		SM	Brown silty fine to coarse sand with gravel and organic matter (roots) (medium dense, moist) (fill)	NS	<1	
								CL	Brown silty clay (medium stiff, moist) (fill)			
2340	5									NS	<1	
			44			2		SM	Gray silty fine to medium sand with gravel (loose, moist) (fill)			
2335										NS	<1	
	10							MSW	MSW (wood, plastic, glass, paper, metal)			
2330										NS	<1	
	15		48			3						
2325								GP	Gray gravel with trace silt and sand (loose, moist) (fill)	NS	<1	
	20									NS	<1	
2320												
	25							MSW	MSW (plastic, paper, wood)			
			60			4		MSW	MSW (plastic, paper, wood, glass, carpet)			
2315										NS	<1	
	30											
2310										NS	<1	
	35											

Note: See Figure E-1 for explanation of symbols.

Log of Boring LFB-2

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-3
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35											
			84			5		MSW	MSW (wood, styrofoam) with trace silty sand and occasional gravel (loose, moist)	NS	<1	
2305	40											
								SM	Brown silty sand with gravel and MSW (waste-wood, paper) (medium dense, moist) (fill)	NS	<1	
2300	45							MSW	MSW (wood, paper, carpet) (medium dense, moist)			
			100			6		MSW	MSW (wood, paper, plastic) with black silty sand and occasional gravel	NS	<1	
2295	50									NS	<1	
								SM	Brown silty sand with gravel (loose, moist)			
2290	55											
			132			7				NS	<1	
2285	60											
										NS	<1	
2280								SP	Gray fine to medium sand with trace silt and occasional gravel (loose, moist)			
	65							SM	Brown silty sand with gravel and clay (medium dense, moist)	NS	<1	

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring LFB-2 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-3
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 6/29/2015 End 6/30/2015	Total Depth (ft) 87	Logged By JML Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2353.95	Top of Casing Elevation (ft)	2356.58
Easting (X) Northing (Y)	2461119.469 219657.372	Horizontal Datum	

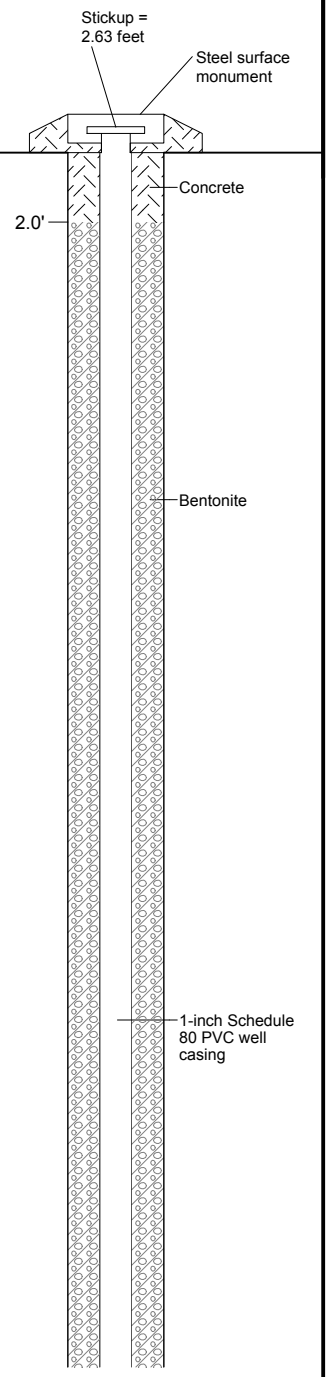
DOE Well I.D.: BIX-959
A 1 (in) well was installed on 6/30/2015 to a depth of 54 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0	36		1			SP-SM	Brown fine to coarse sand with silt and occasional gravel (loose, moist) (fill)	NS	<1
2350	5						MSW/ SP-SM	Black fine to medium sand with silt, clay and occasional gravel with MSW (wood, plastic, metal, paper) (medium dense, moist) (fill)		
		96		2					NS	<1
2345	10									
									NS	<1
2340	15									
		68		3					NS	<1
2335	20								NS	<1
2330							SP-SM	Gray fine to medium sand with silt and occasional gravel (loose, moist) (fill)		
	25								NS	<1
		62		4			MSW/ SP	MSW (paper, plastic, wood, metal) with fine to medium sand and occasional gravel		
2325	30								NS	<1
2320	35									

WELL LOG



Note: See Figure E-1 for explanation of symbols.

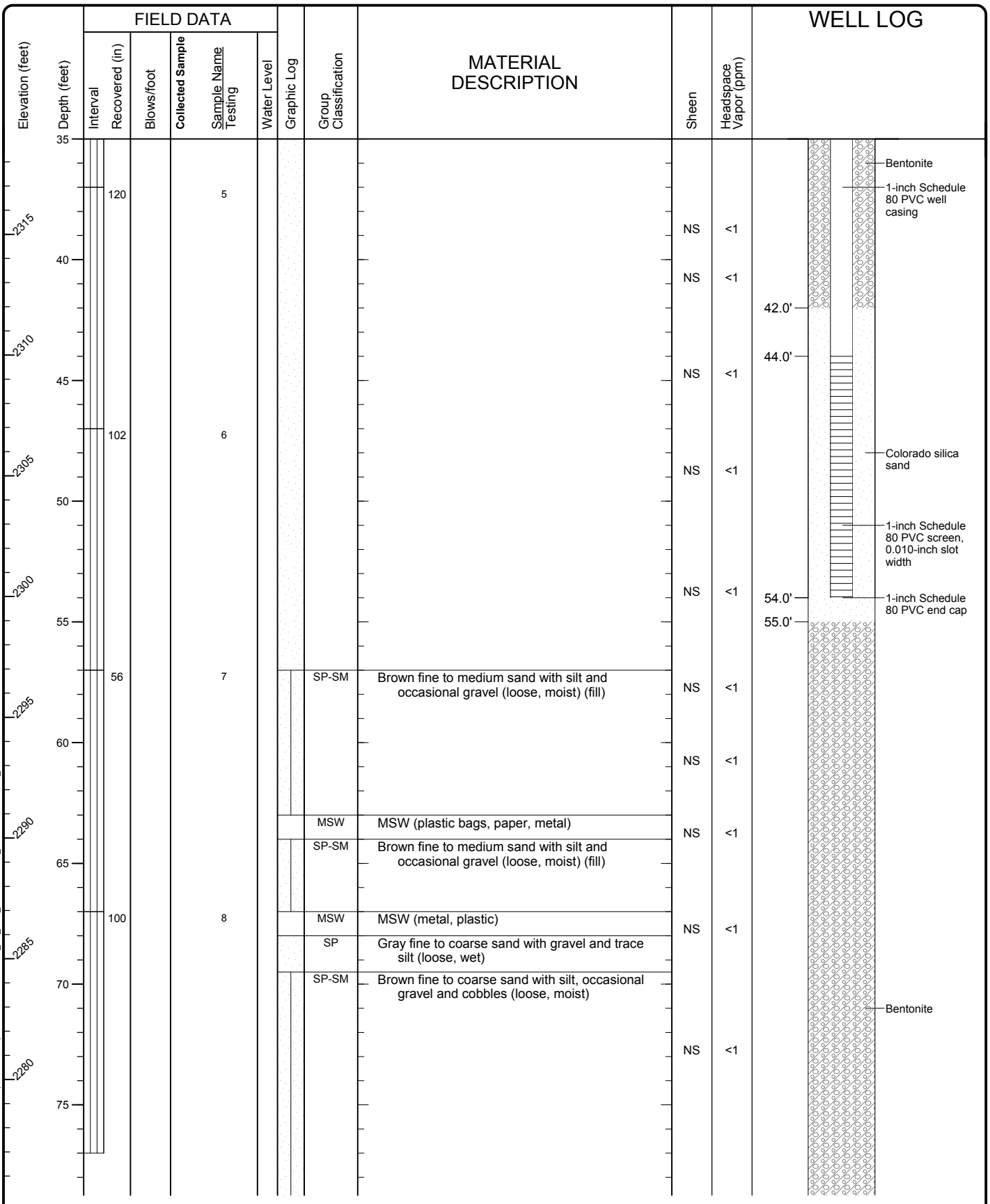
Log of Monitoring Well LFB-3

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-4
Sheet 1 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

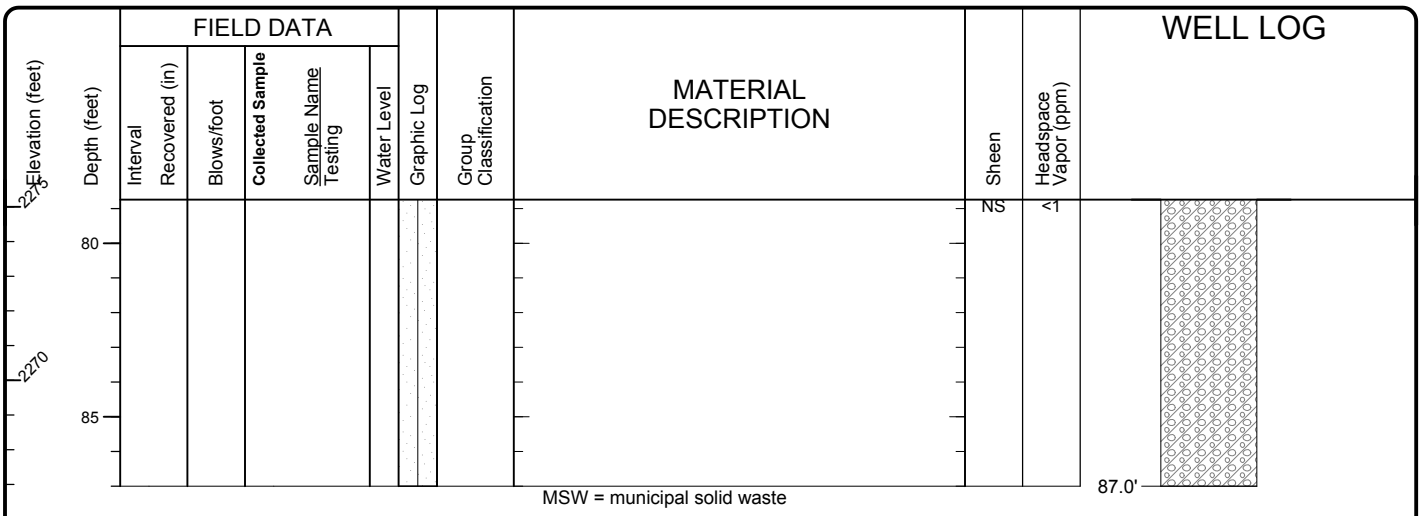
Log of Monitoring Well LFB-3 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-4
Sheet 2 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-3 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-4
Sheet 3 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start 6/30/2015 End 7/1/2015	Total Depth (ft) 107	Logged By JML Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2353.09	Top of Casing Elevation (ft)	2355.76
Easting (X) Northing (Y)	2460886.937 219127.901	Horizontal Datum	

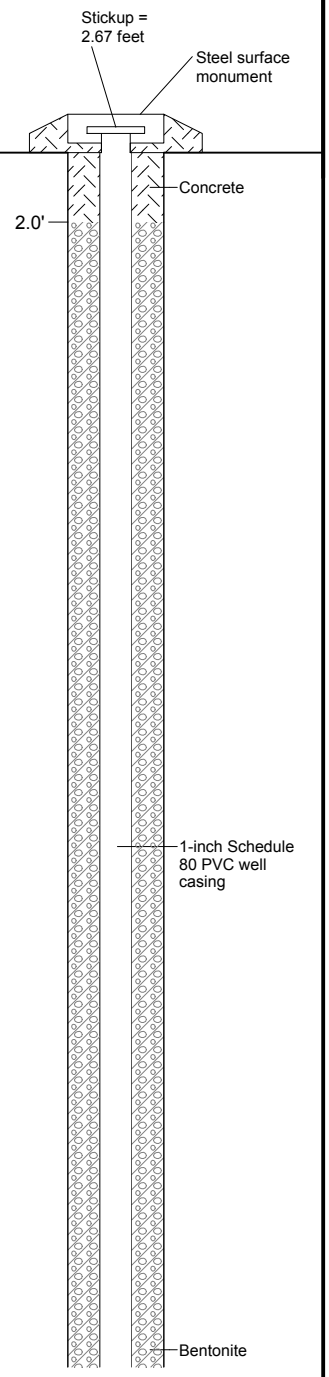
DOE Well I.D.: BIX-952
A 1 (in) well was installed on 7/1/2015 to a depth of 79 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
None Observed		

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0	84		1			SP-SM	Brown fine to coarse sand with gravel and silt (medium dense, moist) (fill)	NS	<1
2350							MSW	MSW (paper, plastic, wood, metal) with fine to coarse sand and gravel (medium dense, moist)		
	5								NS	<1
2345		78		2						
	10						SP-SM	Gray fine to medium sand with silt (loose, moist) (fill)	NS	<1
2340							MSW	MSW (paper, plastic, wood, metal)		
	15								NS	<1
2335		108		3			SM	Brown silty sand with occasional gravel (medium dense, moist) (fill)		
	20								NS	<1
									NS	<1
2330							ML	Brown silt (medium stiff, moist) (fill)		
	25								NS	<1
							SM	Gray silty sand with occasional gravel (soft, moist) (fill)		
2325		72		4			MSW/ SP-SM	MSW (paper, plastic, carpet) with brown fine to coarse sand with silt and gravel (medium dense, moist) (fill)		
	30								NS	<1
2320										
	35									

WELL LOG



Note: See Figure E-1 for explanation of symbols.

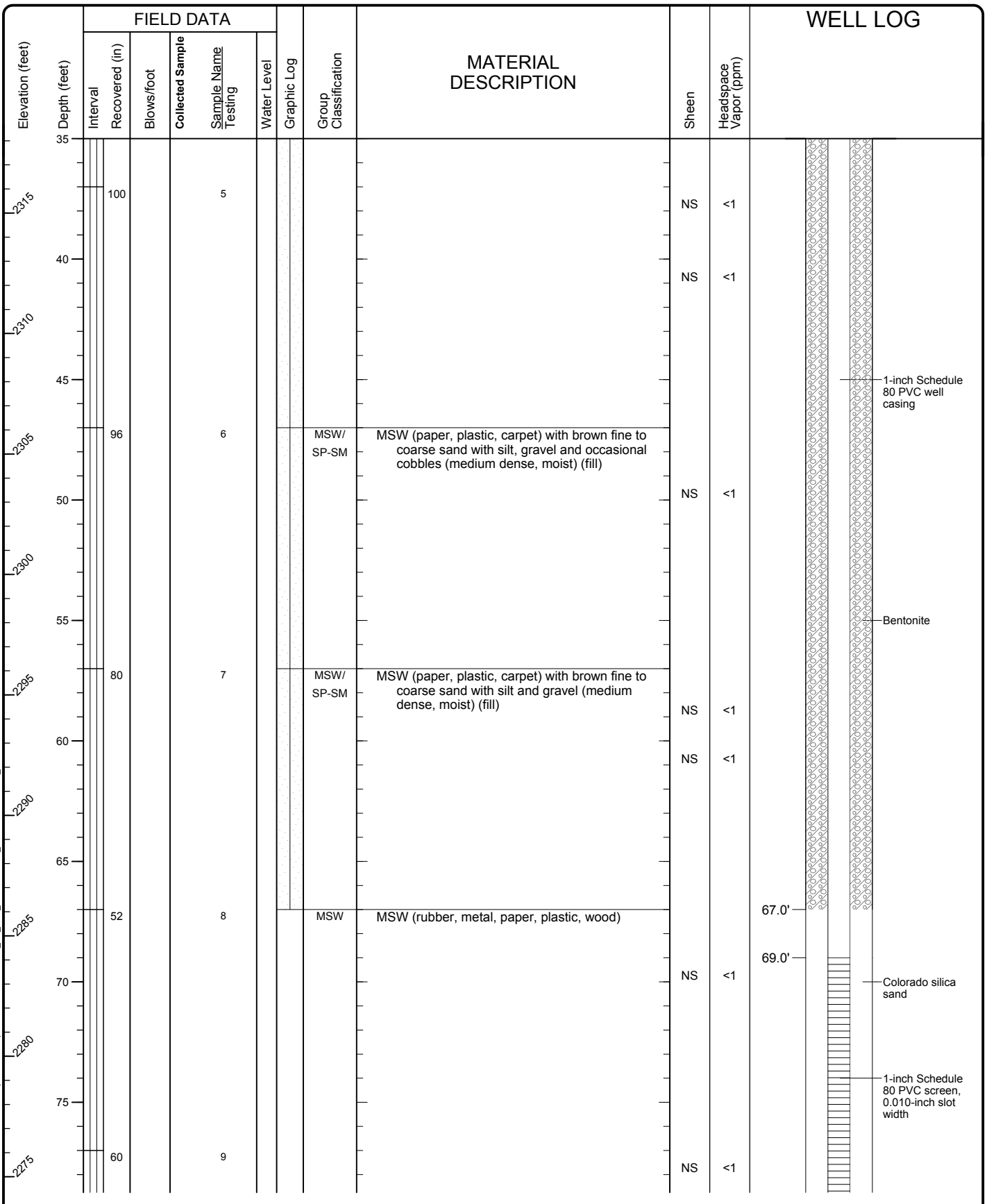
Log of Monitoring Well LFB-4

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-5
Sheet 1 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

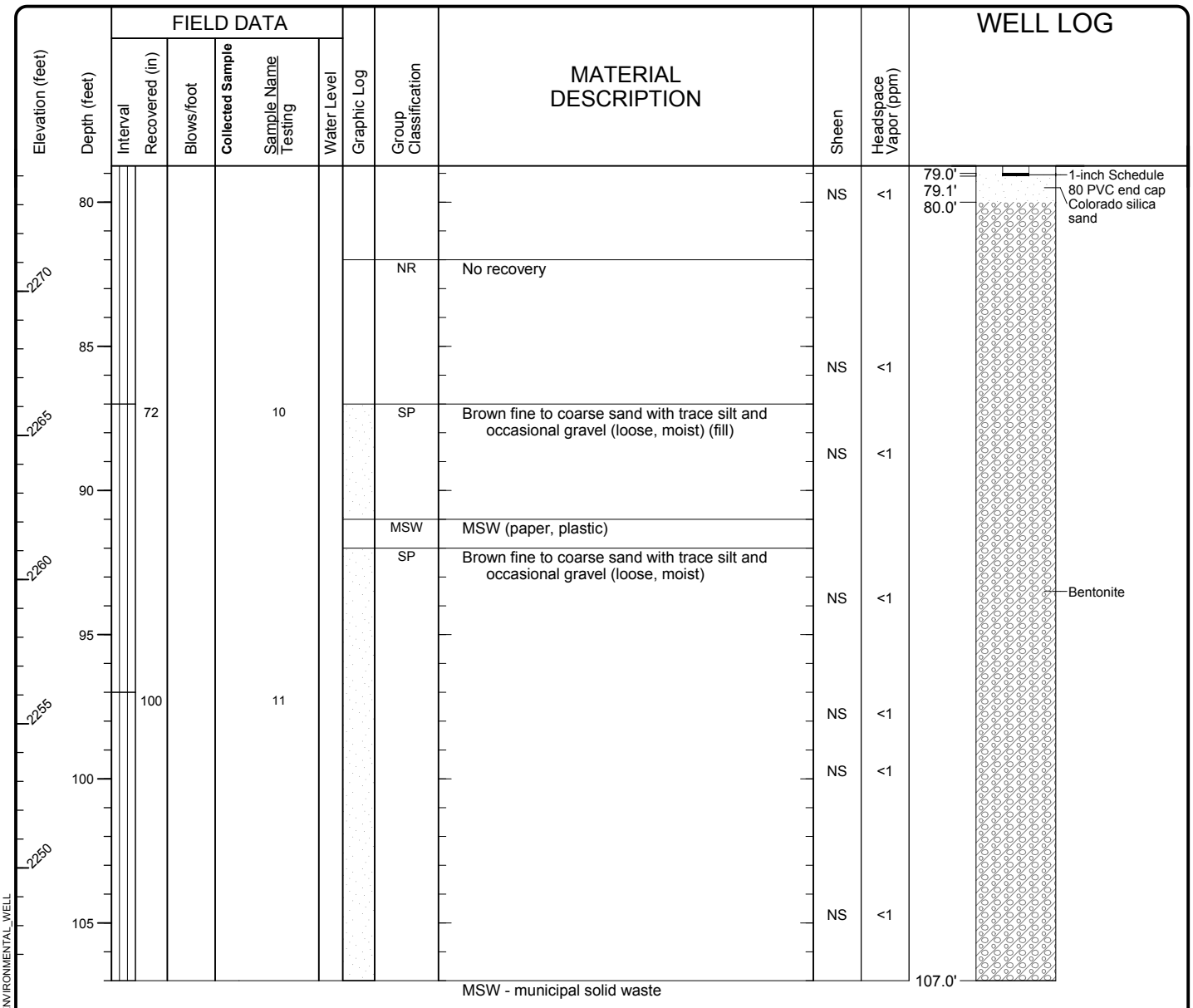
Log of Monitoring Well LFB-4 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-5
Sheet 2 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-4 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-5
Sheet 3 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/1/2015	7/1/2015	67	JML / JER	Environmental West Explorations, Inc.	Sonic

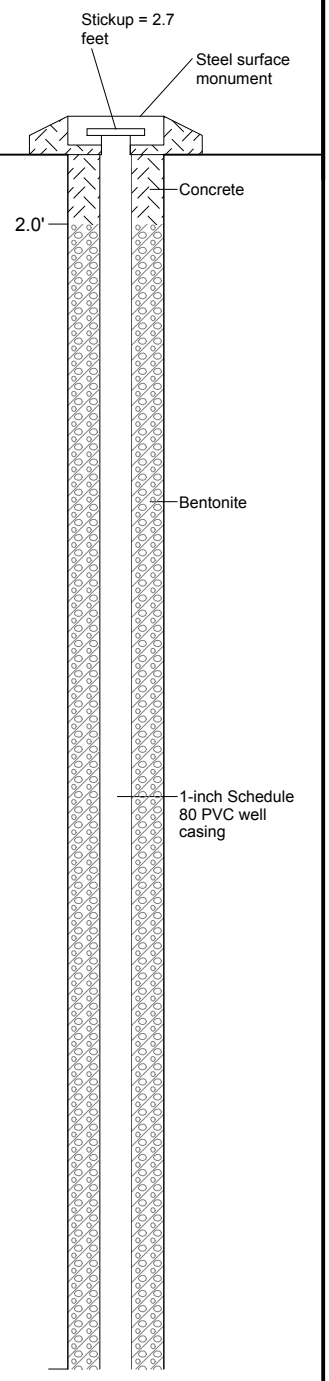
Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2281.5	Top of Casing Elevation (ft)	2284.22
Easting (X) Northing (Y)	2461399.328 219596.236	Horizontal Datum	

DOE Well I.D.: BIX-961
A 1 (in) well was installed on 7/2/2015 to a depth of 47 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2280	0	50				1			SM	Brown silty sand with occasional gravel and trace clay (loose, moist)	NS	<1
2275	5	60				2			MSW/ SM	Dark gray MSW (wood, plastic) with silty sand and occasional gravel (loose, moist)	NS	<1
2270	10										NS	<1
2265	15	68				3			MSW	MSW (metal, wires, wood, plastic, paper)	NS	<1
2260	20										NS	<1
2255	25	42				4						
2250	30								SP	Gray fine to coarse sand with trace silt, occasional gravel and MSW (metal and ash) (loose, moist)	NS	<1
									MSW	MSW (metal, wires, wood, plastic, paper) with trace dark gray fine to coarse sand (loose, moist)	NS	<1
	35											



Note: See Figure E-1 for explanation of symbols.

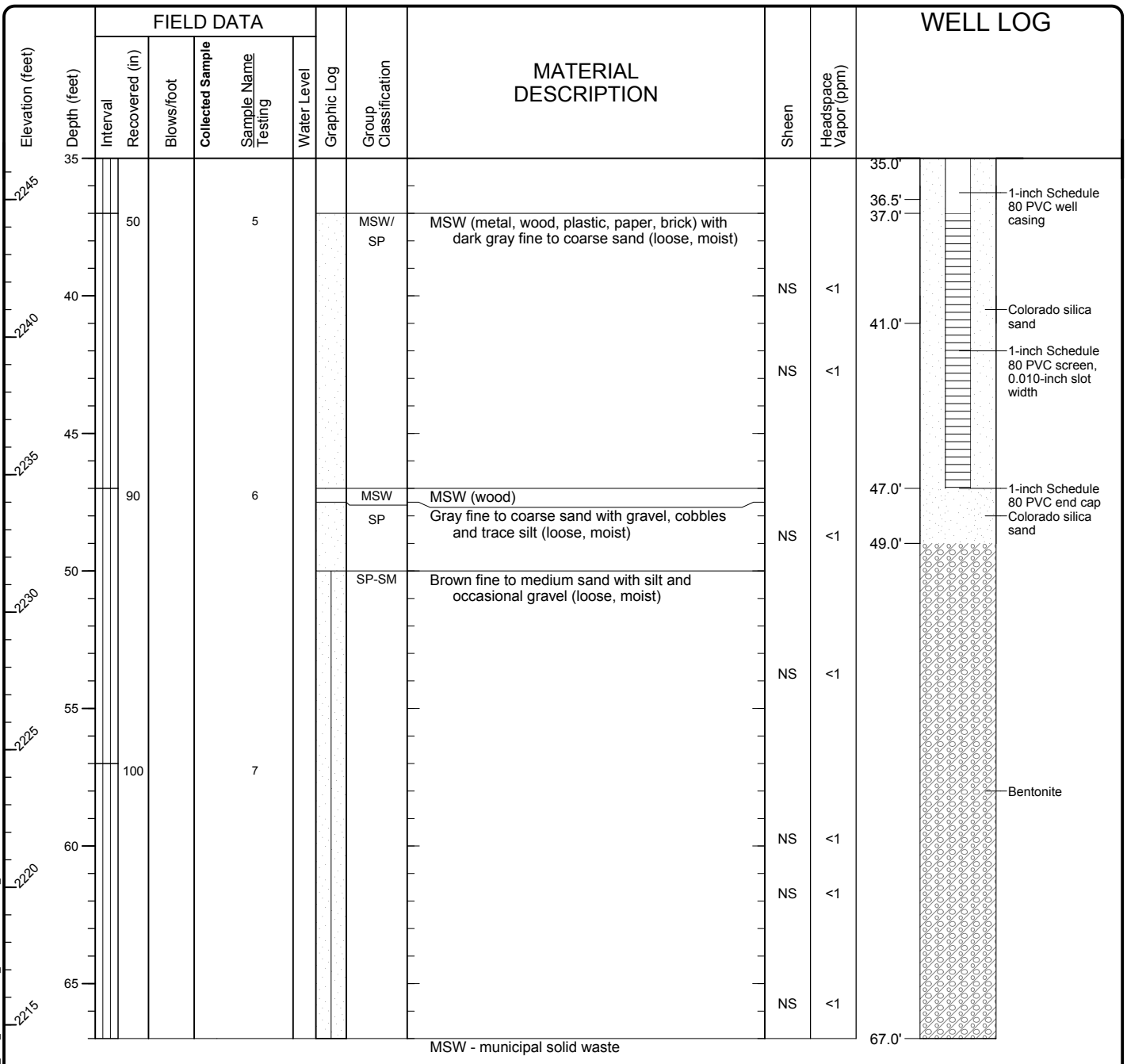
Log of Monitoring Well LFB-5

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-6
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-5 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-6
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/13/2015	7/13/2015	16	JML / JER	Environmental West Explorations, Inc.	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
2346.86	NA	Geoprobe 5400

Easting (X) Northing (Y)	System Datum	Groundwater
2460445 220798	WA State Plane,North NAD83 (feet)	Date Measured / Depth to Water (ft) / Elevation (ft): None Observed

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0							ML	Brown silt with trace sand and occasional gravel (medium stiff, moist) (fill)	NS	<1	
2345			31			1		SP-SM	Brown fine to medium sand with silt and occasional gravel (medium dense, moist) (fill)	NS	<1	
										NS	<1	
			14			2		MSW/ ML	Brown silt with MSW (wood debris) (medium stiff, moist)			
	5											
2340								GP-GM	Brown gravel with silt and trace sand (medium dense, moist) (fill)	NS	<1	
			4			3						
	10							GP/MSW	Brown gravel with sand, trace silt and MSW (wood, plastic) (loose, moist)			
2335			8			4				NS	<1	
			0			5						
	15											

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-6

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-7
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 7/13/2015	End 7/13/2015	Total Depth (ft)	12	Logged By JML Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	2346.77		Hammer Data	NA		Drilling Equipment	Geoprobe 5400		
Easting (X) Northing (Y)	2460452 220738		System Datum	WA State Plane,North NAD83 (feet)		Groundwater Date Measured	Depth to Water (ft) None Observed	Elevation (ft)	
Notes:									

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2345	0	45		1		ML	Brown silt with trace sand and occasional gravel (medium stiff, moist) (fill)	NS	<1	
						SP-SM	Brown fine to coarse sand with silt and occasional gravel (medium dense, moist) (fill)	NS	<1	
		30		2				NS	<1	
	5					MSW	MSW (wood debris)			
2340						SP	Brown fine to coarse sand with trace silt and occasional gravel (medium dense, moist) (fill)			
		0		3		NR	No Recovery			
	10									
2335										

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-6A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-8
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 7/13/2015 End 7/13/2015	Total Depth (ft) 10	Logged By JML Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum 2345.74		Hammer Data NA		Drilling Equipment Geoprobe 5400
Easting (X) 2460467 Northing (Y) 220549		System Datum WA State Plane,North NAD83 (feet)		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft): None Observed
Notes:				

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2345	0	36		1		ML	Brown silt with trace sand (very stiff, moist) (fill)	NS	<1	
						SP	Gray fine to medium sand with trace silt (loose, moist) (fill)			
		21		2		MSW	MSW (wood, plastic) (fill)	NS	<1	
2340	5					SP	Gray fine to coarse sand with trace silt and occasional gravel (loose, moist) (fill)			
		18		3				NS	<1	
	10						MSW (wood, plastic, paper) from 9.3 to 9.5 feet			

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-7

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-9
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/13/2015	7/13/2015	15	JML / JER	Environmental West Explorations, Inc.	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
2344.76	NA	Geoprobe 5400

Easting (X) Northing (Y)	System Datum	Groundwater
2460476 220481	WA State Plane,North NAD83 (feet)	Date Measured: None Observed; Depth to Water (ft); Elevation (ft)

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1		ML	Brown silt with trace sand and occasional gravel (very stiff, moist) (fill)	NS	<1	
2340	5		34			2		SP-SM	Gray fine to medium sand with silt and gravel (medium dense, moist) (fill)	NS	<1	
								MSW	MSW (wood, plastic, paper) and occasional gravel			
								SP	Gray fine to coarse sand with gravel and trace silt (loose, moist) (fill)	NS	<1	
2335	10		5			3						
			6			4		MSW	MSW (wood, plastic, paper) and basalt rock (fill)			
2330	15							NR	No recovery			

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-7A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-10
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/16/2015	7/16/2015	19	JML / JER	Environmental West Explorations, Inc.	Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2359.15	Top of Casing Elevation (ft)	2361.80
Easting (X) Northing (Y)	2460308.869 220933.297	Horizontal Datum	

DOE Well I.D.: BIX-951
A 1 (in) well was installed on 7/16/2015 to a depth of 16 (ft).

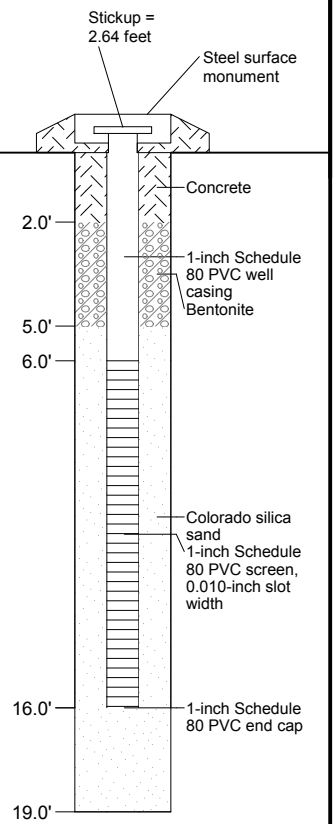
Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0		36			1			ML	Brown silt with trace sand (medium stiff, moist) (fill)	NS	<1
2355	5										NS	<1
									ML	Brown silt with sand and occasional gravel (loose, moist) (fill)		
			78			2			CL/MSW	Brown clay with MSW (wood, insulation) (fill)		
2350	10										NS	<1
									CL/MSW	MSW (wood, paper, plastic) with black/brown gravel and fine to medium sand (fill)		
2345	15										NS	<1
			12			3			SP-SM	Brown fine to medium sand with silt and gravel (loose, moist)	NS	<1
									BASALT	Basalt		

MSW = municipal solid waste

WELL LOG



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-8

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-11
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/16/2015	7/16/2015	20	JML / JER	Environmental West Explorations, Inc.	Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2356.13	Top of Casing Elevation (ft)	2358.66
Easting (X)	2460452.18	Horizontal Datum	
Northing (Y)	220885.979		

DOE Well I.D.: BIX-954
A 1 (in) well was installed on 7/16/2015 to a depth of 15 (ft).

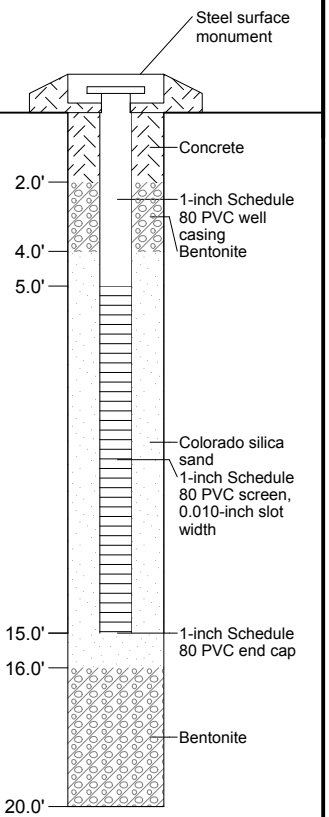
Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2355	0		36			1			SP-SM	Brown fine to coarse sand with silt and occasional gravel (loose, moist) (fill)	ND	<1
									CL	Brown clay with occasional gravel (very stiff, moist) (fill)	ND	<1
2350	5								MSW	MSW (wood, plastic, paper) with sand and gravel (fill)		
			70			2			GP	Brown fine to coarse gravel with sand, trace silt, cobbles and MSW (wood, plastic, paper) (loose, moist) (fill)	ND	<1
2345	10								GP	Brown fine to coarse gravel with sand, trace clay and occasional cobbles (loose, moist)	ND	<1
									GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (loose, moist)		
2340	15		66			3					ND	<1
	20								BASALT	Basalt		

MSW = municipal solid waste

WELL LOG



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-9

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-12
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start 7/16/2015	End 7/16/2015	Total Depth (ft) 77	Logged By JML / Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2352.2	Top of Casing Elevation (ft)	2354.70
Easting (X) / Northing (Y)	2460528.342 / 220368.632	Horizontal Datum	

DOE Well I.D.: BIX-958
A 1 (in) well was installed on 7/16/2015 to a depth of 45 (ft).

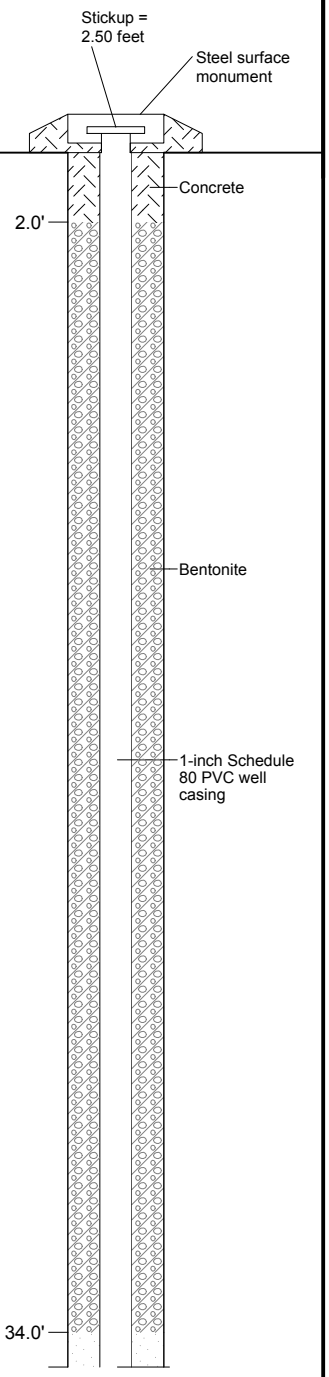
Groundwater

Date Measured	Depth to Water (ft)	Elevation (ft)
None Observed		

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2350	0		84			1			CL	Brown clay with trace sand and occasional gravel (very stiff, moist) (fill)	NS	<1
	5								GP-GM/ MSW	Gray gravel with silt, sand and MSW (wood) (loose, moist) (fill)		
2345			52			2			SM	Brown silty sand with gravel (loose, moist) (fill)	NS	<1
	10								SP-SM	Gray fine to coarse sand with silt, gravel and MSW (wood, plastic) (medium dense, moist) (fill) (odor from waste)	NS	<1
2340	15											
2335			90			3			MSW	MSW (wood, plastic, paper, brick) with silt, gravel and sand	NS	<1
2330	20										NS	<1
	25										NS	<1
2325			51			4						
2320	30										NS	<1
	35										NS	<1

WELL LOG



Note: See Figure E-1 for explanation of symbols.

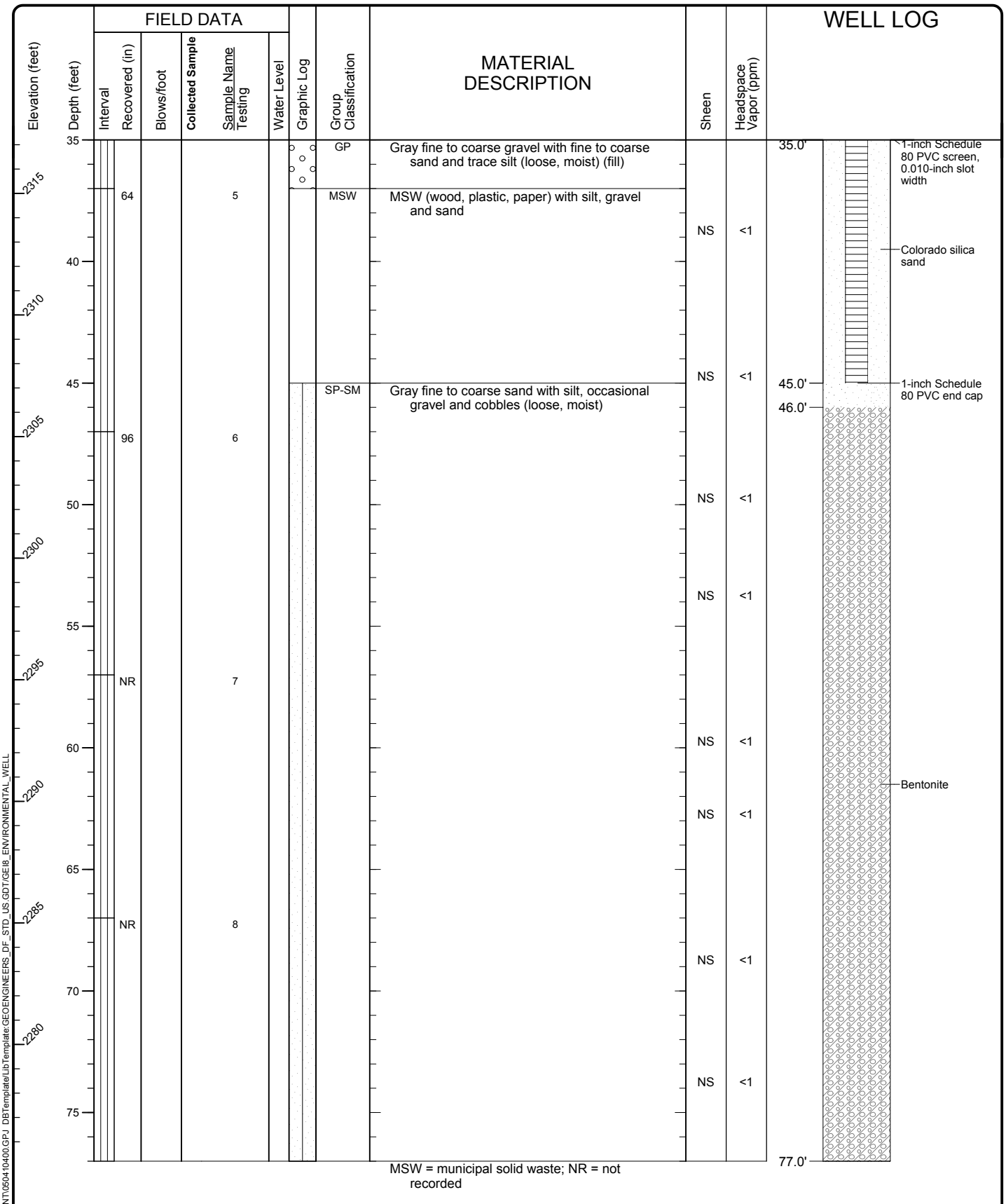
Log of Monitoring Well LFB-10

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-13
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-10 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-13
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/17/2015	7/17/2015	67	JML / JER	Environmental West Explorations, Inc.	Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2354.32	Top of Casing Elevation (ft)	2356.51
Easting (X) Northing (Y)	2460333.755 220400.542	Horizontal Datum	

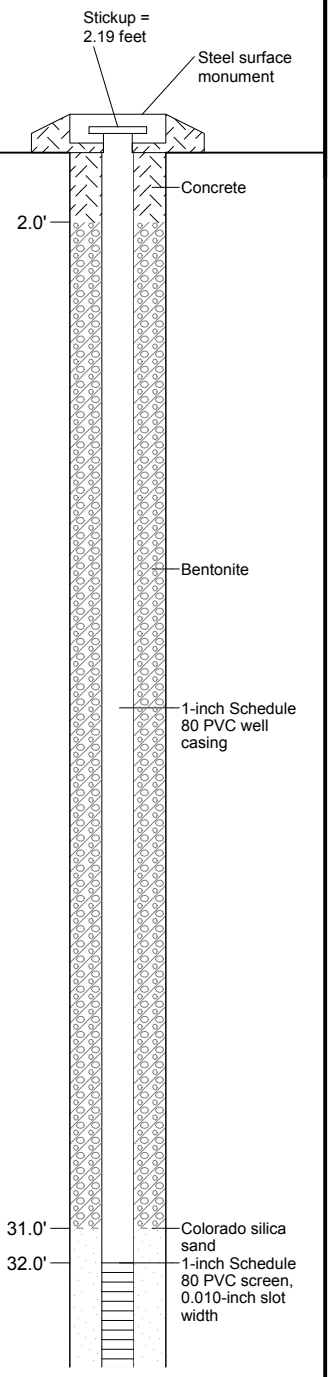
DOE Well I.D.: BIX-956
A 1 (in) well was installed on 7/17/2015 to a depth of 44 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0		52			1			CL	Brown clay with trace sand and occasional gravel (stiff, moist) (fill)	NS	<1
2350	5											
			36			2			MSW/ SP-SM	MSW (wood, plastic, paper) with brown fine to coarse sand with silt (odor from waste)	NS	<1
2345	10										NS	<1
2340	15										NS	<1
			24			3						
2335	20										NS	<1
2330	25										NS	<1
			14			4						
2325	30										NS	<1
2320	35										NS	<1

WELL LOG



Note: See Figure E-1 for explanation of symbols.

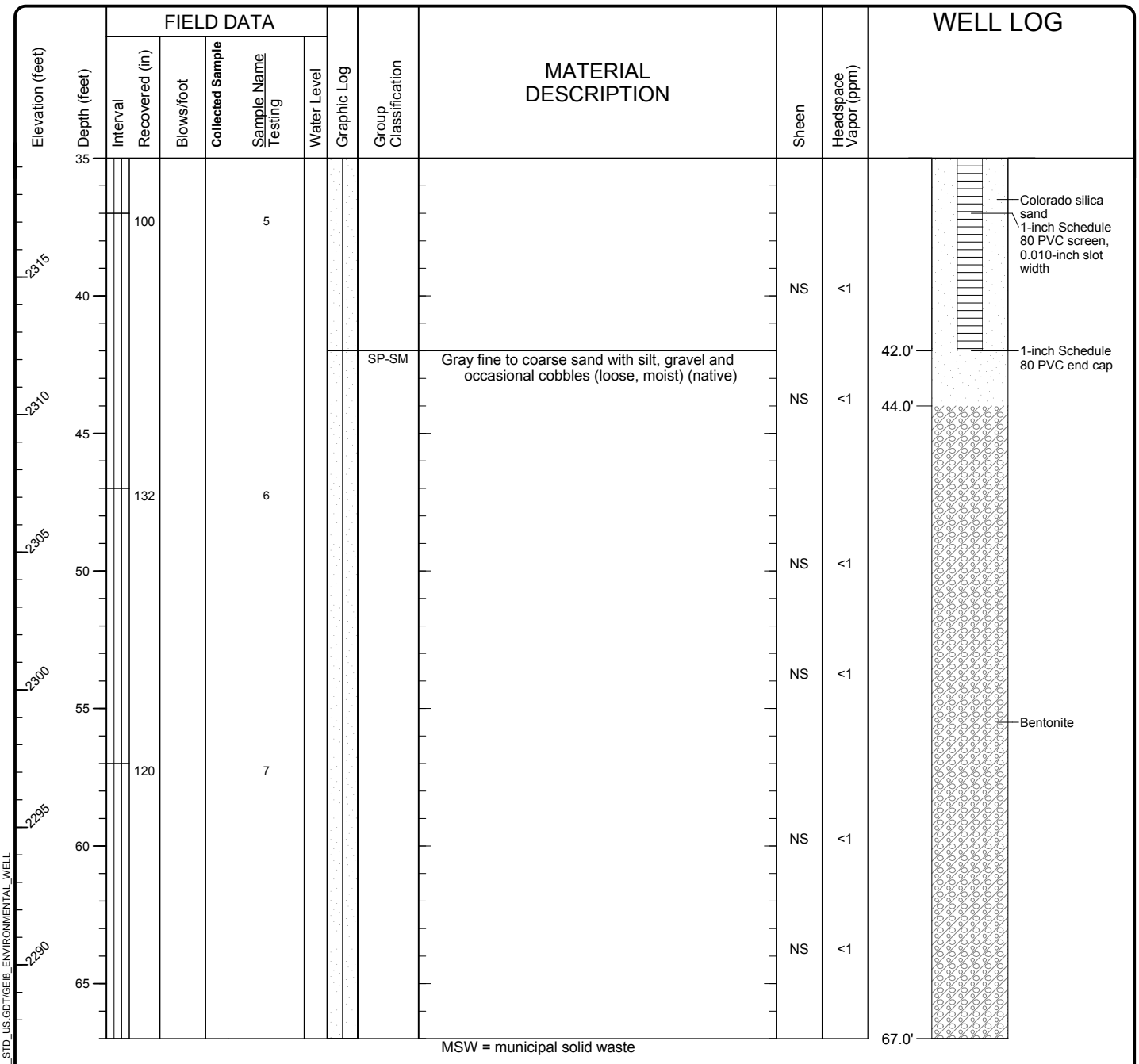
Log of Monitoring Well LFB-11

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-14
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LFB-11 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-14
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled	Start 7/27/2015	End 7/27/2015	Total Depth (ft)	57	Logged By JML / Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Surface Elevation (ft) Vertical Datum	2316.03		Hammer Data	NA		Drilling Equipment	Speedstar Sonic Rig		
Easting (X) 2460794 / Northing (Y) 219568			System Datum	WA State Plane,North NAD83 (feet)		Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:							None Observed		

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2315	0		29			1		SP-SM	Brown silty fine to coarse sand (loose, moist) (fill)			
								MSW	MSW (wood, plastic, paper)		<1	
2310	5		36			2					<1	
2305	10							SM/ MSW	Brown-gray silty fine to medium sand with gravel and MSW (wood, plastic, paper) (medium dense, moist) (fill)		1.5	
			40			3		SP-SM	Gray silty fine to medium sand with gravel (loose, moist) (fill)		<1	
2300	15							MSW	MSW (wood, brick, organic debris)			
			46			4						
2295	20										<1	
2290	25		53			5						
								SM	Brown silty fine to medium sand (medium dense, moist) (native)		<1	
2285	30							GP	Brown fine to coarse gravel (loose, moist)			
								SM	Brown silty fine to medium sand with occasional gravel and cobbles (loose, moist)			
	35										<1	

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-12

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-15
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2280	35									
		48		6						
2275	40									
2270	45	40		7						
2265	50									
2260	55									

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-15
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 7/27/2015	End 7/27/2015	Total Depth (ft)	87	Logged By / Checked By	JML / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Surface Elevation (ft) Vertical Datum	2287.18		Hammer Data	NA			Drilling Equipment	Speedstar Sonic Rig		
Easting (X) / Northing (Y)	2460756 / 218893		System Datum	WA State Plane,North NAD83 (feet)			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:							None Observed			

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		54			1		SP-SM	Brown fine to coarse sand with silt and occasional gravel (loose, moist) (fill)			
2285								MSW	MSW (wood, plastic, paper)			
								SP-SM	Brown fine to coarse sand with silt and occasional gravel (loose, moist) (fill)			
	5							MSW	MSW (wood, plastic, paper)			
2280			38			2		SM	Gray silty fine to medium sand with occasional gravel (loose, moist) (fill)			
								MSW	MSW (wood, plastic)			
	10							SP	Gray fine to coarse sand with trace silt (loose, moist)			
2275												
	15											
2270			0			3						No recovery from 17 to 27 feet
	20											
2265												
	25											
2260			60			4		SM/ MSW	Gray silty fine to medium sand with MSW wood, paper plastic, metal) (loose, moist)			
	30											
2255												
	35											

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-13

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-16
Sheet 1 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35											
2250			58			5		SM	Gray silty fine to coarse sand with gravel and occasional cobbles (medium dense, moist) (fill)			
	40											
2245												
								MSW	MSW (wood, plastic, metal, brick)			
	45											
2240			50			6		SM/ MSW	Gray silty fine to coarse sand with gravel and MSW (wood, plastic, paper)			
	50											
2235												
	55											
2230			46			7						
	60											
2225												
	65											
2220			72			8						
	70											
2215								SP	Brown fine to medium sand with occasional gravel (loose, moist) (native)			
	75											

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-16
Sheet 2 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
210		120		9						
	80									
205										
	85									

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-16
Sheet 3 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 7/28/2015	End 7/28/2015	Total Depth (ft)	107	Logged By JML / Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Surface Elevation (ft) Vertical Datum	2262.27		Hammer Data	NA		Drilling Equipment	Speedstar Sonic Rig		
Easting (X) 2461584 / Northing (Y) 219824			System Datum	WA State Plane,North NAD83 (feet)		Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:						None Observed			

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0	30		1		SM	Brown silty fine to coarse sand with occasional gravel (loose, moist) (fill)			
2260						SM/ MSW	Gray silty fine to coarse sand with gravel and MSW (wood, plastic, brick, cloth, insulation, paper)		<1	
	5								<1	
2255		21		2						
	10								<1	
2250										
	15								<1	
2245		75		3						
	20								<1	
2240										
	25								<1	
2235		114		4						
	30								<1	
2230										
	35								<1	

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-14

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-17
Sheet 1 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35									
2225		112		5		SP/ MSW	Gray fine to medium sand with trace silt, occasional gravel and MSW (wood, plastic) (loose, moist)			
	40								<1	
2220										
									<1	
	45									
2215		108		6		MSW	MSW (wood, plastic)			
									<1	
						SP-SM	Gray fine to medium sand with silt (loose, moist)			
	50									
2210										
									<1	
	55									
2205		102		7		SM	Gray silty fine to medium sand with occasional gravel (loose, moist) (fill)			
	60									
2200										
									<1	
	65									
2195		120		8						
	70								<1	
2190										
									<1	
	75									

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-17
Sheet 2 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2185	80	120		9					<1	
2180	85	120		10					<1	
2175	90					SM/ MSW	Gray silty fine to medium sand with occasional gravel and MSW		<1	
2170	95					MSW	MSW (wood, wire, paper plastic)			
2165	100	NR				SP-SM	Brown fine to coarse sand with silt and occasional gravel and cobbles (loose, moist) (native)		<1	
2160	105									

MSW = municipal solid waste; NR = not recorded

Note: See Figure E-1 for explanation of symbols.

Log of Direct-Push Boring LFB-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-17
Sheet 3 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/29/2015	7/29/2015	57	JML / JER	Environmental West Explorations, Inc.	Sonic

Hammer Data	NA	Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2252.39	Top of Casing Elevation (ft)	2254.96
Easting (X) Northing (Y)	2460762.197 218603.478	Horizontal Datum	

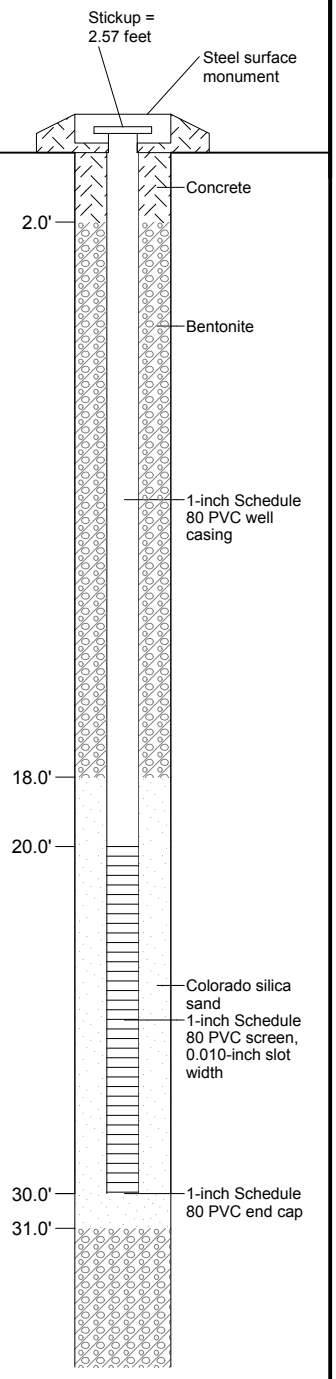
DOE Well I.D.: BIX-963
A 1 (in) well was installed on 7/29/2015 to a depth of 31 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2250	0		31			1			SP	Brown fine to coarse sand with gravel and trace silt (loose, moist) (fill)	NS	<1
									MSW	MSW (plastic)		
	5								ML	Brown silt with fine to coarse sand and occasional gravel (loose, moist) (fill)		
									MSW	MSW (insulation, paper, plastic)		
2245			55			2			SP-SM/ MSW	Brown fine to coarse sand with silt, occasional gravel and cobbles, and MSW (brick, wood, plastic, paper, rope) (loose, moist)	NS	<1
2240	10										NS	<1
	15											
2235			36			3					NS	<1
2230	20											<1
	25										NS	<1
2225			21			4						
2220	30										NS	<1
	35											

WELL LOG



Note: See Figure E-1 for explanation of symbols.

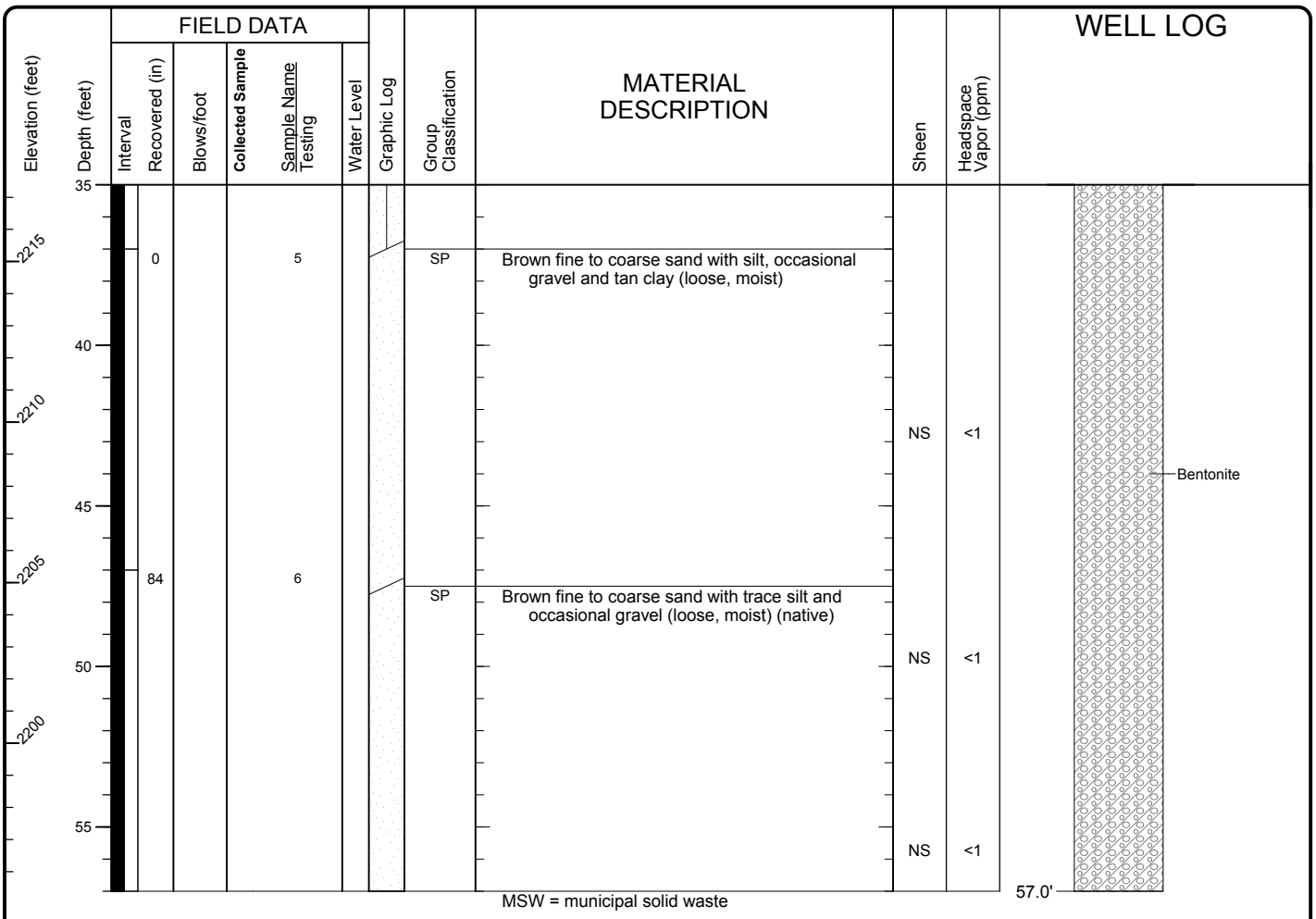
Log of Monitoring Well LBF-15

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-18
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LBF-15 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-18
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	7/29/2015	7/29/2015	47	JML	JER	Environmental West Explorations, Inc.	Sonic

Hammer Data	NA	Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2240.93	Top of Casing Elevation (ft)	2243.06
Easting (X) Northing (Y)	2460980.98 218656.735	Horizontal Datum	

DOE Well I.D.: BIX-965
A 1 (in) well was installed on 7/29/2015 to a depth of 30 (ft).

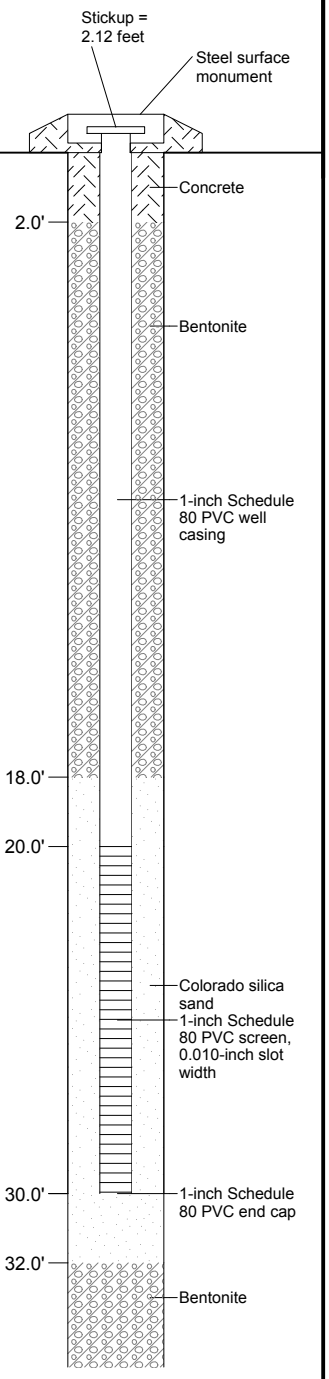
Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
	None Observed	

Notes:

FIELD DATA

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2240	0		37			1			SP	Brown fine to coarse sand with trace silt and occasional gravel (loose, moist) (fill)		<1
									SP/ MSW	Brown fine to coarse sand with cobbles and MSW (metal, paper, plastic)		
2235	5											<1
									SM	Light brown silty fine to medium sand (loose, moist) (fill)		
			60			2			SP/ MSW	Brown fine to coarse sand with gravel, cobbles, trace silt and MSW (brick, plastic, paper, rubber) (medium dense, moist) (fill)		<1
2230	10											
												<1
2225	15											
			77			3						<1
2220	20											
												<1
2215	25											
			25			4				With trace clay and MSW (rubber)		<1
									BSLT	Basalt (boulder)		
2210	30								SP/ MSW	Brown fine to medium sand with occasional gravel, trace silt and MSW (wood, plastic) (loose, moist)		
												<1
	35								SM	Brown silty fine to medium sand with		

WELL LOG



Note: See Figure E-1 for explanation of symbols.

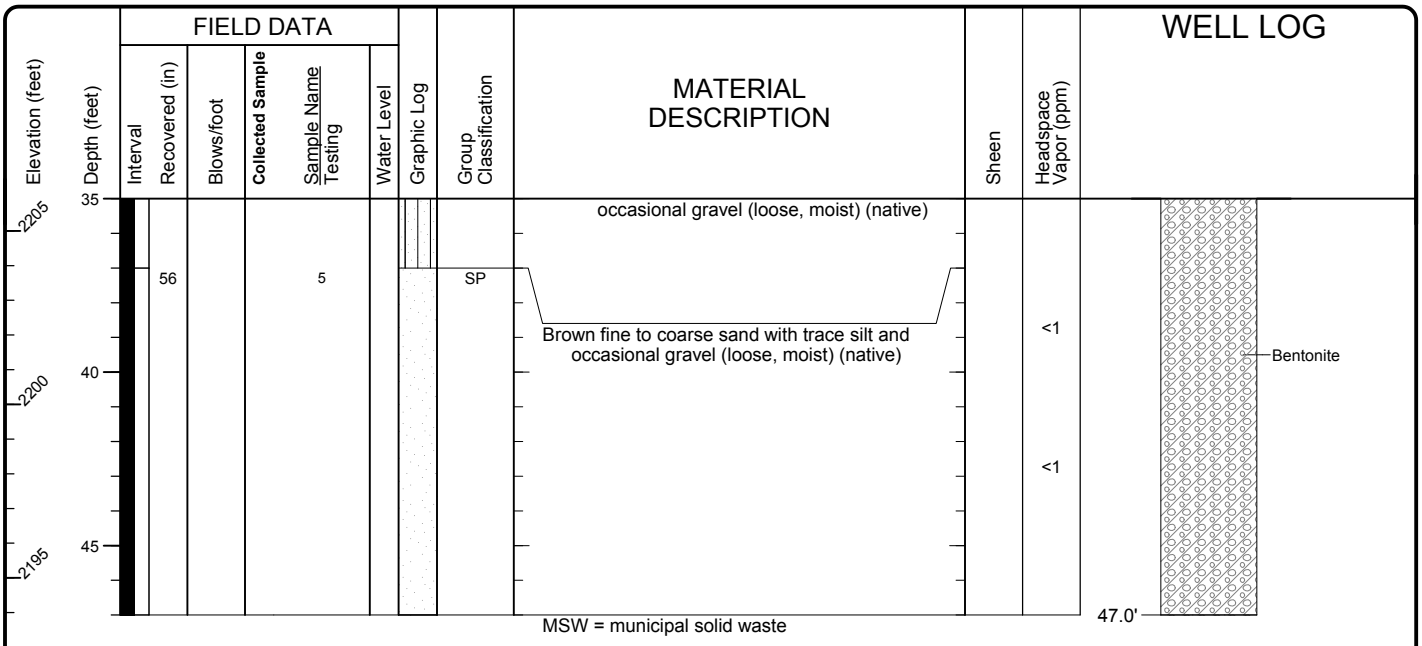
Log of Monitoring Well LBF-16

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-19
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LBF-16 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-19
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start 7/29/2015	End 7/29/2015	Total Depth (ft) 57	Logged By JML / Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Sonic

Hammer Data	NA	Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2241.49	Top of Casing Elevation (ft)	2244.11
Easting (X) / Northing (Y)	2461442.549 / 219338.811	Horizontal Datum	

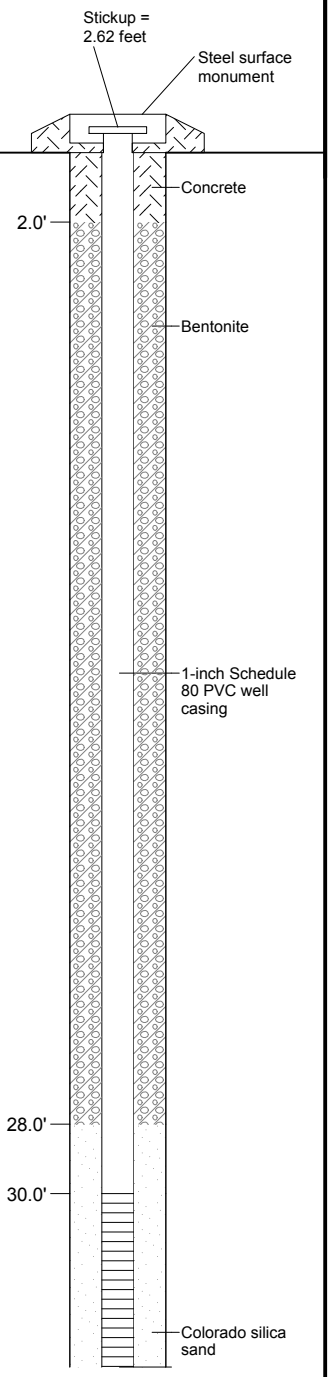
DOE Well I.D.: BIX-967
A 1 (in) well was installed on 7/29/2015 to a depth of 40 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
None Observed		

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2240	0		46			1			SP	Brown fine to coarse sand with trace silt and occasional gravel (loose, moist) (fill)	NS	<1
									SP-SM/ MSW	Gray fine to coarse sand with silt, occasional gravel, cobbles and MSW (wood, plastic, paper)		
2235	5		50			2					NS	<1
											NS	<1
2230	10											
											NS	<1
2225	15		62			3						
											NS	<1
2220	20											
											NS	<1
											NS	<1
2215	25		98			4				Broken basalt cobbles/boulders below 17 feet		
											NS	<1
2210	30											
	35											

WELL LOG



Note: See Figure E-1 for explanation of symbols.

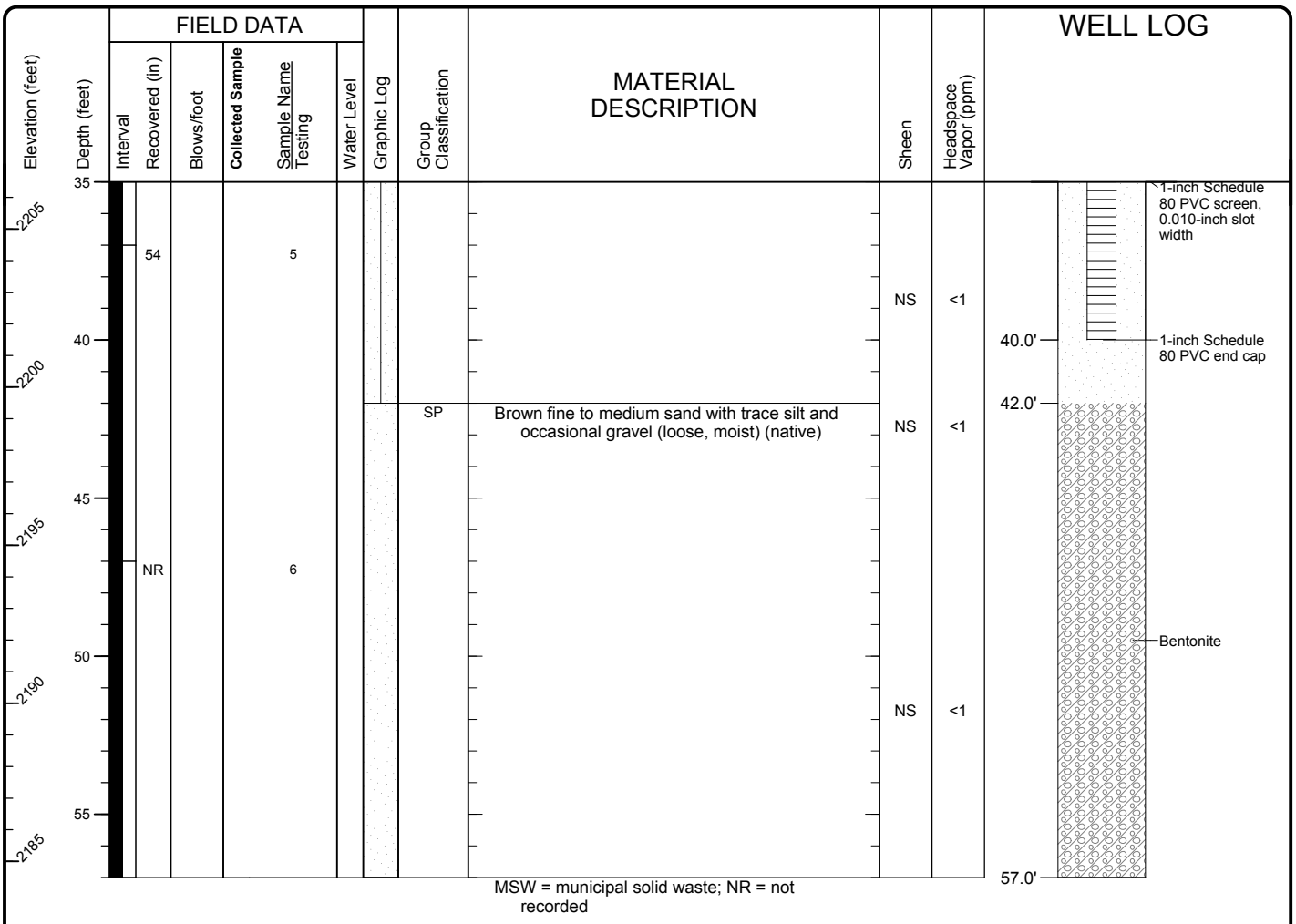
Log of Monitoring Well LBF-17

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-20
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well LBF-17 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-20
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

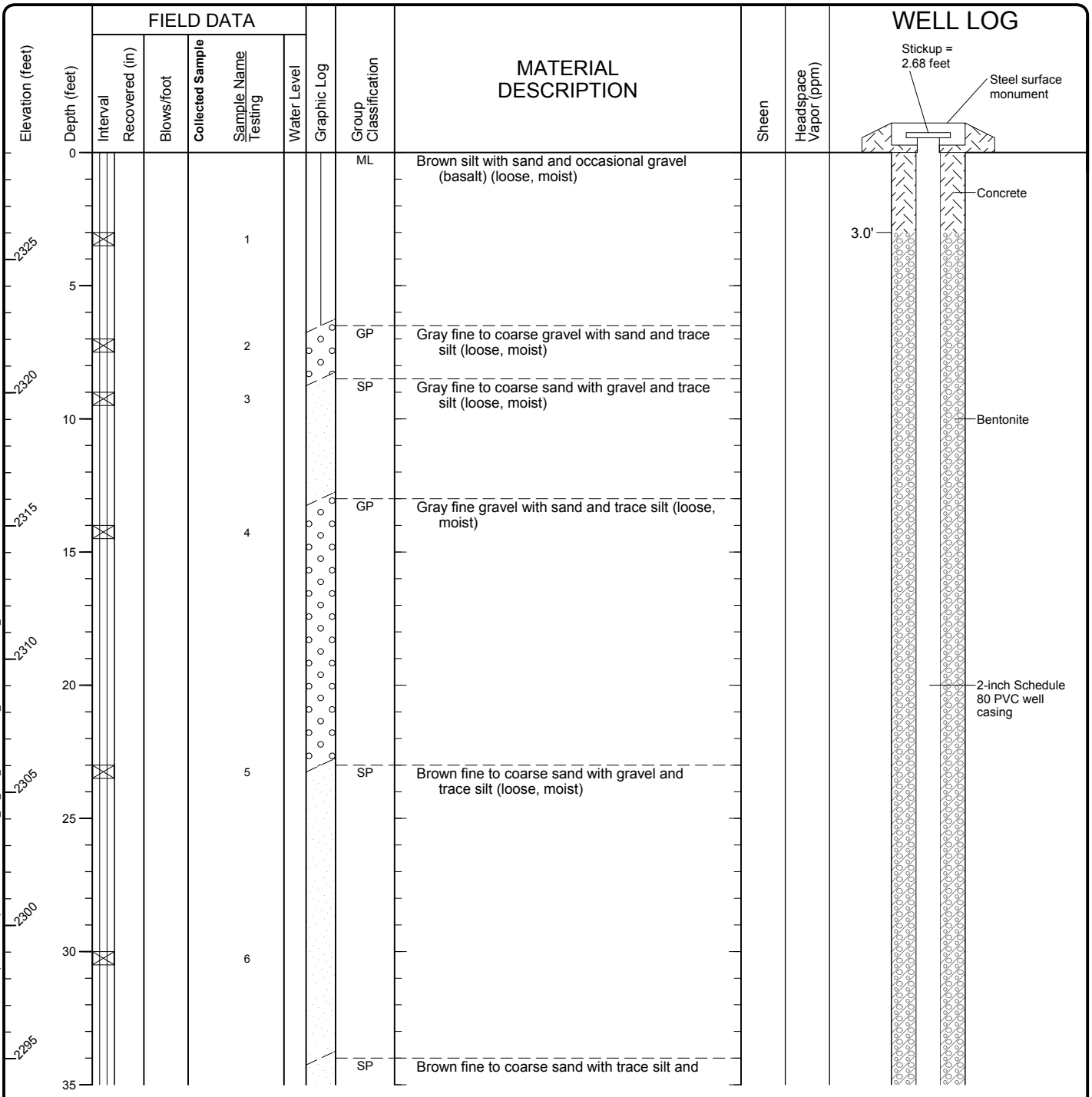
Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
8/14/2015	8/19/2015	300	JML / JER	Environmental West Explorations, Inc.	Air Rotary

Hammer Data		Drilling Equipment	Mobile B-90
Surface Elevation (ft) Vertical Datum	2329.02	Top of Casing Elevation (ft)	2331.70
Easting (X) Northing (Y)	2460913.532 219987.639	Horizontal Datum	

DOE Well I.D.: BHW-547
A 2 (in) well was installed on 8/19/2015 to a depth of 298 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
8/19/2015	238.3	2090.7

Notes:



Note: See Figure E-1 for explanation of symbols.

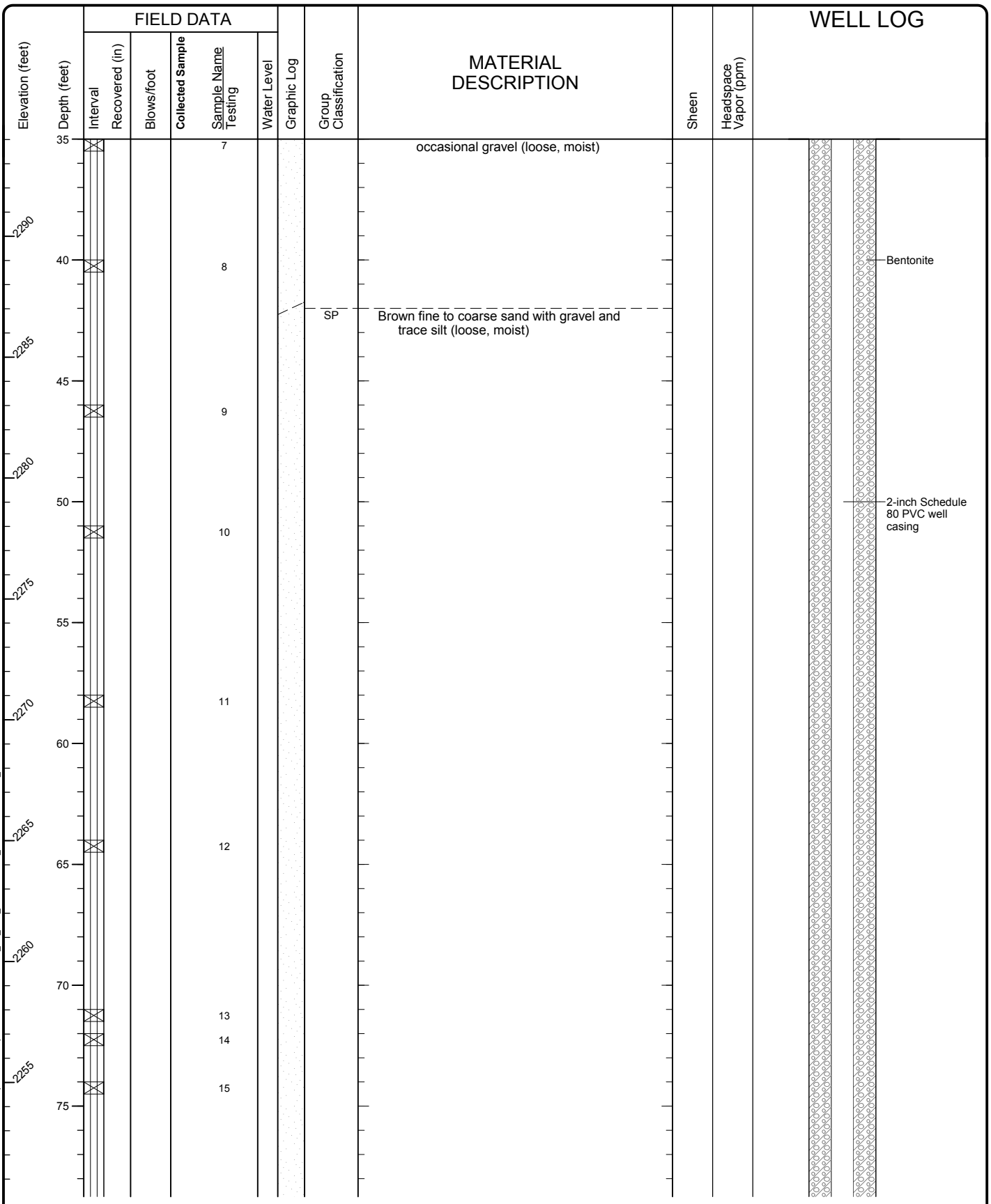
Log of Monitoring Well MW-7D

GeoEngineers

Project:	Marshall Landfill
Project Location:	Spokane County, Washington
Project Number:	0504-104-00

Figure E-21
Sheet 1 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

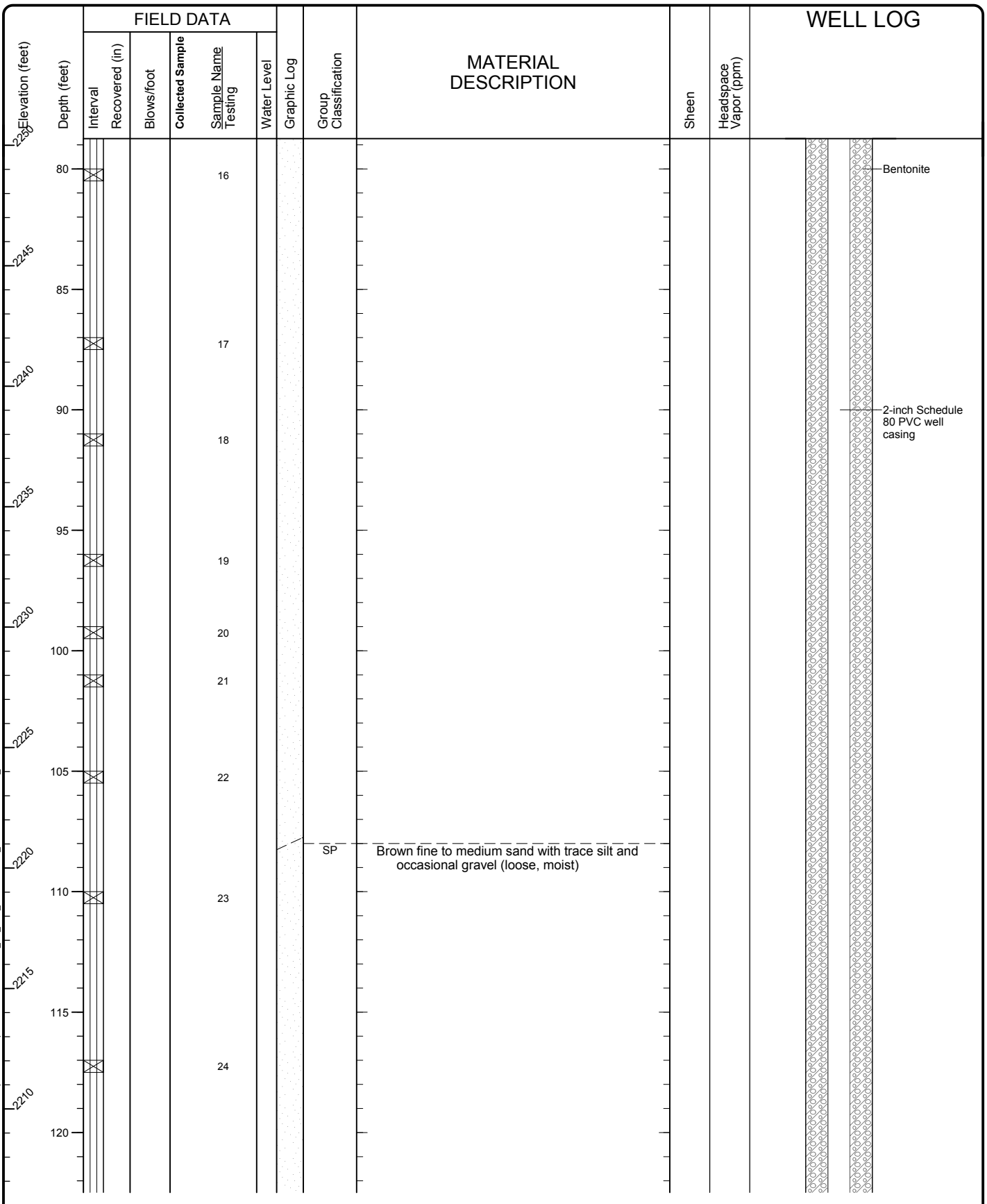
Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 2 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

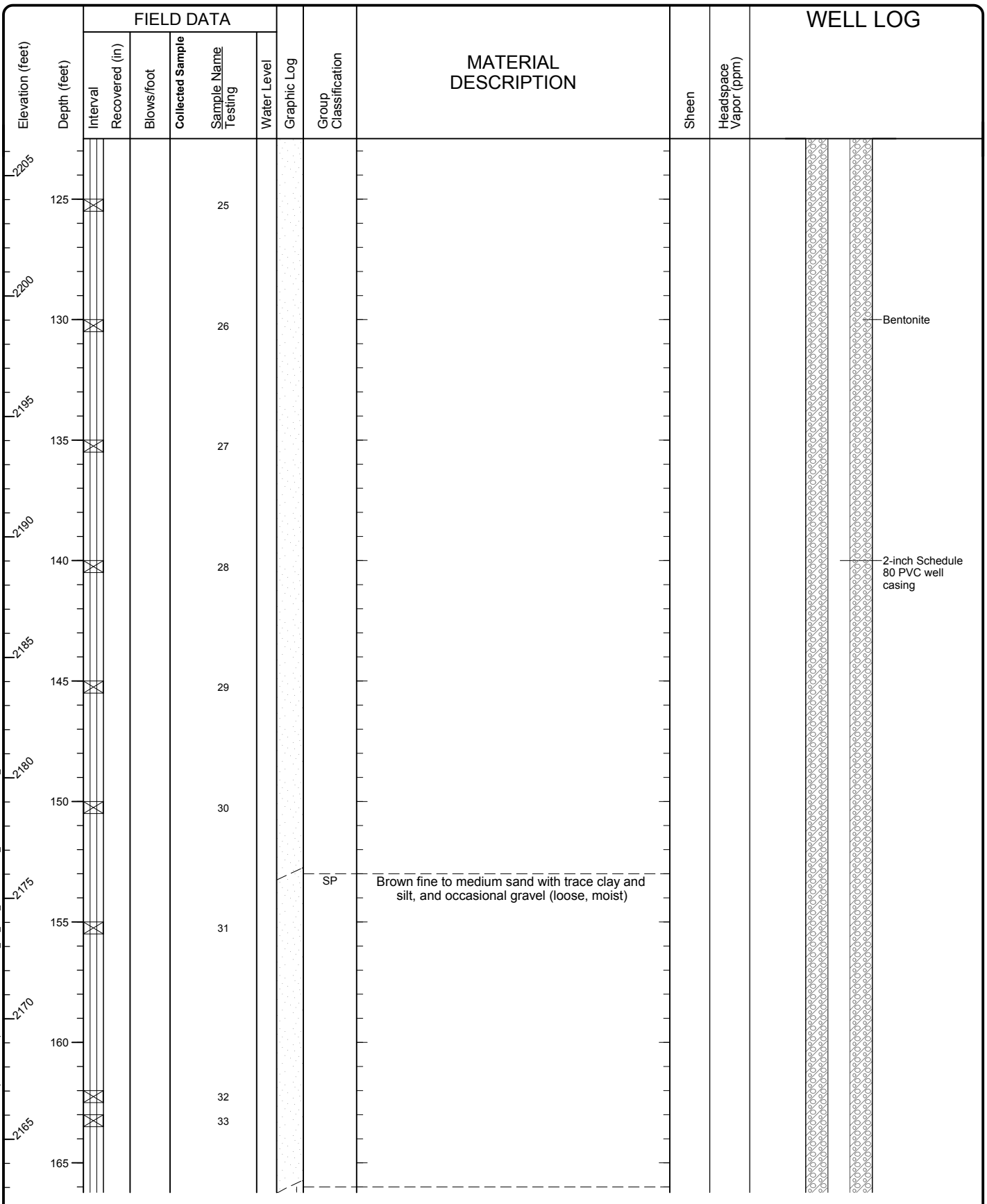
Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 3 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

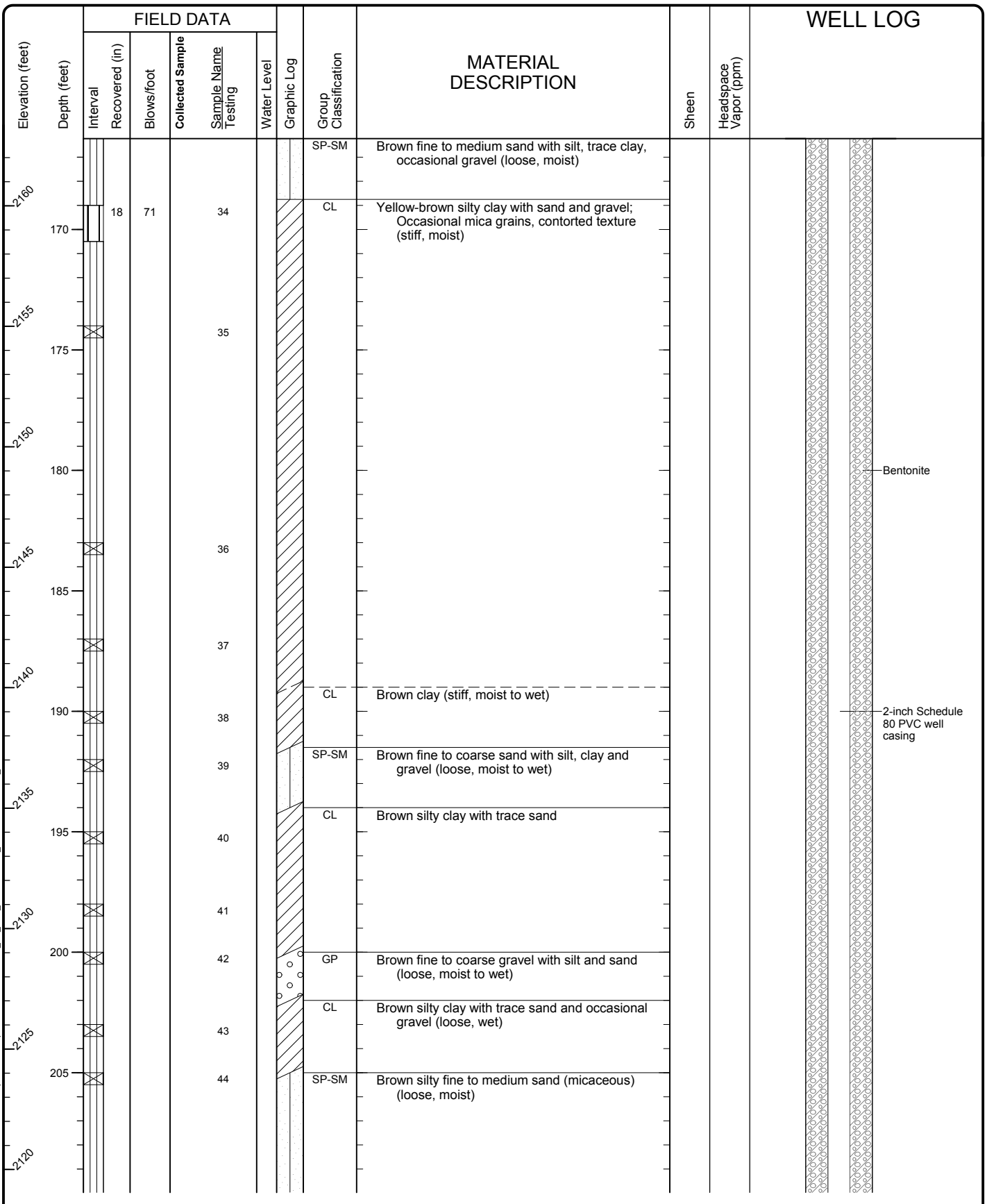
Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 4 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

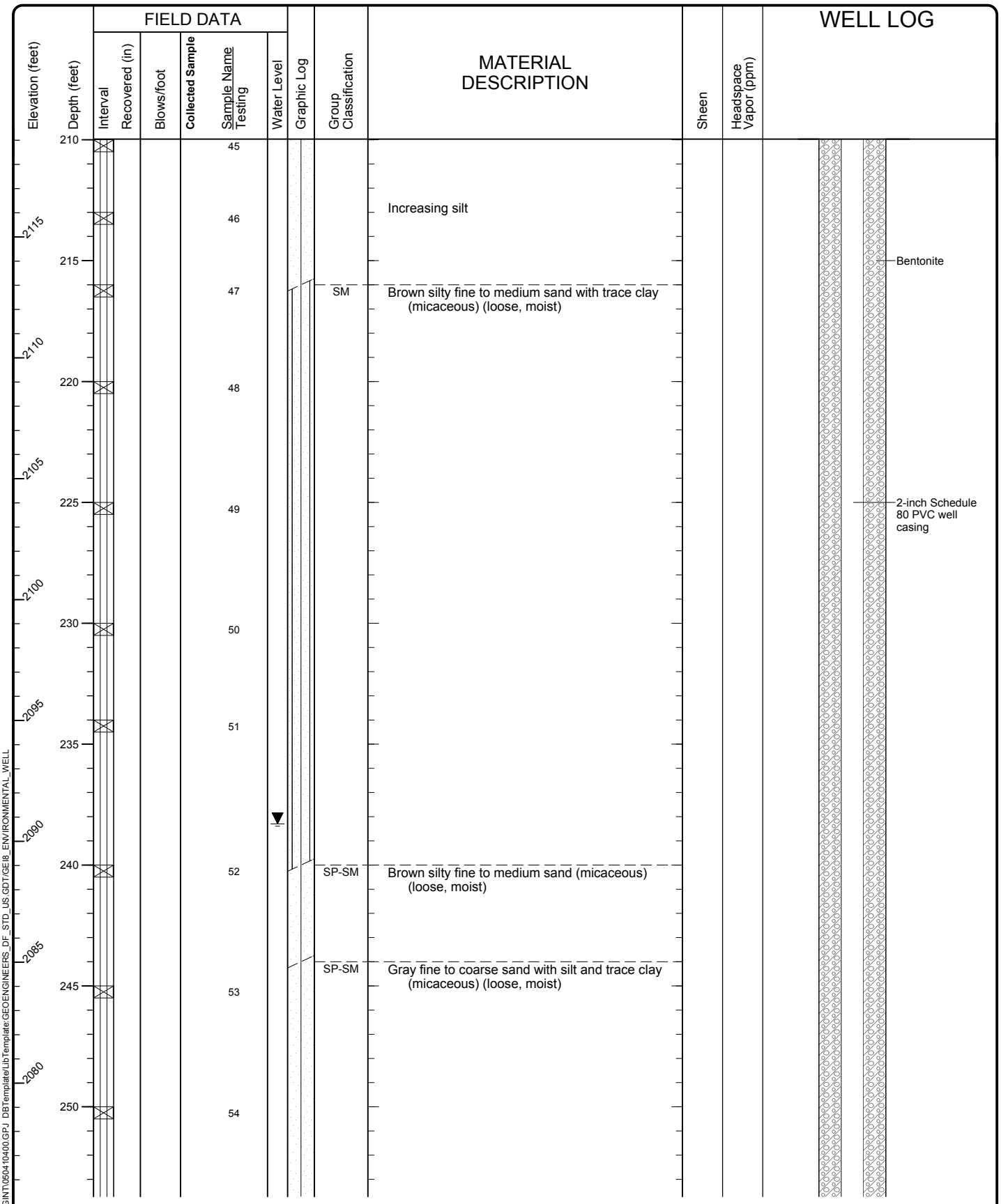
Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 5 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

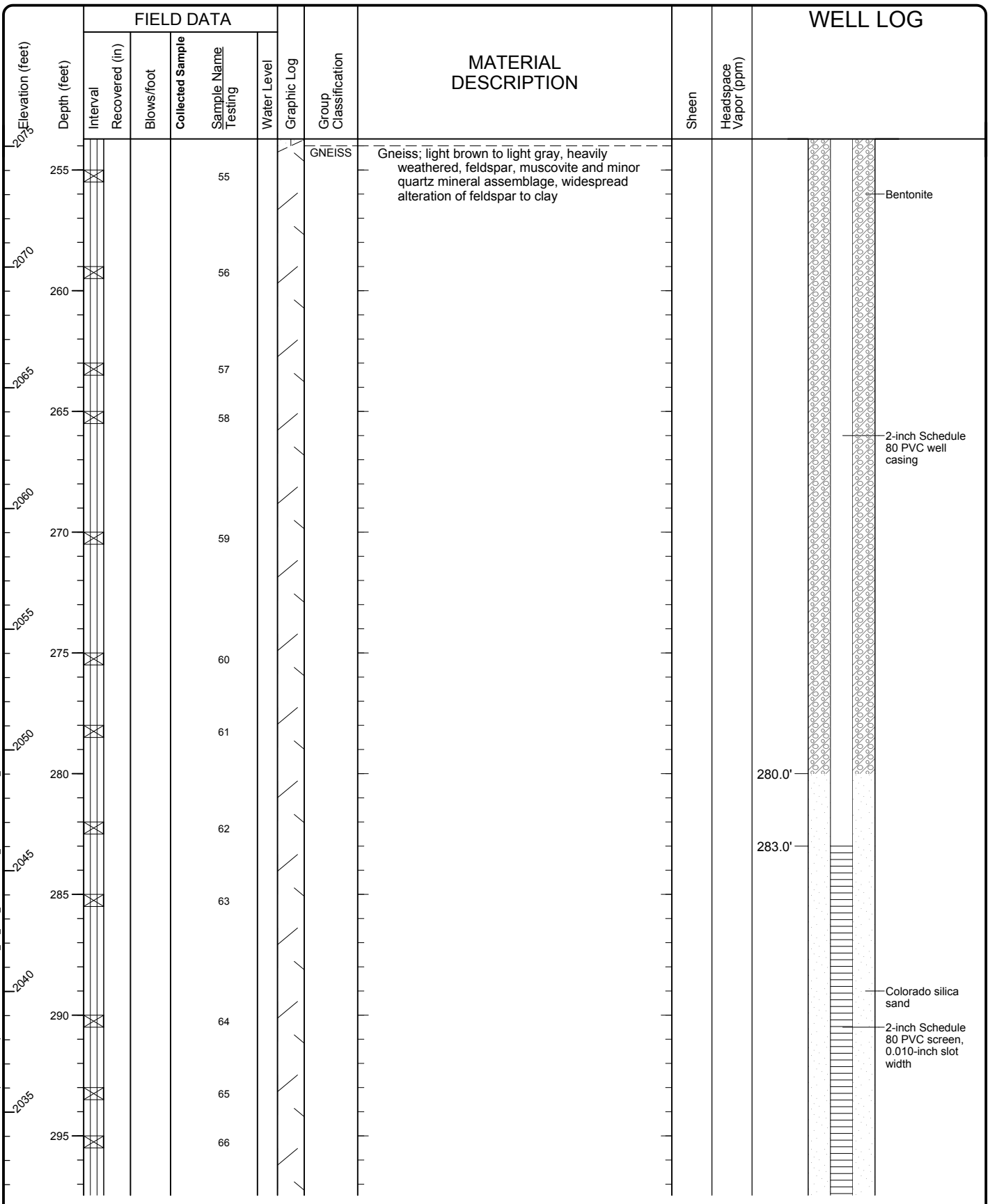
Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 6 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 7 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	WELL LOG
2030	300										298.0' 2-inch Schedule 80 PVC well casing 298.1' 2-inch Schedule 80 PVC end cap 300.0' Colorado silica sand

Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-7D (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-21
Sheet 8 of 8

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled	Start 6/16/2015	End 6/16/2015	Total Depth (ft)	65.25	Logged By	JML	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Checked By					JER					

Surface Elevation (ft) / Vertical Datum	2345 NAVD88	Hammer Data	NA	Drilling Equipment	Speedstar Sonic Rig
Easting (X) / Northing (Y)	2460591 220533	System Datum	WA State Plane,North NAD83 (feet)	Groundwater	Date Measured: — Depth to Water (ft): None Observed — Elevation (ft):

Notes: A monitoring well was planned at this location; however, no monitoring well was installed because of shallow bedrock

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0											
			36			1		SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (loose, moist)	NS	<1	
2340	5									NS	<1	
										NS	<1	
			30			2				NS	<1	
2335	10							GP	Brown fine to coarse gravel with trace sand (loose, moist)	NS	<1	
2330	15									NS	<1	
			14			3				NS	<1	
2325	20								Granitic boulder encountered from 19 to 20½ feet			
			14			4				NS	<1	
								GP	Brown fine to coarse gravel with trace sand and silt (loose, moist) (cobbles present)			
2320	25											
			87			5				NS	<1	
2315	30									NS	<1	
2310	35											

Note: See Figure E-1 for explanation of symbols.

Log of Boring MW-13

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-22
Sheet 1 of 2

Spokane: Date:3/10/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35							SP	Brown fine to coarse sand with gravel (loose, moist)	NS	<1	
			120			6						
2305	40									NS	<1	
								CL	Gray clay with gravel and sand (medium dense, moist)	NS	<1	
2300	45							SP	Brown fine to coarse sand with gravel (loose, moist)	NS	<1	
			120			7		CL	Brown clay with gravel (medium dense, moist)	NS	<1	
2295	50							GP	Gray gravel with sand and occasional cobbles (loose, moist)	NS	<1	
2290	55									NS	<1	
			96			8						
2285	60									NS	<1	
2280	65							BASALT	Dark gray basalt			

Note: See Figure E-1 for explanation of symbols.

Log of Boring MW-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

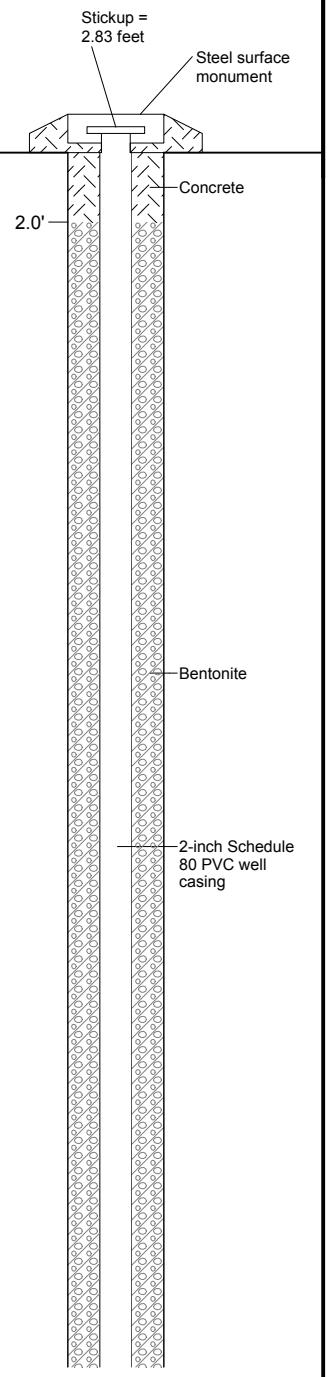
Figure E-22
Sheet 2 of 2

Spokane: Date:3/10/17 Path:P:\0\0504104\GINT\0504104.00.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 8/12/2015 End 8/13/2015	Total Depth (ft) 255	Logged By JML Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Sonic
Hammer Data		Drilling Equipment Speedstar Sonic Rig	DOE Well I.D.: BHW-548 A 2 (in) well was installed on 8/13/2015 to a depth of 252.3 (ft).	
Surface Elevation (ft) Vertical Datum 2310.99		Top of Casing Elevation (ft) 2313.83	Groundwater Date Measured / Depth to Water (ft) / Elevation (ft) None Observed	
Easting (X) 2460646.29 Northing (Y) 219019.836		Horizontal Datum		
Notes:				

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2310	0									Refer to Log SB-12 (situated 20 feet west) for lithologic conditions from 0 to 160 feet in depth		
2305	5											
2300	10											
2295	15											
2290	20											
2285	25											
2280	30											
	35											

WELL LOG



Note: See Figure E-1 for explanation of symbols.

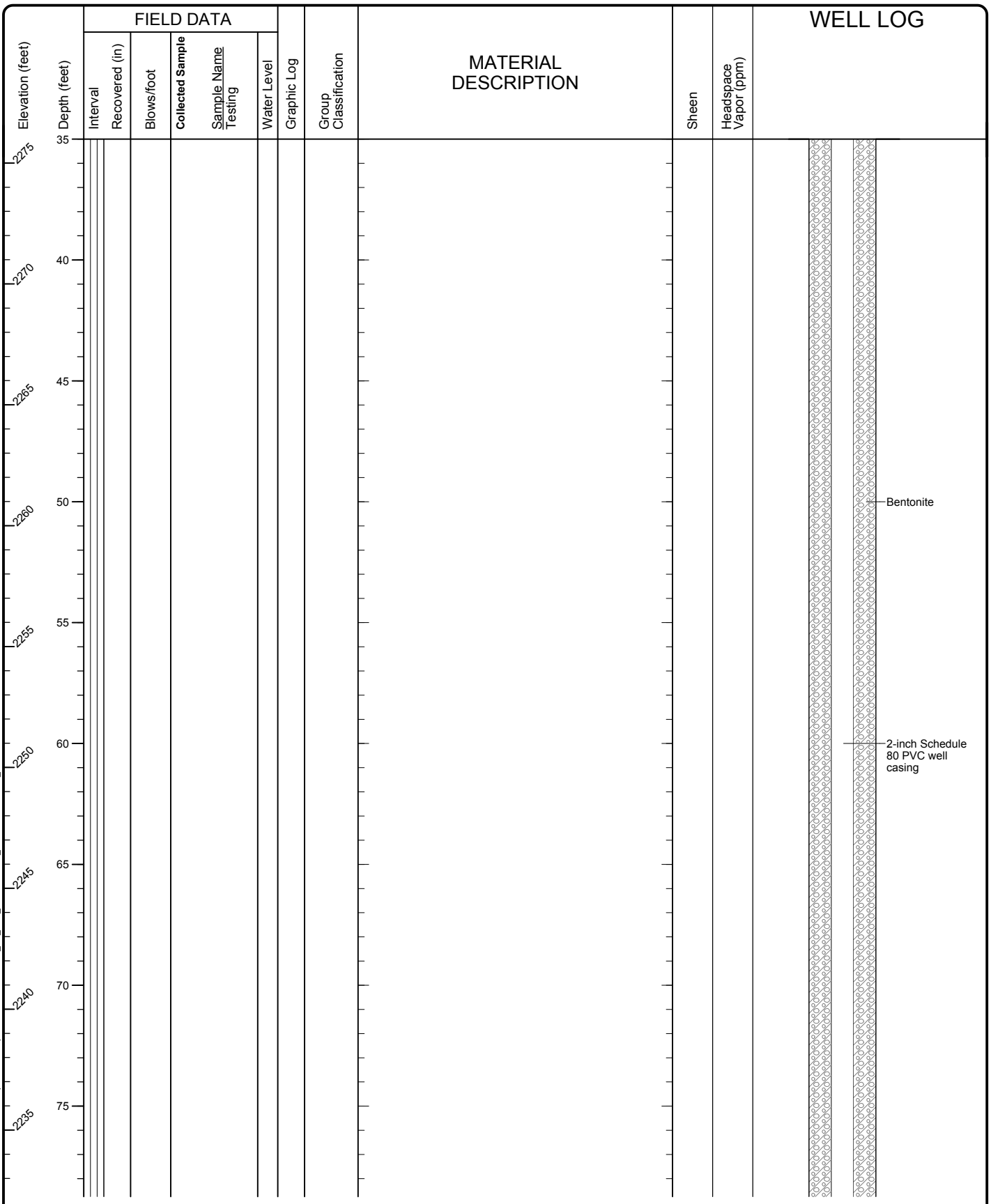
Log of Monitoring Well MW-14

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 1 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

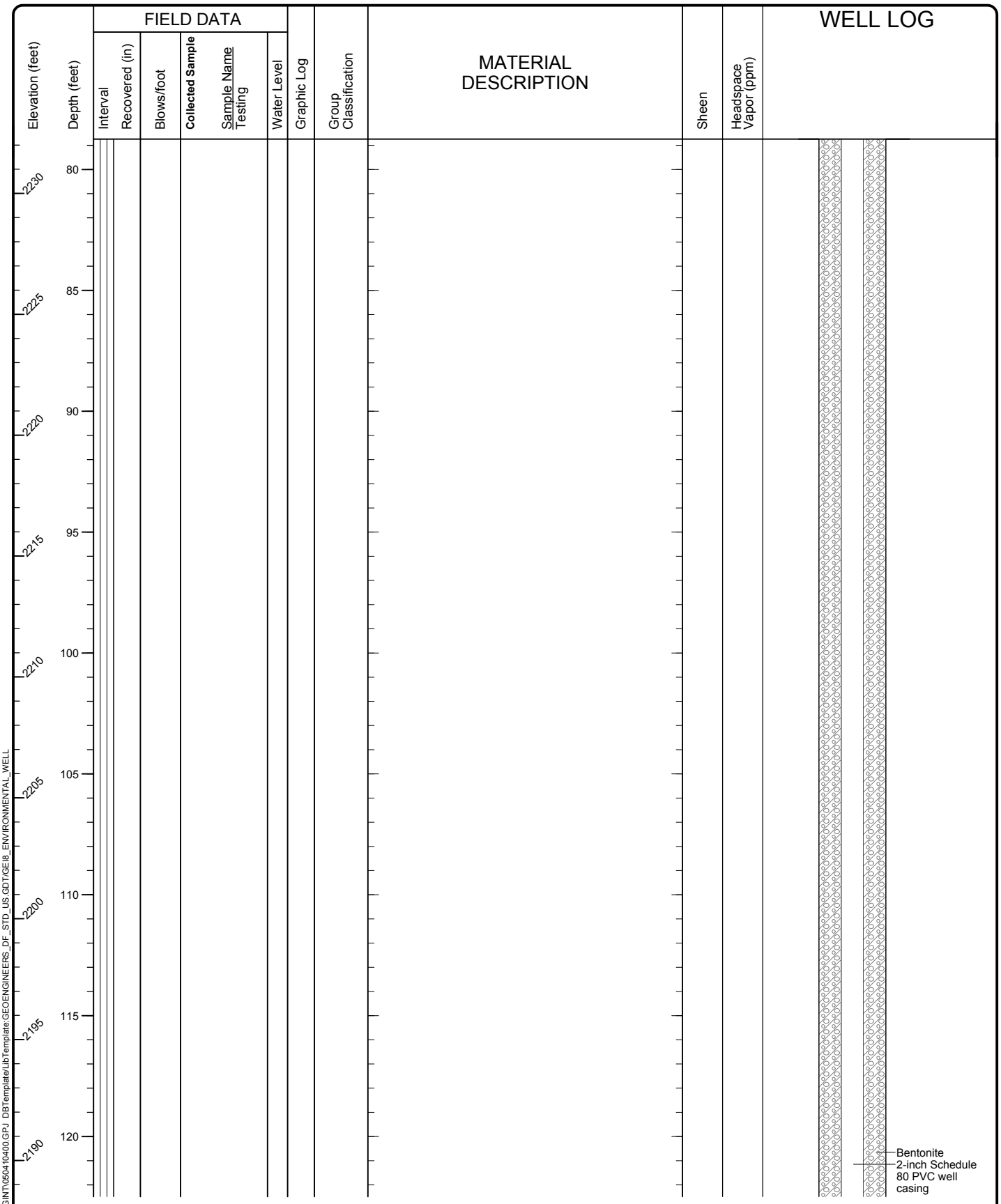
Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 2 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

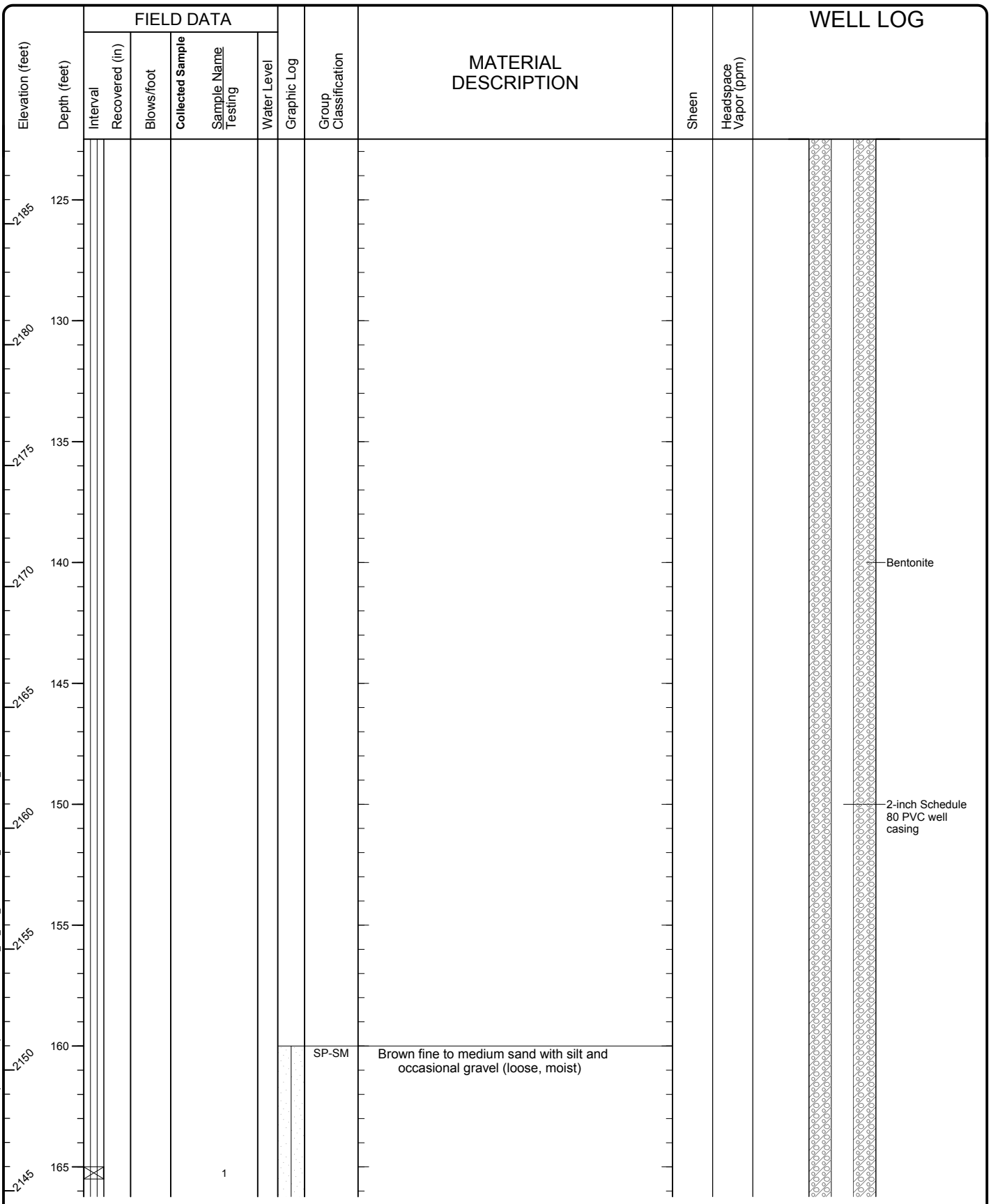
Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 3 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

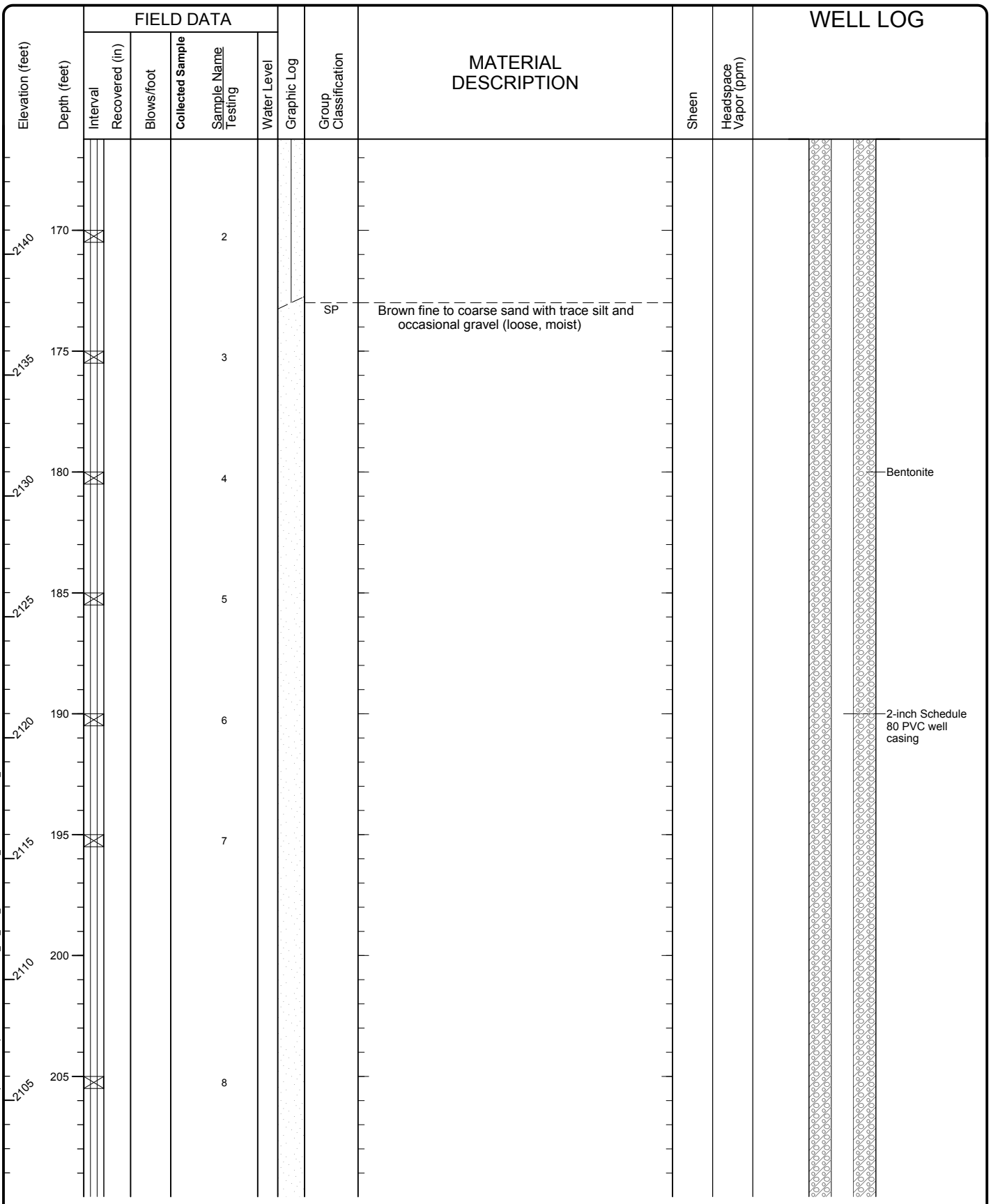
Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 4 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

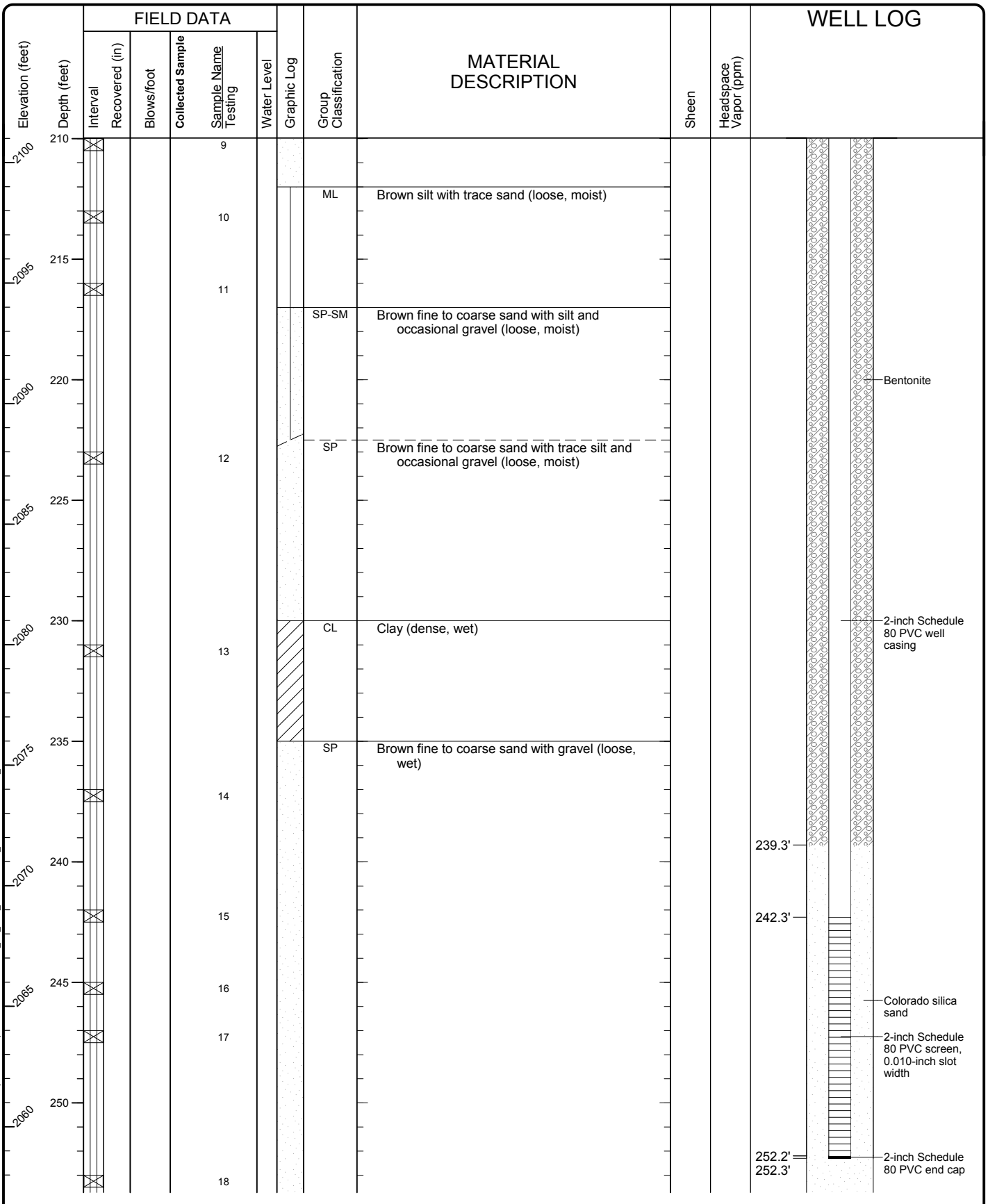
Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 5 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 6 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	FIELD DATA: Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name / Testing	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	WELL LOG
255	255.0'											Colorado silica sand

Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-23
Sheet 7 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/8/2015	9/9/2015	177	JML / JER	Environmental West Explorations, Inc.	Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2233.52	Top of Casing Elevation (ft)	2236.04
Easting (X) Northing (Y)	2461932.468 219860.528	Horizontal Datum	

A 2 (in) well was installed on 9/8/2015 to a depth of 175 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/19/2015	160.6	2072.9

Notes:

FIELD DATA

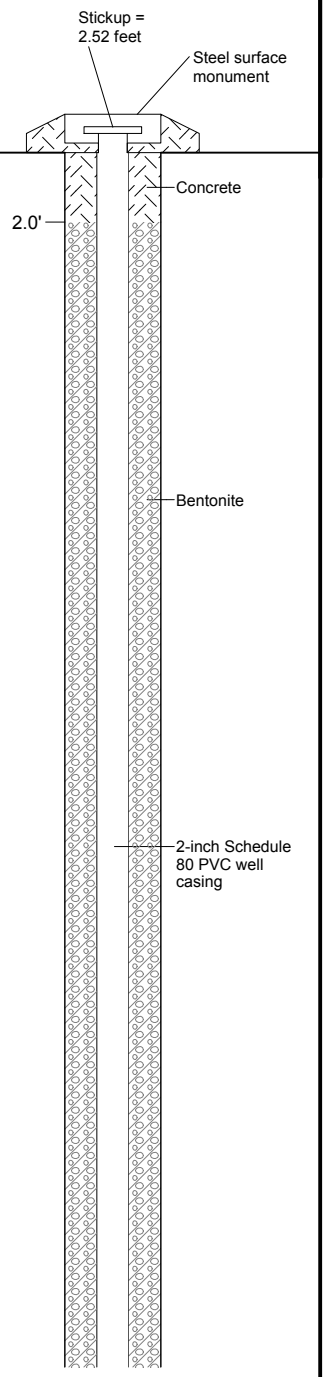
Elevation (feet) | Depth (feet) | Interval Recovered (in) | Blows/foot | Collected Sample / Sample Name Testing | Water Level | Graphic Log | Group Classification

MATERIAL DESCRIPTION

Refer to Log SB-13 (situated about 20 feet west) for lithologic conditions from 0 to 127 feet in depth

Sheen | Headspace Vapor (ppm)

WELL LOG



Note: See Figure E-1 for explanation of symbols.

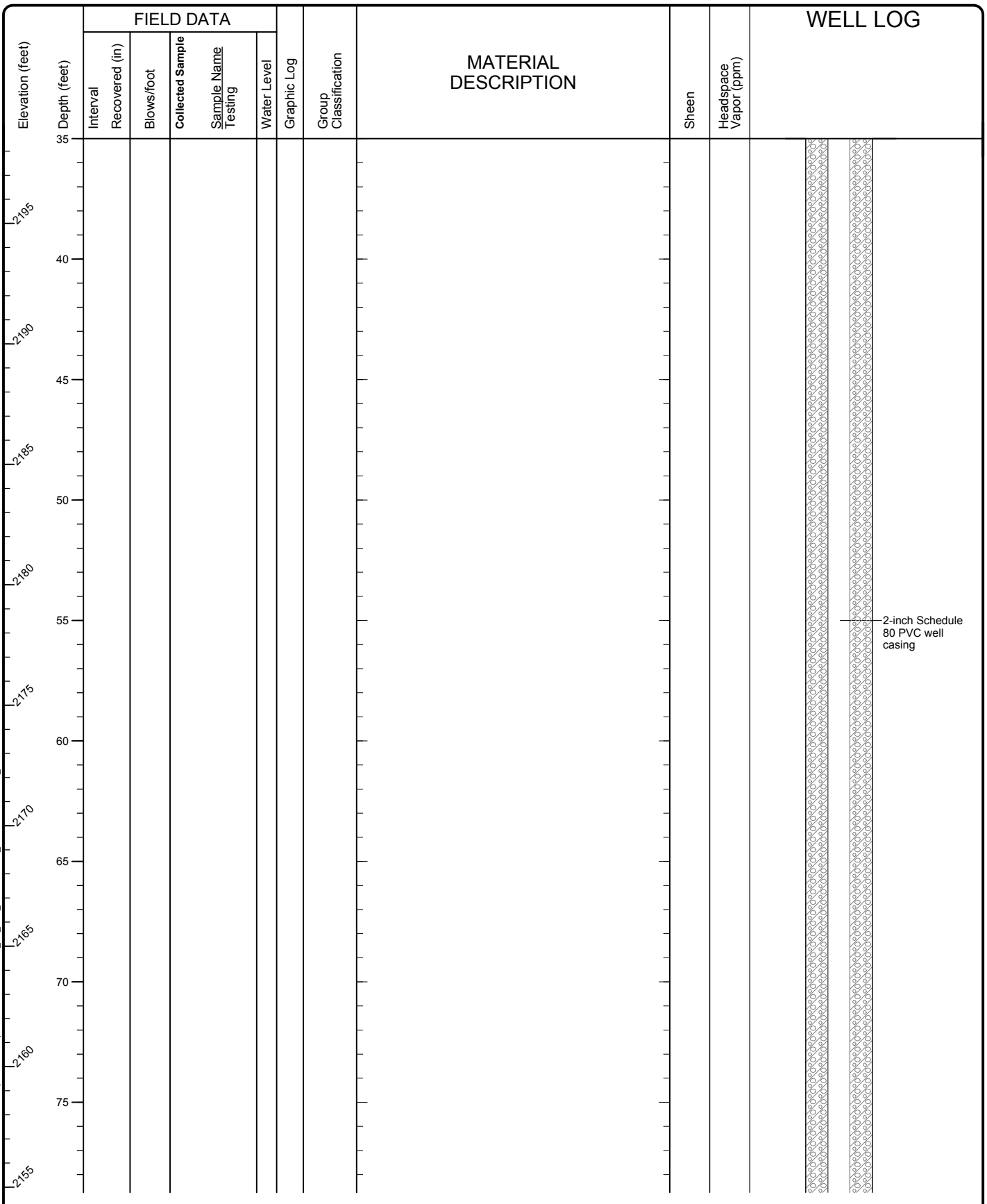
Log of Monitoring Well MW-15

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-24
Sheet 1 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

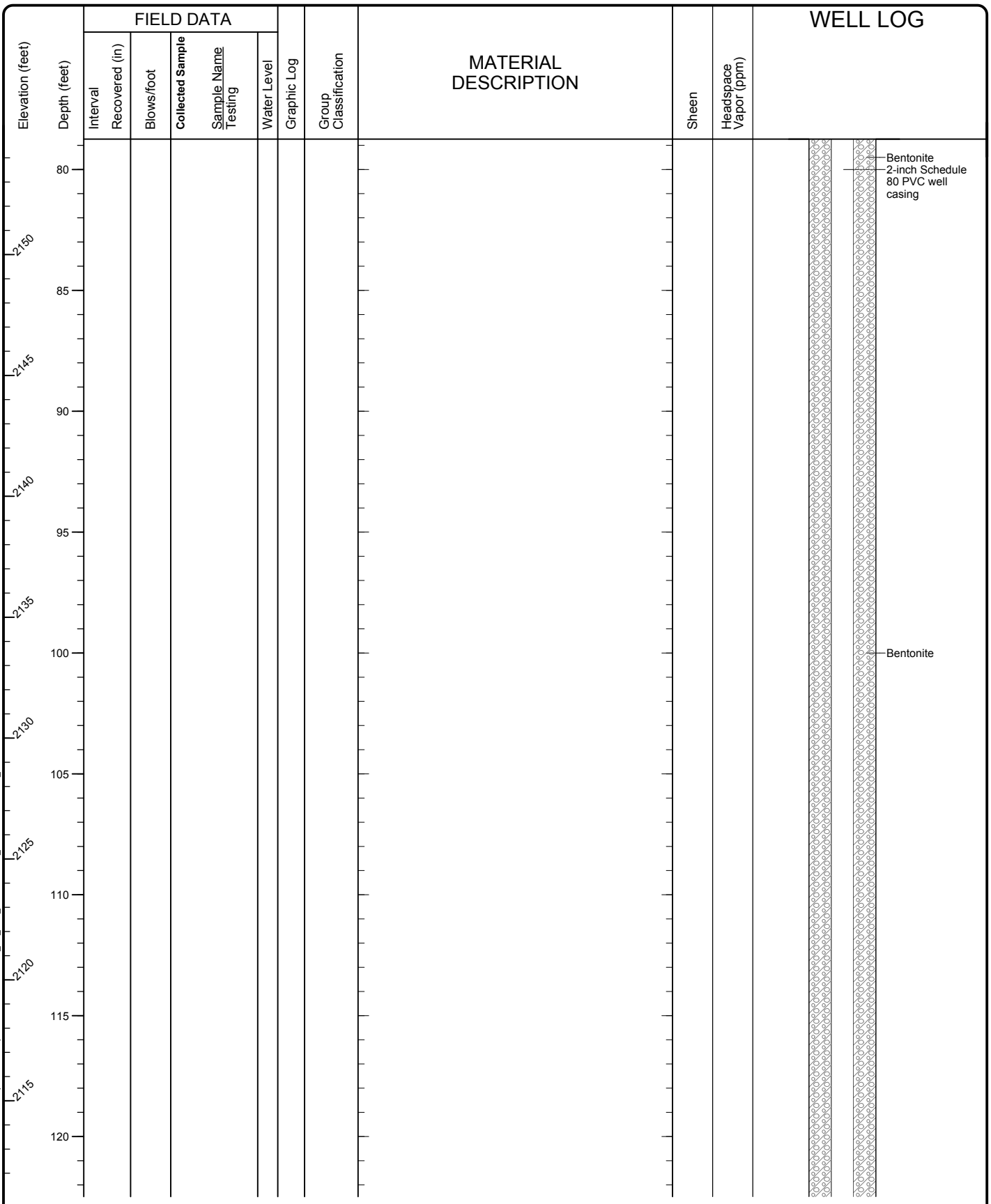
Log of Monitoring Well MW-15 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-24
Sheet 2 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

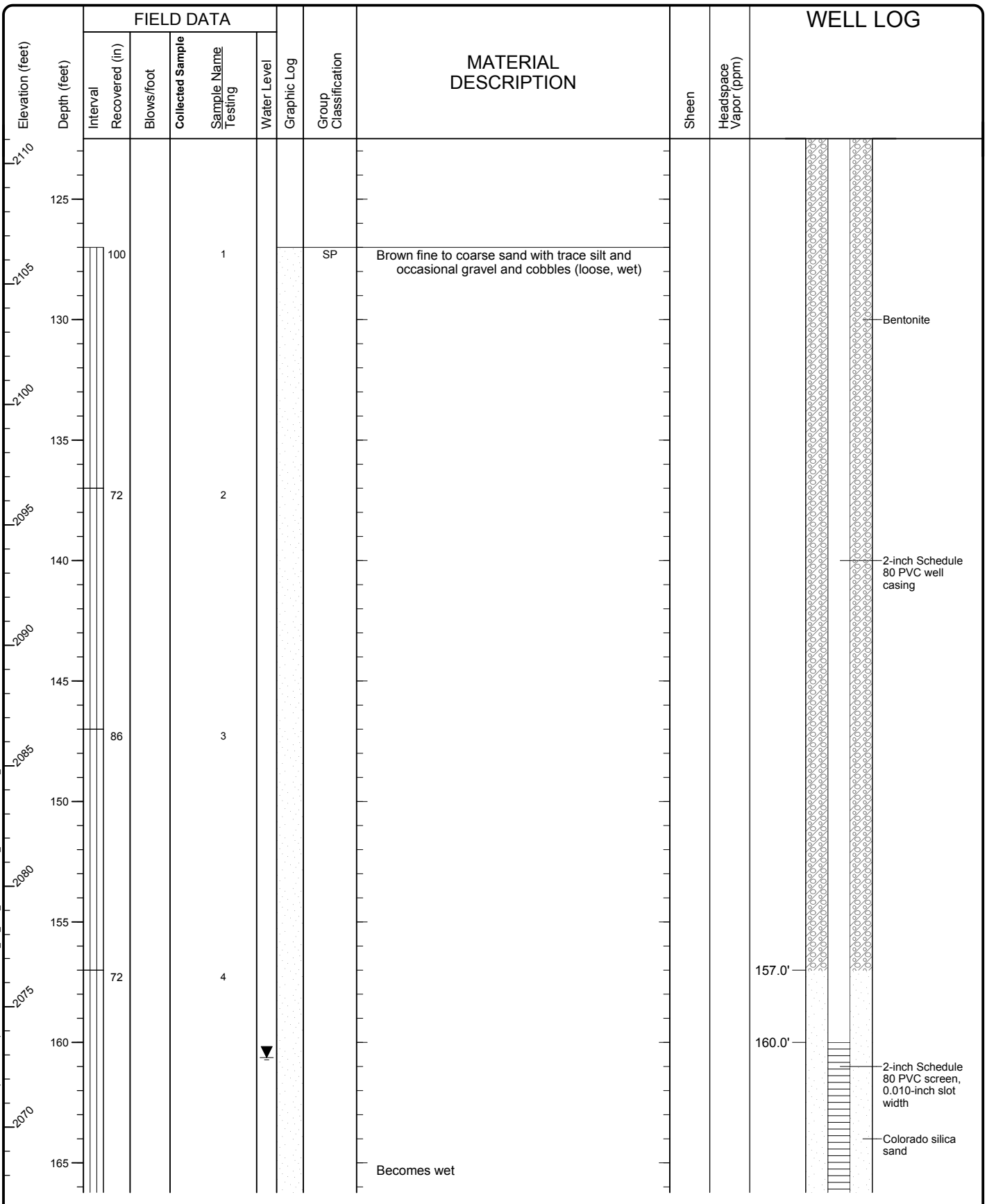
Log of Monitoring Well MW-15 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-24
Sheet 3 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-15 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-24
Sheet 4 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	FIELD DATA: Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	FIELD DATA: Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	WELL LOG
2065			90		5			GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (loose, wet)			2-inch Schedule 80 PVC screen, 0.010-inch slot width; Colorado silica sand
	170											
2060								SP	Brown fine to coarse sand with trace silt, occasional gravel and cobbles (loose, wet)			
								GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (loose, wet)			
	175											175.0' 2-inch Schedule 80 PVC end cap; 177.0'

Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-15 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-24
Sheet 5 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
8/21/2015	8/24/2015	259	JML / JER	Environmental West Explorations, Inc.	Air Rotary

Hammer Data		Drilling Equipment	Mobile B-90
Surface Elevation (ft) Vertical Datum	2234.29	Top of Casing Elevation (ft)	2237.26
Easting (X) Northing (Y)	2461902.241 219875.805	Horizontal Datum	

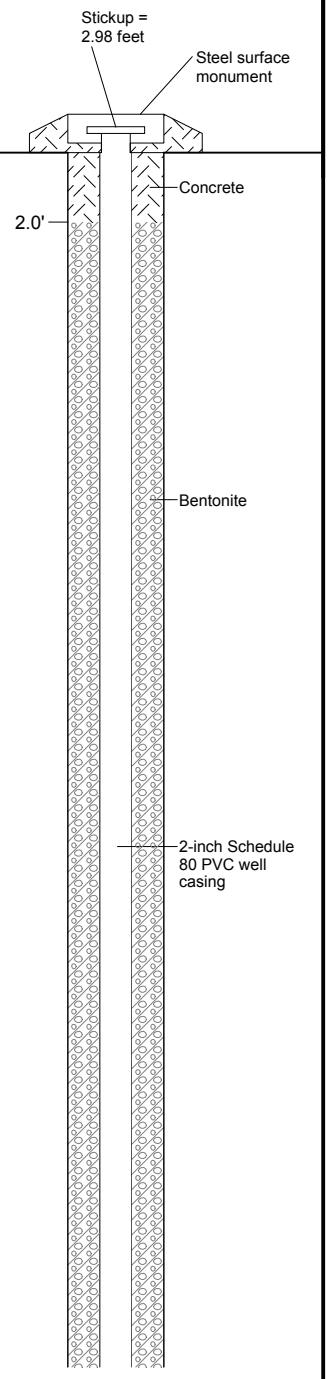
DOE Well I.D.: BHW-573
A 2 (in) well was installed on 8/25/2015 to a depth of 202 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
8/25/2015	162.9	2071.4

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0						ML/MSW	Brown silt with trace sand, occasional gravel and MSW (plastic, wood) (loose, moist) (fill)		
2230	5			1						
				2						
2225	10									
				3			SP/MSW	Gray to brown fine to medium sand with trace silt, occasional gravel and MSW (plastic, wood) (loose, moist) (fill)		
2220	15									
2215	20			4						
2210	25			5			MSW	MSW (wood, plastic, paper)		
2205	30			6			SP/MSW	Brown fine to medium sand with trace silt, occasional gravel and MSW (plastic, wood) (loose, moist)		
2200	35									

WELL LOG



Note: See Figure E-1 for explanation of symbols.

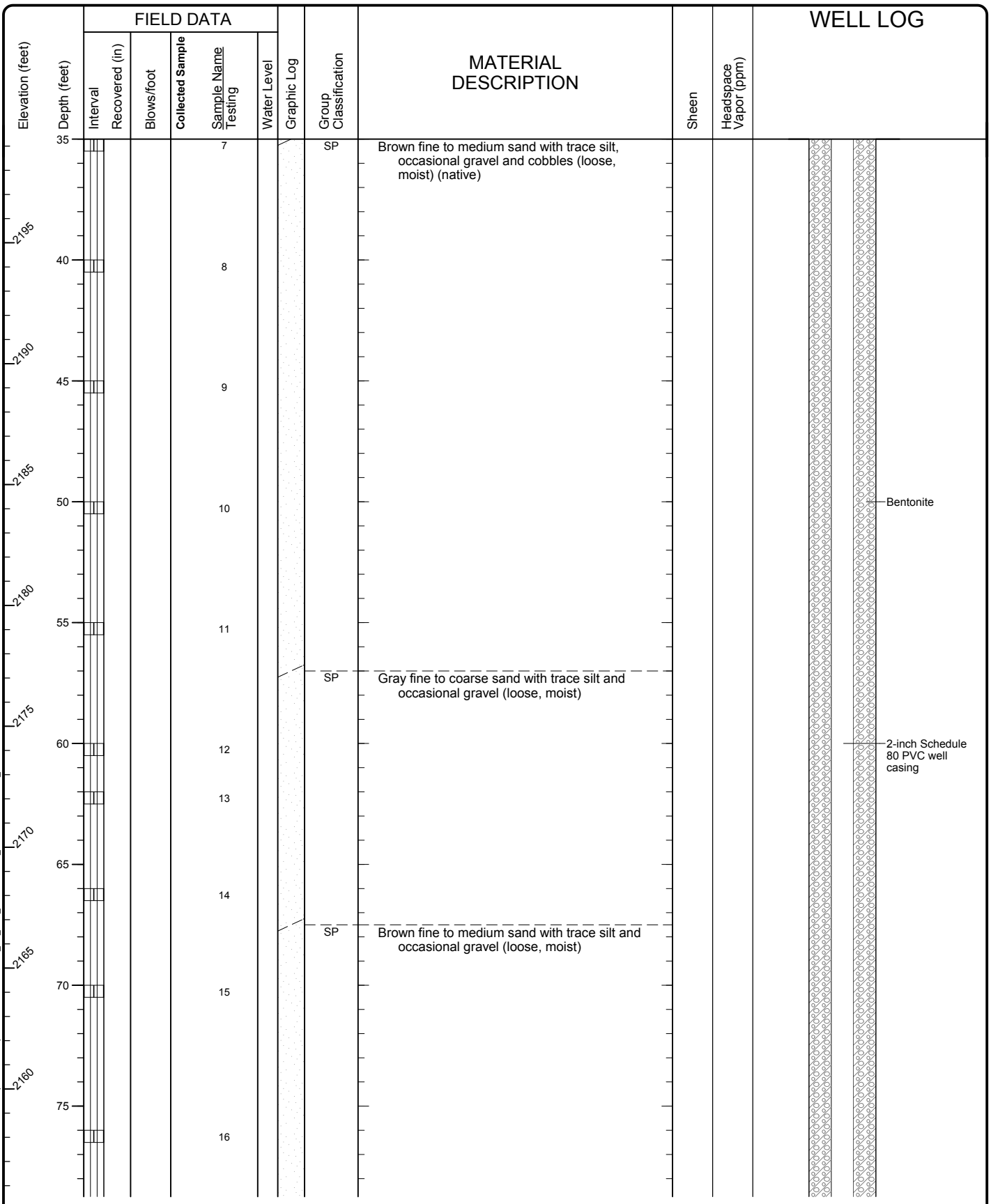
Log of Monitoring Well MW-15A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 1 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

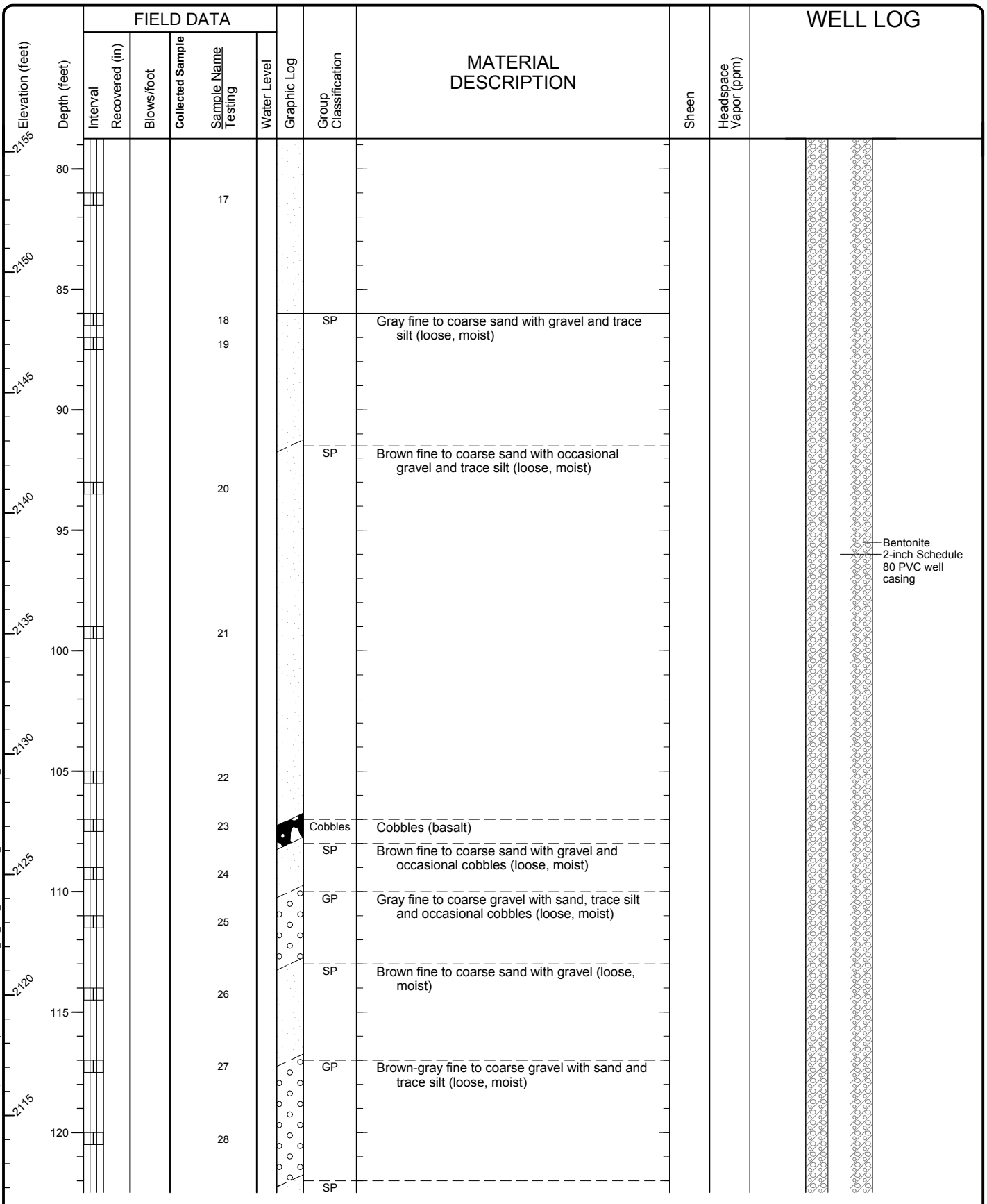
Log of Monitoring Well MW-15A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 2 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

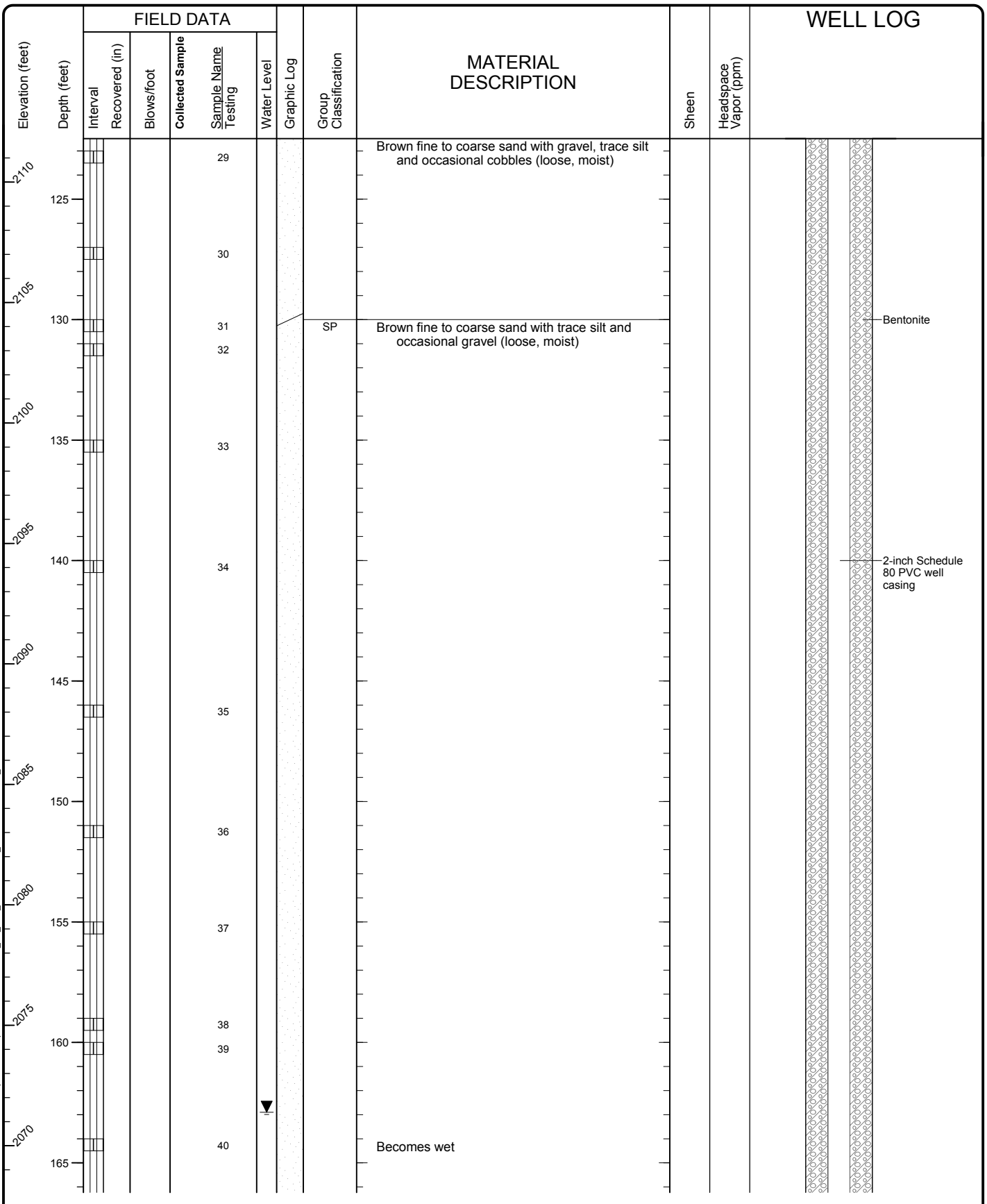
Log of Monitoring Well MW-15A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 3 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

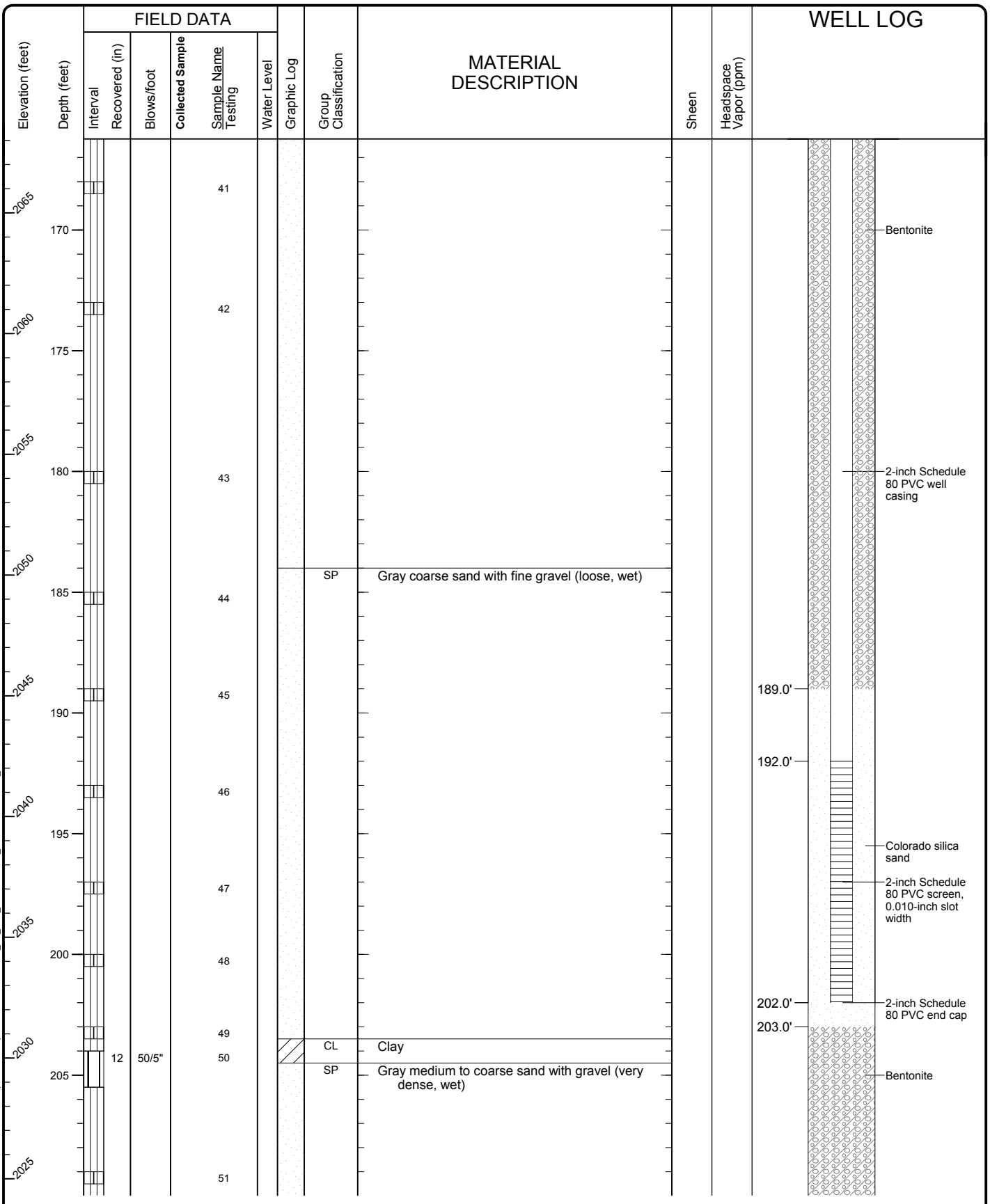
Log of Monitoring Well MW-15A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 4 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

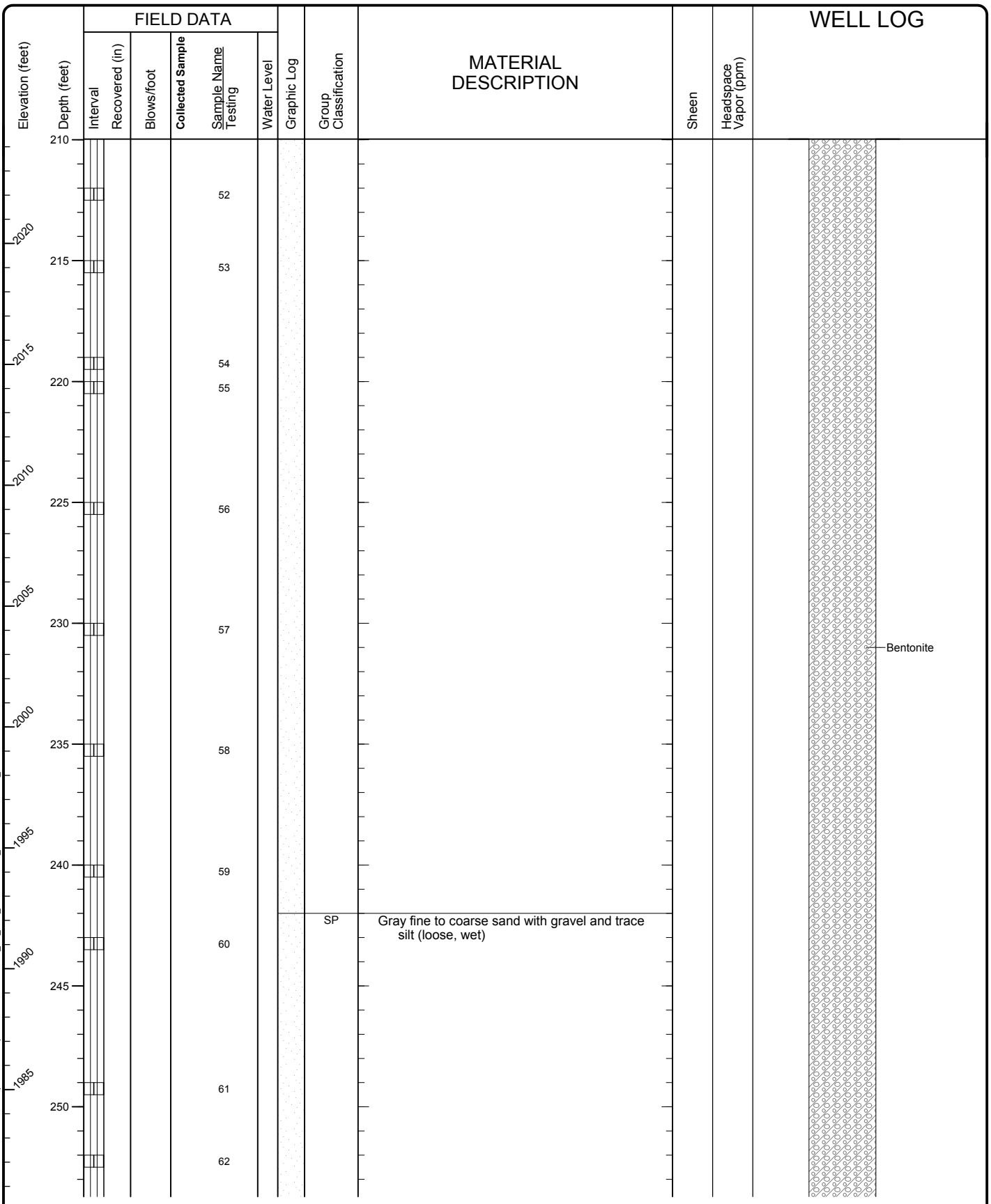
Log of Monitoring Well MW-15A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 5 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

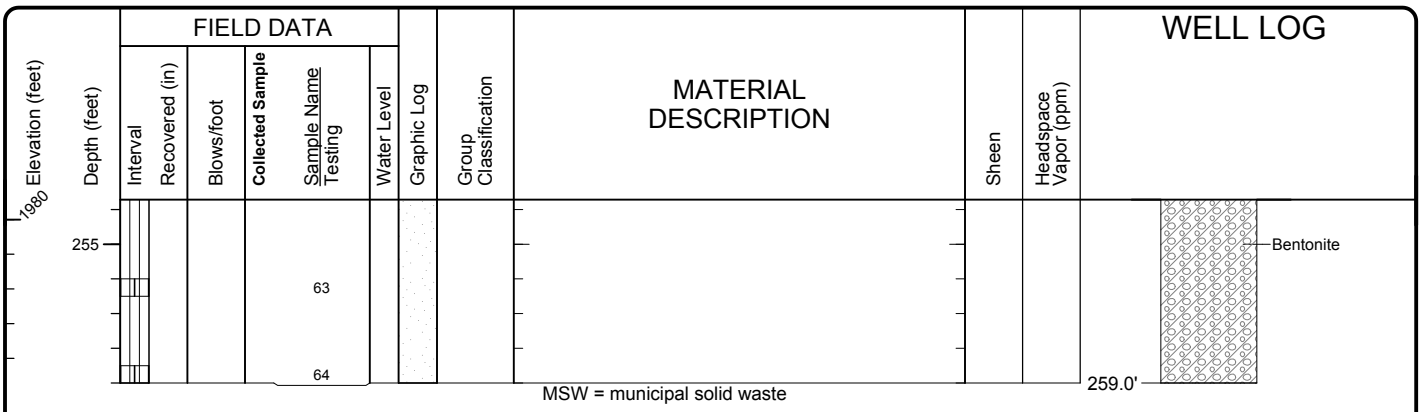
Log of Monitoring Well MW-15A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 6 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-15A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-25
Sheet 7 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
7/14/2015	7/14/2015	112	JML / JER	Environmental West Explorations, Inc.	Sonic

Hammer Data		Drilling Equipment	Speedstar Sonic Rig
Surface Elevation (ft) Vertical Datum	2167.61	Top of Casing Elevation (ft)	2170.24
Easting (X) Northing (Y)	2461137.987 218486.153	Horizontal Datum	

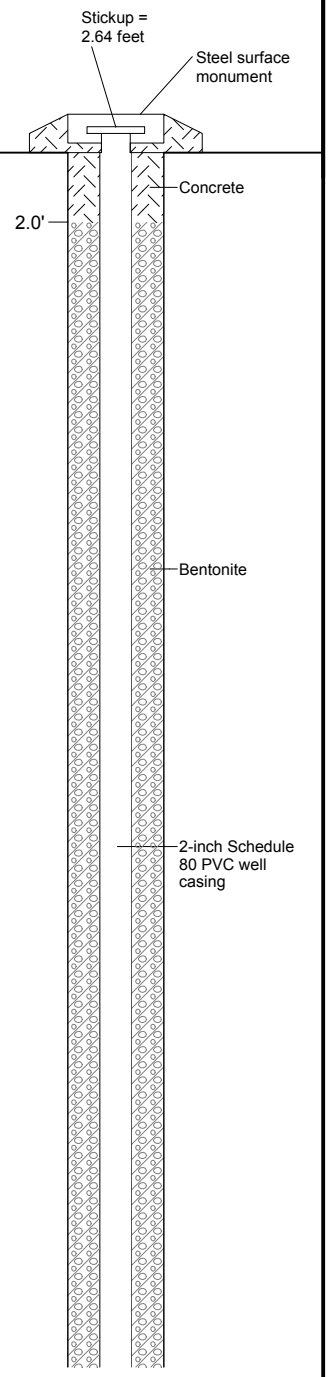
DOE Well I.D.: BIX-455
A 2 (in) well was installed on 7/15/2015 to a depth of 86.5 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
7/14/2015	69.3	2098.3

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
2165	0		36			1			SP-SM	Brown fine to coarse sand with silt and occasional gravel, and cobbles (loose, moist)	NS	<1
	5										NS	<1
2160			74			2						
											NS	<1
	10											
2155											NS	<1
	15										NS	<1
2150			48			3						
	20											
2145											NS	<1
	25										NS	<1
2140			66			4						
	30								SP	Brown fine to coarse sand with trace silt and occasional gravel (loose, moist)	NS	<1
2135	35										NS	<1

WELL LOG



Note: See Figure E-1 for explanation of symbols.

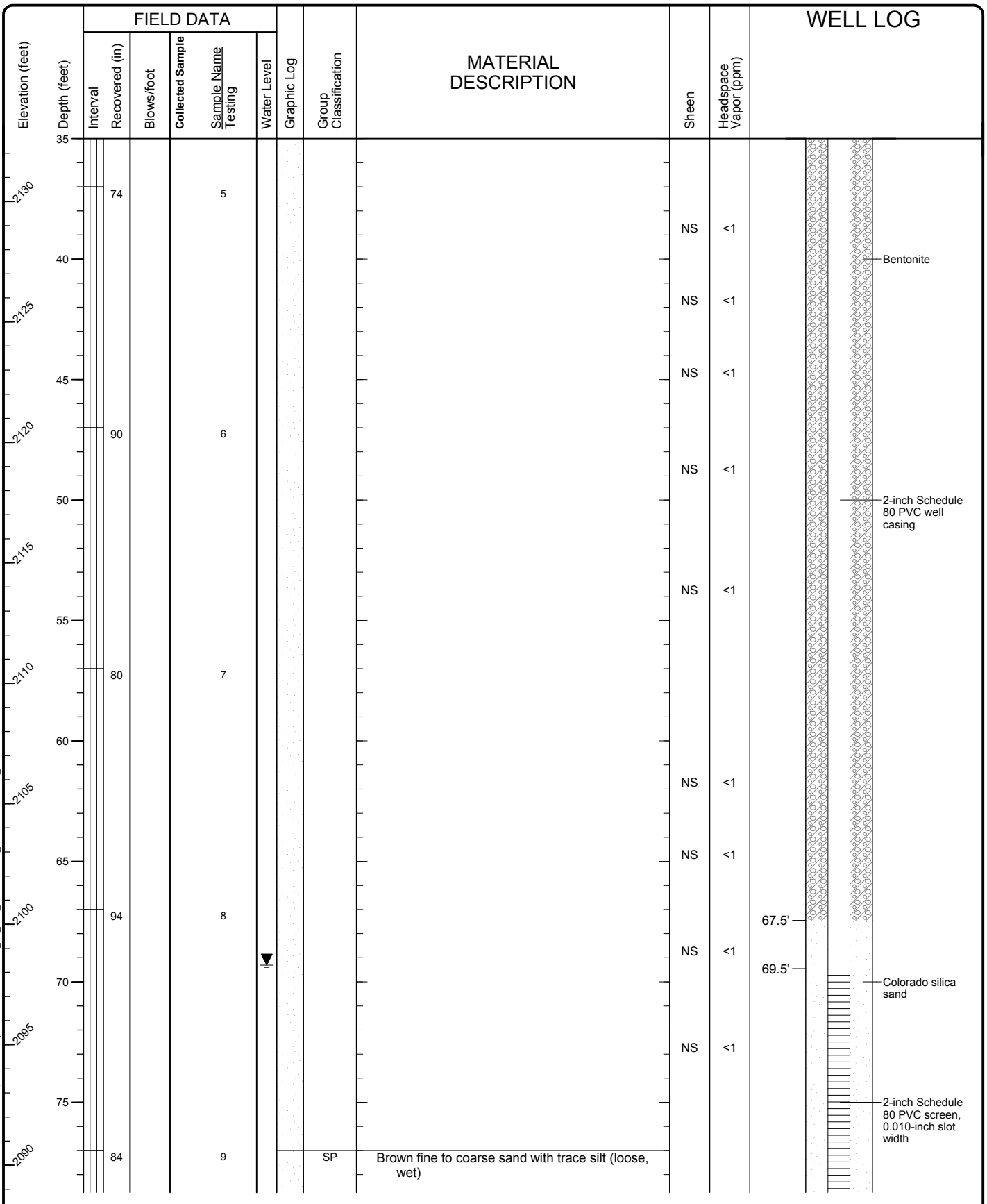
Log of Monitoring Well MW-16

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-26
Sheet 1 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

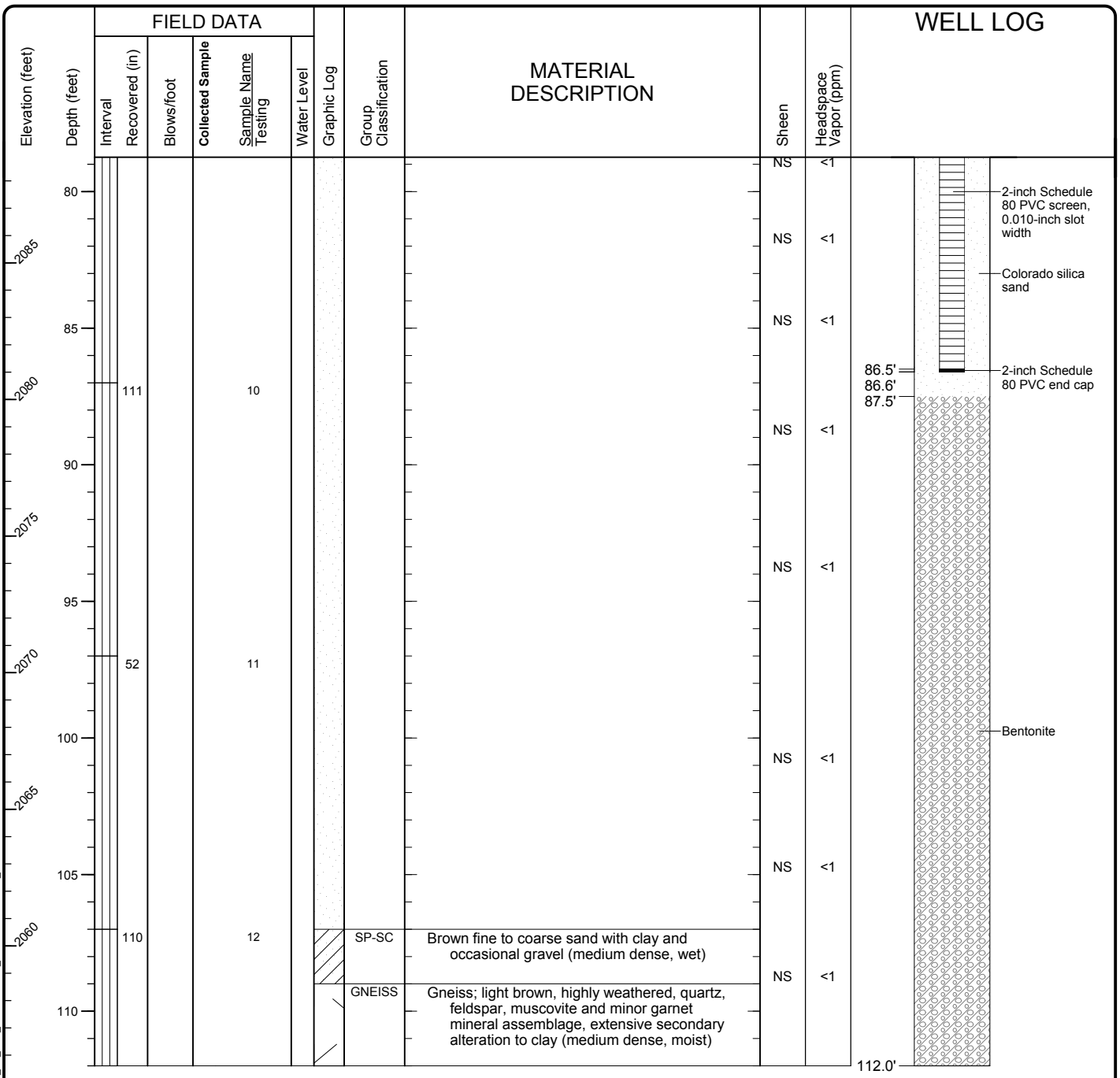
Log of Monitoring Well MW-16 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-26
Sheet 2 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-16 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-26
Sheet 3 of 3

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled Start 8/26/2015 End 8/27/2015	Total Depth (ft) 150	Logged By JML Checked By JER	Driller Environmental West Explorations, Inc.	Drilling Method Air Rotary

Hammer Data		Drilling Equipment	Mobile B-90
Surface Elevation (ft) Vertical Datum	2165.04	Top of Casing Elevation (ft)	2167.89
Easting (X) Northing (Y)	2461130.947 218450.159	Horizontal Datum	

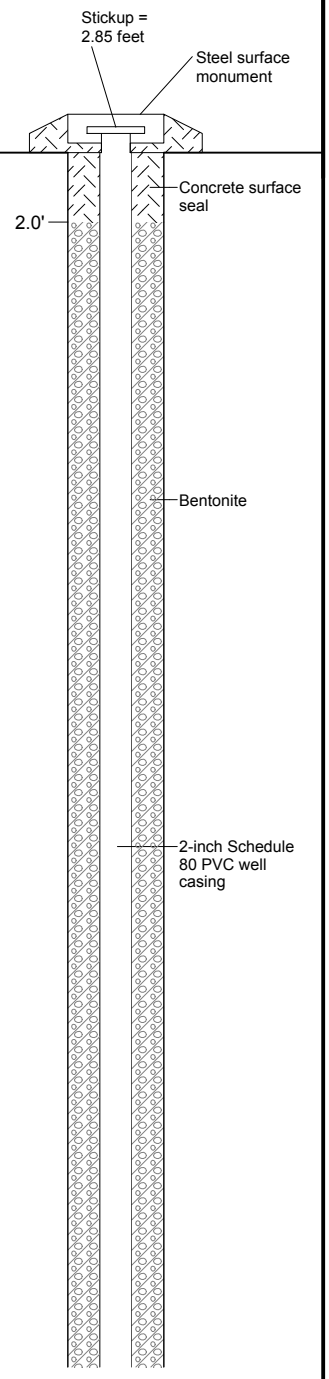
DOE Well I.D.: BHW-572
A 2 (in) well was installed on 8/27/2015 to a depth of 126 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
8/27/2015	82.0	2083.1

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0						SP	Brown fine to coarse sand with trace silt and occasional gravel (loose, moist) (fill)		
		⊠		1			SP	Brown fine to coarse sand with trace silt and occasional gravel (loose to medium dense, moist) (native)		
2160	5	18	16	2						
2155	10	12	14	3						
2150	15	16	35	4						
2145	20	14	15	5						
2140	25	14	42	6						
2135	30	10	19	7			SP-SM	Brown fine to coarse sand with silt and occasional gravel (loose to medium dense, moist)		
	35									

WELL LOG



Note: See Figure E-1 for explanation of symbols.

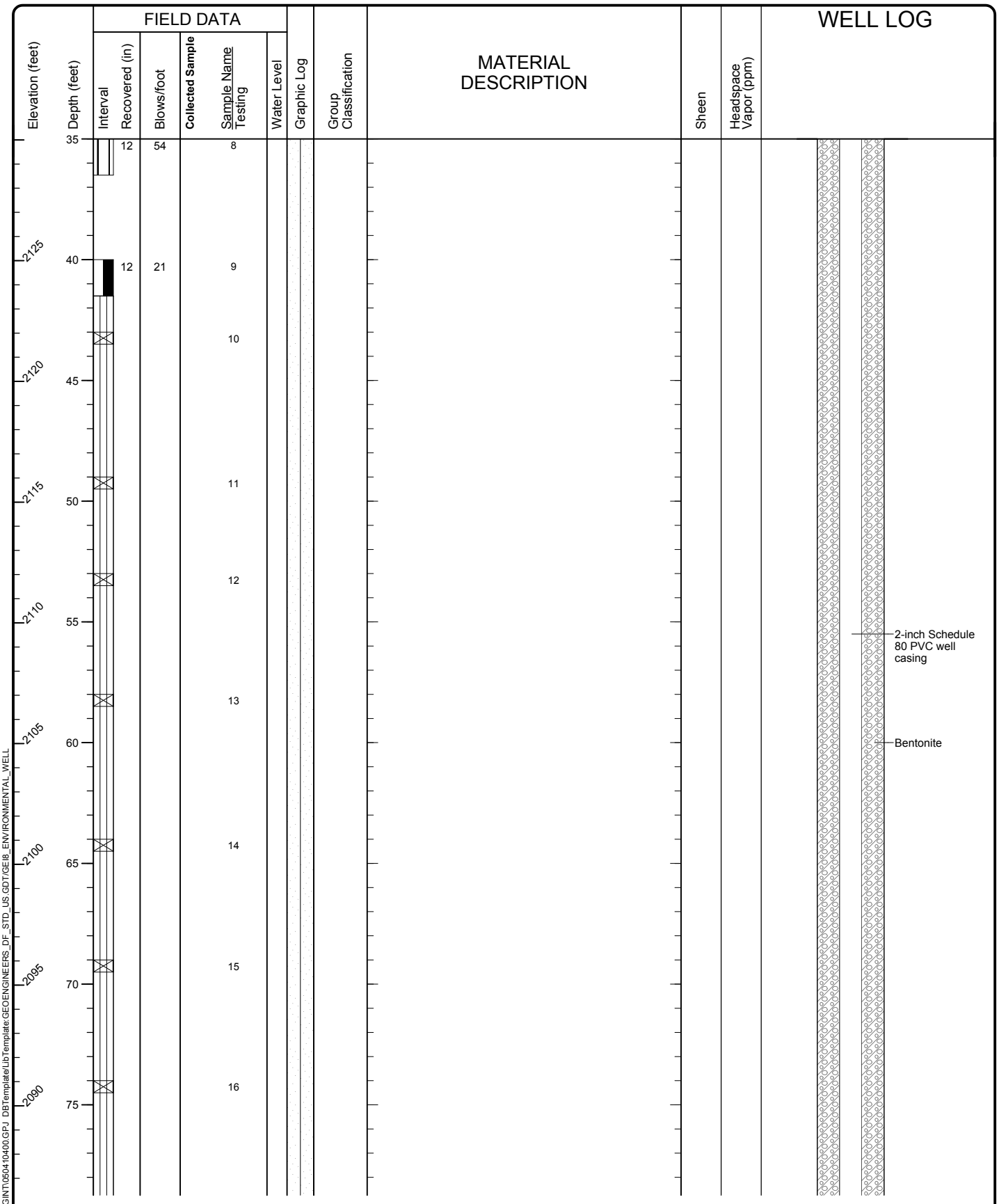
Log of Monitoring Well MW-16A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-27
Sheet 1 of 4

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

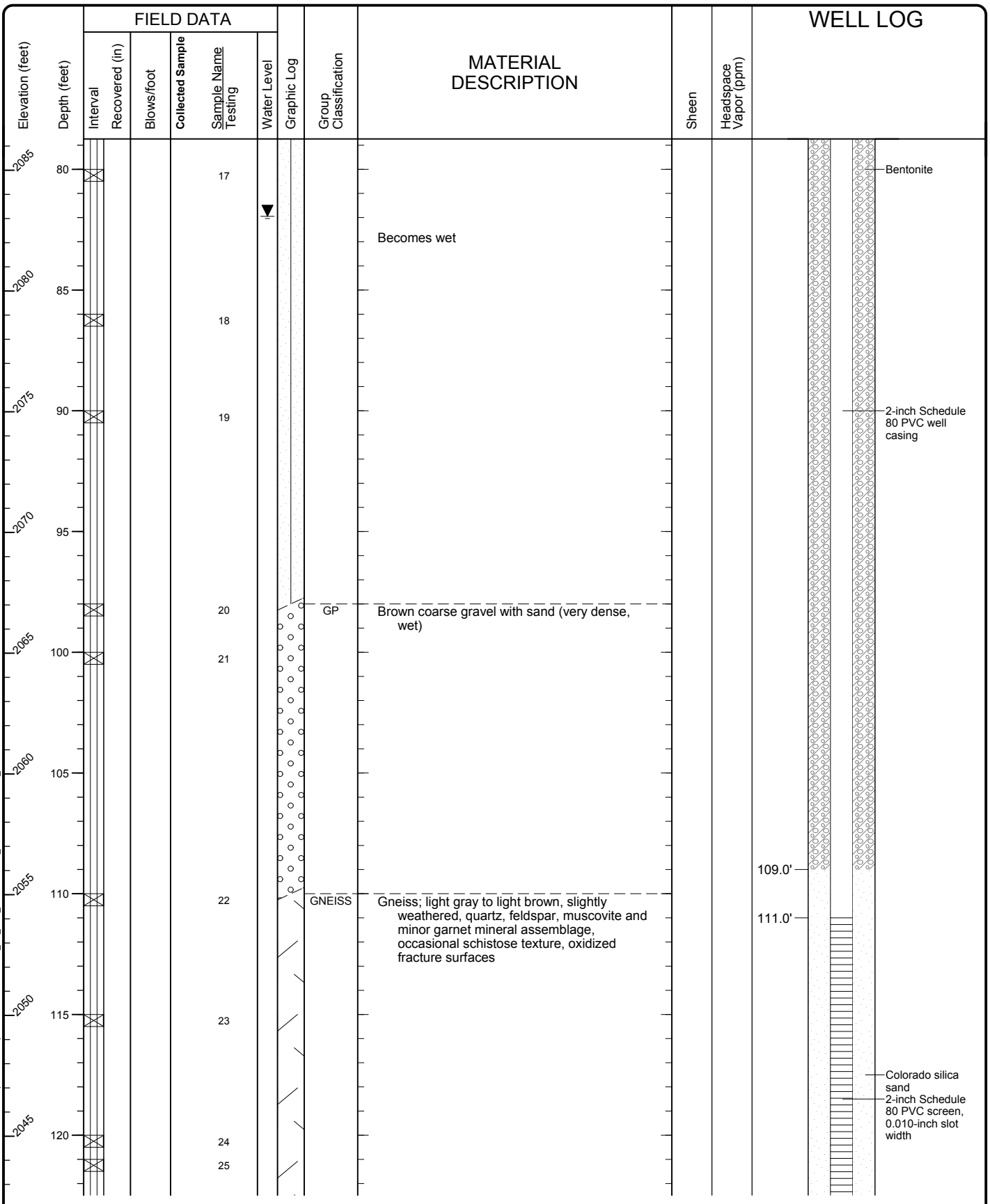
Log of Monitoring Well MW-16A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-27
Sheet 2 of 4

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

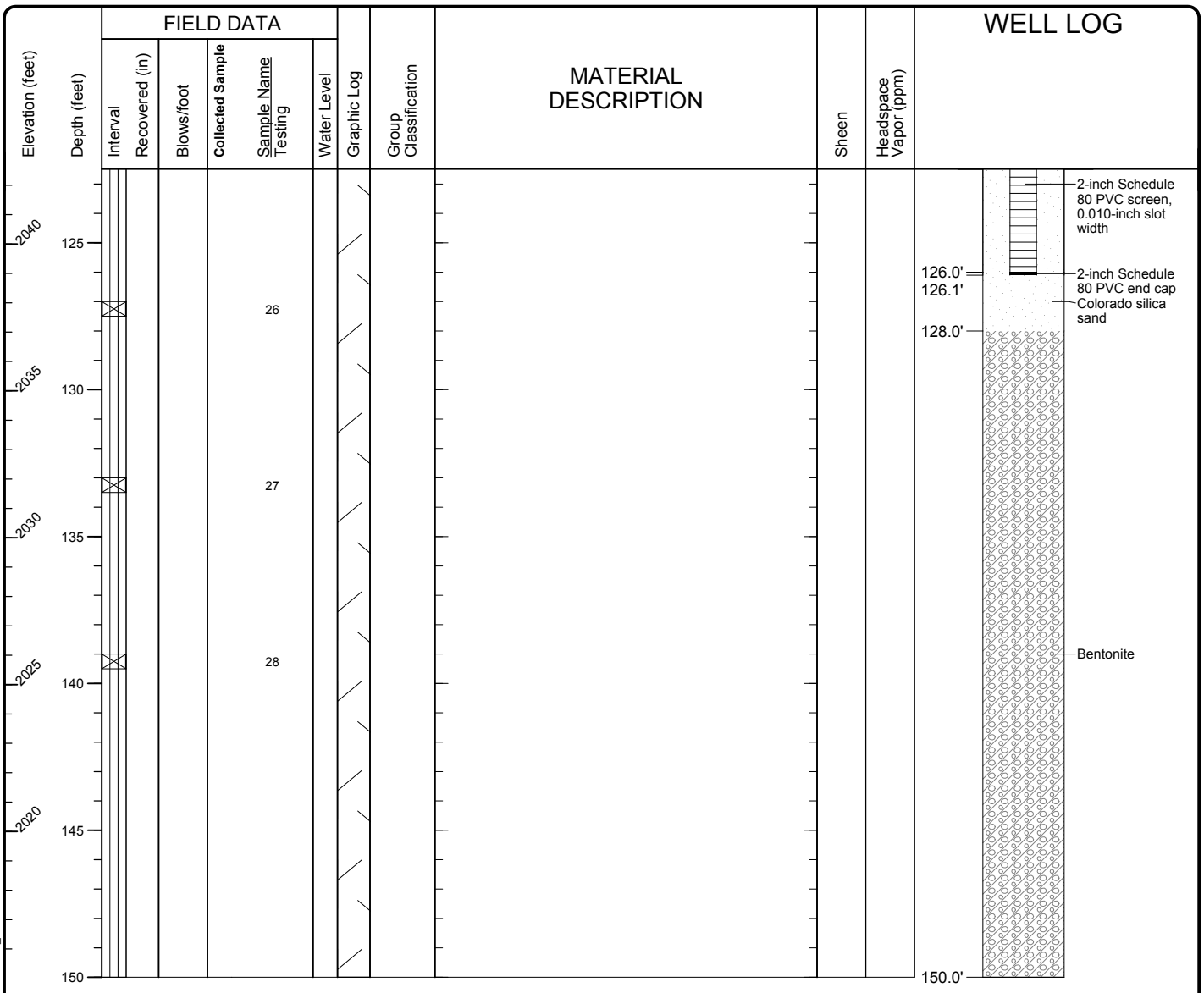
Log of Monitoring Well MW-16A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-27
Sheet 3 of 4

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL



Note: See Figure E-1 for explanation of symbols.

Log of Monitoring Well MW-16A (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-27
Sheet 4 of 4

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_WELL

Drilled	Start 7/29/2015	End 7/29/2015	Total Depth (ft)	71.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2194.62 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2461128 218722		System Datum	WA State Plane,North NAD83 (feet)			Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:								None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	0					SP-SM	Brown fine to medium sand with silt, occasional gravel and cobbles (loose, moist) (fill)			
2190	5	1	65	1						Poor sample recovery, cobble in sample shoe, blow count not representative
2185	10	6	22	2		SP-SM/ MSW	Brown fine to coarse sand with silt, occasional gravel and cobble, and MSW including plastic and wood debris (loose, moist) (fill-MSW)			Approximate SPT N-value is 9
2180	15	3	6	3						
2175	20	8	48	4 MD		SP-SM/ MSW	Gray fine to medium sand with silt, gravel and MSW including wood, fabric and trace metal (medium dense, moist) (fill-MSW)	6.1	86	Approximate SPT N-value is 20
2170	25	8	8	5						
2165	30	4	50/6"	6		MSW	MSW including wood debris, tar-like material on wood and occasional glass			Approximate SPT N-value is 50+
2160	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-1

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-28
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	35	18	18	7		SP-SM/ MSW	Brown fine to coarse sand with silt and occasional MSW including fabric (medium dense, moist) (fill)			
2155	40	12	28	8 MD				2.4	103	Approximate SPT N-value is 11
2150	45	18	18	9		SP	Brown fine to coarse sand with trace silt (medium dense, moist) (native - flood deposits)			
2145							Sand grades to fine to medium			
	50	12	50	10						Approximate SPT N-value is 21
2140	55	18	17	11						
2135	60	12	47	12		SP	Brown fine to coarse sand with trace silt and gravel (medium dense, moist)			Approximate SPT N-value is 19
2130	65	18	31	13						
2125	70	12	82	14						Approximate SPT N-value is 34

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-1 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-28
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/29/2015	End 7/29/2015	Total Depth (ft)	66.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2201.61 / NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile B-90				
Easting (X) / Northing (Y)	2461236 / 218943		System Datum	WA State Plane,North NAD83 (feet)	Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)		
Notes:						None Observed				

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2200	0					SP-SM	Brown fine to coarse sand with silt and trace gravel (loose, dry to moist) (fill)			
	5	8	7	1						
2195										
	10	6	11	2						Approximate SPT N-value is 4
2190										
	15	12	5	3						
2185										
	20	10	21	4						Approximate SPT N-value is 8
2180						SP-SM	Brown fine to coarse sand with silt (medium dense, moist) (fill)			
	25	18	13	5						
2175						SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobble (loose, moist) (fill)			
	30	12	21	6 MD				1.6	102	Approximate SPT N-value is 8
2170						SP-SM	Brown fine to medium sand with silt and MSW including decomposing newspaper, wood and thin plastic (loose, moist) (fill)			
	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-2

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-29
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2165	35	6	9	7						
						SP-SM/ MSW	Brown fine to coarse sand with silt, occasional gravel and MSW including thin plastic, wood and glass (loose, moist) (fill)			
2160	40	12	10	8						Approximate SPT N-value is 4
2155	45	18	14	9 SA		SP-SM	Brown medium to coarse sand with silt and occasional gravel (medium dense to dense, moist) (native - flood deposits)	6		
2150	50	12	57	10						Approximate SPT N-value is 23
2145	55	18	31	11			Occasional cobbles at 55 feet			
2140	60	12	57	12						Approximate SPT N-value is 23
	65	18	27	13						

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-2 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-29
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/30/2015	End 7/30/2015	Total Depth (ft)	46	Logged By JWR / Checked By JER	Driller	Drilling Method
						Environmental West Explorations, Inc.	Hollow-Stem Auger

Surface Elevation (ft) / Vertical Datum	2193.59 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile B-90
Easting (X) / Northing (Y)	2461315 219122	System Datum	WA State Plane,North NAD83 (feet)	Groundwater	Date Measured / Depth to Water (ft) / Elevation (ft)
Notes:					None Observed

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	0					SP-SM	Brown fine to coarse sand with silt and trace gravel (loose to medium dense, moist) (fill)			
2190	5	12	54	1						Approximate SPT N-value is 22
2185	10	4	7	2			Occasional MSW (thin plastic, wood) below 10 feet			
						SP-SM/ MSW	Brown-gray fine to coarse sand with silt, gravel and occasional MSW including thin plastic (medium dense, moist) (fill)			
2180	15	12	27	3						Approximate SPT N-value is 11
2175	20	8	13	4						
						SP-SM/ MSW	Brown-gray fine to coarse sand with silt, gravel, cobbles and MSW including thin plastic, wood, cardboard and trace metal (medium dense, moist) (fill)			
2170	25	11	50/5"	5						Approximate SPT N-value is 50+ Blow count overstated
2165	30	6	12	6						
						SP-SM/ MSW	Black fine to medium sand with silt, gravel and MSW including rubber, steel wires and tires (medium dense, moist) (fill)			
2160	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-3

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-30
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	35		5	50/5"		7						Approximate SPT N-value is 50+ Blow count overstated
2155												
	40		18	19		8		SP-SM/ MSW	Gray fine to medium sand with silt, gravel and MSW including wood and thin plastic (medium dense, moist) (fill)			
2150												
	45		2	50/2"		9		MSW	MSW including rubber tires			Blow count not representative
									Boring terminated at approximately 46 feet below ground surface due to refusal on municipal solid waste (MSW)			

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-3 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-30
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 8/3/2015	End 8/3/2015	Total Depth (ft)	71.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Air Rotary
Surface Elevation (ft) / Vertical Datum	2193.59 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-80		
Easting (X) / Northing (Y)	2461323 219137		System Datum	WA State Plane,North NAD83 (feet)			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:								None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	50	12	24	1		GP-GM/ MSW	Brown fine to coarse gravel with silt, sand and occasional MSW including thin rubber (medium dense, moist) (fill)			No samples collected from 0 to 50 feet
2140										
	55	12	43	2 MD		SP-SM	Brown fine to coarse sand with silt and gravel (medium dense, moist) (native - flood deposits)	6.5	104	Approximate SPT N-value is 18
2135										
	60	12	21	3 SA				6.5		
2130						SP-SM	Brown fine to medium sand with silt (medium dense to dense, moist)			
	65	12	50	4 MD				16	98	Approximate SPT N-value is 20
2125										
	70	18	31	5						

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-3A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-31
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/28/2015	End 7/29/2015	Total Depth (ft)	71.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2200.26 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2461444 219297		System Datum	WA State Plane,North NAD83 (feet)			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:								None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2200	0					SP-SM/ MSW	Brown fine to coarse sand with silt, occasional gravel, cobbles and MSW including fabric, plastic, wood debris and rubber (medium dense, moist) (fill)			
2195	5	18	27	1						Approximate SPT N-value is 11
						SP-SM/ MSW	Gray fine to medium sand with silt, gravel and MSW including plastic and fabric (loose to medium dense, moist) (fill)			
2190	10	12	12	2						
2185	15	12	16	3						Approximate SPT N-value is 6
2180	20	18	22	4 SA		SW-SM/ MSW	Gray medium to coarse sand with silt, occasional gravel and MSW including fabric and wood (loose to medium dense, moist) (fill)	7.7		
2175	25	12	47	5						Approximate SPT N-value is 19
2170	30	7	16	6						
	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-4

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-32
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2165	35	12	17	7						Approximate SPT N-value is 7
						SP/ MSW	Brown fine to medium sand with trace silt, occasional gravel, cobbles and MSW including fabric and thin metal wires (medium dense, moist) (fill)			
2160	40	10	23	8						
						SP-SM/ MSW	Brown fine to medium sand with silt, occasional gravel and occasional MSW including thin metal wires (medium dense, moist) (fill)			
2155	45	12	64	9 MD; SA				4.9	98	Approximate SPT N-value is 26
2150	50	18	20	10		SP	Brown fine to coarse sand with trace silt (medium dense, moist) (native - flood deposits)			
2145	55	12	54	11						Approximate SPT N-value is 22
2140	60	18	33	12 SA		SP	Brown fine to medium sand with trace silt and gravel (dense, moist)	4.5		
						SP	Brown medium to coarse sand with trace silt (medium dense, moist)			
2135	65	12	55	13 MD				4.5	109	Approximate SPT N-value is 23
2130	70	18	22	14						

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-4 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-32
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/28/2015	End 7/28/2015	Total Depth (ft)	71.5	Logged By JWR / Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2204.51 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2461544 219438		System Datum	WA State Plane,North NAD83 (feet)		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:							None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	0					SW-SM	Brown medium to coarse sand with silt and gravel (loose, moist) (fill)			
2200	5	18	8	1 SA				4.8		
						SP-SM/ MSW	Brown-dark gray fine to medium sand with silt, occasional gravel and MSW including wood debris, thin plastic and cloth (loose, moist) (fill)			
2195	10	8	18	2						Approximate SPT N-value is 7
2190	15	18	39	3		ML/ MSW	Dark gray silt with sand, occasional gravel and MSW (dense, moist) (fill)			
2185	20	12	51	4		SP-SM/ MSW	Dark gray fine to medium sand with silt and MSW including wood, cloth and metal (medium dense, moist) (fill)			Approximate SPT N-value is 21
2180	25	18	10	5						Moderate hydrocarbon odor
2175	30	12	71	6		MSW	MSW including cardboard, thin plastic and wood debris			Approximate SPT N-value is 29
2170	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-5

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-33
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	35		18	19		7		SP	Brown fine to medium sand with trace silt (medium dense, moist) (fill)			
2165	40		12	23		8 MD		SP-SM/ MSW	Gray fine to medium sand with silt and MSW including plastic, cardboard, wood and styrofoam (loose, moist) (fill)	9.5	107	Approximate SPT N-value is 9
2160	45		4	16		9						
2155	50		5	50/5"		10						Approximate SPT N-value is 50+
2150	55		18	30		11		SP-SM	Brown fine to medium sand with silt (medium dense, moist) (native)			
2145	60		12	50		12 MD; SA				6	100	Approximate SPT N-value is 21
2140	65		18	39		13			Brown fine to coarse sand with silt, occasional gravel and cobbles (medium dense to dense, moist)			
2135	70		12	68		14						Approximate SPT N-value is 28

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-5 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-33
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/27/2015	End 7/28/2015	Total Depth (ft)	66.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2223.62 / NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2461662 / 219557		System Datum	WA State Plane,North NAD83 (feet)			Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:								None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	0					SP-SM	Brown fine to medium sand with silt and occasional gravel (medium dense, moist) (fill)			
2220	5	12	36	1 MD				5	116	Approximate SPT N-value is 15
2215	10	18	15	2						
2210						SP-SM/ MSW	Brown to gray fine to medium sand with silt and occasional gravel with MSW including thin plastic, fabric and wood (medium dense to dense, moist) (fill)			
	15	4	50/4"	3						Approximate SPT N-value is 50+
2205						SP-SM/ MSW	Gray fine to coarse sand with silt, occasional gravel and MSW including plastic, fabric and wood debris (medium dense to dense, moist) (fill)			
	20	14	37	4						
2200	25	12	51	5						Approximate SPT N-value is 21
2195						SP-SM/ MSW	Gray fine to coarse sand with silt, gravel and MSW including wood debris (medium dense, moist) (fill)			
	30	18	22	6 SA				9.6		
2190	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-6

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-34
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	35	12	41	7		SP	Brown medium to coarse sand and trace silt (medium dense, moist) (fill)			Approximate SPT N-value is 17
						SP	Brown fine to medium sand with trace silt (medium dense, moist) (fill)			
2185	40	15	22	8						
2180	45	12	39	9		SP-SM/ MSW	Brown fine to medium sand with silt, occasional gravel and MSW including fabric (medium dense, moist) (fill)			Approximate SPT N-value is 16
2175	50	18	9	10 SA		SP-SM	Brown fine to medium sand with silt and occasional gravel (loose, moist) (native - flood deposits)	5.2		
2170	55	12	50/5"	11		SP	Brown medium to coarse sand, trace silt and occasional gravel (very dense, moist)			Approximate SPT N-value is 50+
2165	60	18	26	12		SP	Brown medium to coarse sand with trace silt (medium dense to dense, moist)			
2160	65	12	87	13 MD				4.3	116	Approximate SPT N-value is 36

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-6 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-34
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/27/2015	End 7/27/2015	Total Depth (ft)	61.5	Logged By JWR / Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2205.41 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2461847 219717		System Datum	WA State Plane,North NAD83 (feet)		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:							None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2205	0					SP/ MSW	Brown medium to coarse sand with trace silt, gravel and MSW (loose, moist)			
2200	5	18	8	1						
						SW-SM	Brown fine to coarse sand with silt and occasional gravel (loose to medium dense, moist) (fill)	5.4	115	Approximate SPT N-value is 10
2195	10	12	25	2 MD; SA						
2190	15	18	12	3						
2185	20	12	20	4 MD; SA		SM	Brown silty fine to coarse sand with trace gravel (loose, moist) (fill)	9.9	112	Approximate SPT N-value is 8
2180	25	18	16	5		SP-SM	Brown medium to coarse sand with trace silt and occasional gravel (medium dense, moist) (native - flood deposits)			
2175	30	12	50	6						Approximate SPT N-value is 21
	35						Grades to fine to medium sand			

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-7

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-35
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2170	35	18	17	7						
						SP	Brown medium to coarse sand with trace silt and gravel (medium dense, moist)			
2165	40	12	55	8						Approximate SPT N-value is 23
2160	45	18	21	9						
2155	50	12	73	10						Approximate SPT N-value is 30
						SP	Brown medium sand with trace silt, gravel and occasional cobbles (very dense, moist)			
2150	55	18	81	11						
						SP	Brown medium to coarse sand with occasional gravel and trace silt (dense, moist)			
2145	60	12	81	12 MD				4.6	112	Approximate SPT N-value is 33

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-7 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-35
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/27/2015	End 7/27/2015	Total Depth (ft)	41.5	Logged By JWR / Checked By JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2178.73 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2461456 219063		System Datum	WA State Plane,North NAD83 (feet)		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:							None Observed		

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
	0					SW-SM	Brown medium to coarse sand with silt and occasional gravel (loose, dry to moist) (fill)			
2175	5	18	7	1 SA				5.5		
2170							Sand grades to fine to medium			
	10	12	27	2 MD; SA		SP-SM	Brown fine to medium sand with silt and occasional gravel (loose to medium dense, moist) (native - flood deposits)	3.6	106	Approximate SPT N-value is 11
2165	15	18	21	3						
2160	20	12	41	4 SA				3.5		Approximate SPT N-value is 17
2155	25	18	16	5						
2150	30	12	48	6 SA				3.5		Approximate SPT N-value is 20
2145	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-9

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-36
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2140	35	18	19	7						
	40	12	48	8 MD		SP	Brown medium to coarse sand with trace silt and occasional gravel (medium dense, moist)	3.5	107	Approximate SPT N-value is 20

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-9 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-36
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 7/27/2015	End 7/27/2015	Total Depth (ft)	41.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	2186.67 NAVD88		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile B-90				
Easting (X) / Northing (Y)	2461687 219441		System Datum	WA State Plane,North NAD83 (feet)	Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)		
Notes:						None Observed				

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2185	0					SP	Brown medium to coarse sand with trace silt, gravel and occasional cobbles (medium dense, moist) (native - flood deposits)			
2180	5	12	42	1						Approximate SPT N-value is 9
2175	10	18	23	2 SA		SW-SM	Brown fine to coarse sand with silt and occasional gravel (medium dense, moist)	4.5		
2170	15	12	51	3						Approximate SPT N-value is 21
2165	20	18	21	4						
2160	25	12	63	5 MD; SA		SP-SM	Brown fine to medium sand with silt (medium dense, moist)	5	116	Approximate SPT N-value is 26
						SW-SM	Brown fine to coarse sand with silt and occasional gravel (medium dense, moist)			
2155	30	18	21	6						
	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-10

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-37
Sheet 1 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	REMARKS
2150	35	12	71	MD; SA				4.6	109	Approximate SPT N-value is 29
	40	18	36	8		SP	Brown medium to coarse sand with occasional gravel and trace silt (dense, moist)			

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-10 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-37
Sheet 2 of 2

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_GEOTECH_STANDARD_DD_NO_GW

Drilled	Start 6/22/2015	End 6/25/2015	Total Depth (ft)	227	Logged By / Checked By	JML / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Surface Elevation (ft) Vertical Datum	2322.43		Hammer Data	NA			Drilling Equipment	Speedstar Sonic Rig		
Easting (X) / Northing (Y)	2460703 / 219654		System Datum	WA State Plane,North NAD83 (feet)			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	None Observed
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2320	0		36			1		ML	Brown silt with sand and occasional gravel (medium stiff, moist) (fill)	NS	<1	
										NS	<1	
	5							SP	Gray fine to coarse sand (loose, moist) (fill)	NS	<1	
2315			84			2		SP/ MSW	Gray fine to coarse sand with gravel, trace silt and MSW (plastic, wood) (loose, moist) (fill)	NS	<1	
	10							SP	Light brown fine to medium sand (loose, moist)	NS	<1	
2310								SP	Light brown fine to coarse sand with gravel (loose, moist)	NS	<1	
	15											
2305			54			3		SP	Gray fine to coarse sand with gravel and occasional cobbles (loose, moist)	NS	<1	
	20									NS	<1	
2300												
	25									NS	<1	
2295			56			4		SP	Gray fine to coarse sand with occasional gravel (loose, moist)	NS	<1	
	30									NS	<1	
2290												
	35											

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-11

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-38
Sheet 1 of 6

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	FIELD DATA: Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35								NS	<1	
2285			84		5			Basalt cobbles from 37 to 38 feet	NS	<1	
	40										
2280									NS	<1	
	45								NS	<1	
2275			88		6						
									NS	<1	
	50										
2270									NS	<1	
	55								NS	<1	
2265			64		7				NS	<1	
	60								NS	1.5	
2260									NS	5.0	
	65										
2255			106		8				NS	<1	
	70										
2250									NS	<1	
	75								NS	1.2	

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-11 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-38
Sheet 2 of 6

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2245			108			9				NS	3.0	
	80											
2240										NS	<1	
	85											
2235										NS	<1	
			96			10						
	90							SP	Light brown fine to coarse sand with trace silt and occasional gravel (loose, moist) (native)	NS	<1	
2230												
	95									NS	<1	
2225			96			11						
	100									NS	<1	
2220												
	105											
2215			84			12						
	110									NS	<1	
2210												
	115									NS	<1	
2205			100			13		SP	Brown fine to coarse sand with gravel and trace silt (loose, moist)			

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-11 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-38
Sheet 3 of 6

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2200	120						Brown fine to coarse sand with occasional gravel and trace silt (loose, moist)	NS	<1	
	125					BASALT	Basalt			
						SP	Brown fine to coarse sand with occasional gravel and trace silt (loose, moist)			
2195		120		14						
	130							NS	<1	
2190										
	135							NS	<1	
2185		96		15						
								NS	<1	
	140									
2180								NS	<1	
	145									
2175		100		16						
	150							NS	<1	
2170										
	155							NS	<1	
2165		102		17						
								NS	<1	
	160									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-11 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-38
Sheet 4 of 6

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2160	165							NS	<1	
2155		96		18						
	170							NS	<1	
2150										
	175							NS	<1	
2145		102		19						
						SP-SM	Brown fine to coarse sand with gravel, silt and trace clay (very dense, moist)			
	180					SP-SM	Brown fine to coarse sand with silt and occasional gravel (loose, moist)			
2140								NS	<1	
	185									
2135		106		20						
	190							NS	<1	
2130										
	195							NS	<1	
2125		106		21						
	200							NS	<1	

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-11 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-38
Sheet 5 of 6

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2120	205									
2115		110		22				NS	<1	
2110	210									
						GNEISS	Gneiss; light brown, highly weathered, remnant banded texture, mineral assemblage largely altered to clay	NS	<1	
	215									
2105		108		23				NS	<1	
	220					GNEISS	Gneiss; white to light brown, moderately weathered, feldspar, quartz and minor muscovite mineral assemblage			
2100								NS	<1	
	225									

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-11 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-38
Sheet 6 of 6

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 8/4/2015	End 8/7/2015	Total Depth (ft)	277.5	Logged By / Checked By	JWR / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Air Rotary
Surface Elevation (ft) Vertical Datum	2300.22		Hammer Data	NA			Drilling Equipment	Mobile B-90		
Easting (X) / Northing (Y)	2460654 / 218993		System Datum	WA State Plane,North NAD83 (feet)			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes: A monitoring well was temporarily installed to a depth of 250 feet, but subsequently was decommissioned when observed to be dry.							None Observed			

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2300	0			1		SP-SM	Brown fine to medium sand with silt and occasional gravel (loose, moist) (fill)			
2295	5			2						
2290	10									
2285	15					SM	Brown silty fine to coarse sand with occasional gravel (loose, moist) (fill)			
2280	20			3						
2275	25									
2270	30			4		SP-SM	Thin silt lens/layer at base Brown fine to coarse sand with silt and gravel (loose, moist)			
	35									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 1 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2265	35					SP	Brown fine to coarse sand with trace silt and occasional gravel (loose, moist)			
				5						
2260	40									
2255	45					SP	Brown fine to coarse sand with trace silt (loose, moist)			
				6						
2250	50									
2245	55									
2240	60			7						
						SP	Gray medium to coarse sand with trace silt and occasional gravel (loose, moist)			
				8						
2235	65									
						SP-SM	Brown fine to medium sand with silt and occasional gravel (loose, moist)			
2230	70			9						
2225	75					SP	Gray fine to coarse sand with trace silt and occasional gravel (loose, moist)			
				10						

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 2 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2220	80									
2215	85					SP	Gray fine to coarse sand with occasional gravel and trace silt (loose, moist)			
2210	90			11						
2205	95									
2200	100			12						
2195	105									
2190	110			13						
2185	115									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 3 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2180	120			14						
2175	125									
2170	130			15						
2165	135									
2160	140			16						
2155	145			17						
2150	150									
2145	155			18						
2140	160									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 4 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2135	165									
				19						
2130	170									
2125	175									
				20						
2120	180					SP	Gray fine to coarse sand with gravel and trace silt (medium dense, moist)			
2115	185			21						Drilling action slows due to increased gravel content
2110	190					SP	Gray fine to coarse sand with trace silt and occasional gravel (loose, moist)			
2105	195			22						
2100	200									

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 5 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2095	205			23						
2090	210			24		ML	Brown silt with sand (medium stiff, moist)			
				25		SM	Brown silty fine to medium sand (loose, moist)			
2085	215			26		SP	Gray fine to coarse sand with trace silt and occasional gravel (loose, moist)			
2080	220									
2075	225			27						
				28						
2070	230					CL	Dark brown to reddish brown clay with sand and occasional gravel (stiff to very stiff, moist)			
2065	235	18	60	29						
						SP	Gray fine to coarse sand (loose, moist)			
2060	240			30						

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 6 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2055	245									
				31		CL	Brown clay with sand (soft, wet)			
2050	250					SP	Brown fine to coarse sand with trace silt and gravel (loose, wet)			
2045	255			32						
2040	260			33		GP	Brown to gray coarse gravel with sand (loose, wet)			
2035	265			34		SM	Brown fine to coarse sand with clay and occasional gravel (soft, wet)			
						GNEISS	Gneiss; light brown to gray, slightly to moderately weathered, feldspar, quartz and muscovite mineral assemblage			
				35						
2030	270									
2025	275			36						

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-12 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-39
Sheet 7 of 7

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate/LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 6/17/2015	End 6/22/2015	Total Depth (ft)	186.5	Logged By / Checked By	JML / JER	Driller	Environmental West Explorations, Inc.	Drilling Method	Sonic
Surface Elevation (ft) Vertical Datum	2209.92		Hammer Data	NA			Drilling Equipment	Speedstar Sonic Rig		
Easting (X) Northing (Y)			System Datum				Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes: A monitoring well (Ecology ID No. BIX953) was temporarily installed to a depth of 163 feet, but subsequently was decommissioned when observed to be dry.							None Observed			

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		28			1		ML	Brown silt (soft, moist) (fill)	NS	<1	
										NS	<1	
2205	5							BASALT	Basalt boulder			
			60			2		ML/ MSW	Brown silt with sand, trace clay and MSW (brick pieces) (medium stiff, moist) (fill)			
										NS	<1	
2200	10									NS	<1	
								SP	Brown fine to medium sand with trace silt, occasional gravel and MSW (plastic) (loose, moist) (fill)	NS	<1	
2195	15		60			3				NS	<1	
										NS	<1	
2190	20									NS	<1	
								MSW	MSW (paper, plastic, wood)			
2185	25		96			4				NS	<1	
								SP	Brown fine to medium sand with trace silt, occasional gravel and MSW (plastic) (medium dense, moist) (fill)			
2180	30									NS	1.4	
								MSW	MSW (paper, plastic, wood)			
2175	35									NS	2.2	

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-13

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-40
Sheet 1 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104400.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35							SP	Light brown fine to medium sand with trace silt and occasional gravel (loose, moist) (native)			
			96			5				NS	<1	
2170	40									NS	<1	
										NS	<1	
2165	45		120			6				NS	<1	
2160	50									NS	<1	
										NS	<1	
2155	55		120			7		SP	Light brown fine to medium sand with trace silt and occasional gravel, and cobbles (loose, moist)			
2150	60									NS	<1	
										NS	<1	
2145	65		120			8				NS	<1	
2140	70									NS	<1	
										NS	<1	
2135	75									NS	<1	

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-40
Sheet 2 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2130	80									NS	<1	
										NS	<1	
2125	85											
			120			10				NS	<1	
2120	90									NS	<1	
2115	95									NS	<1	
			120			11				NS	<1	
2110	100									NS	<1	
2105	105									NS	<1	
			120			12				NS	<1	
2100	110									NS	<1	
2095	115									NS	<1	
			120			13				NS	<1	

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-40
Sheet 3 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	FIELD DATA: Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
2090	120								NS	<1	
2085	125								NS	<1	
			120		14				NS	<1	
2080	130								NS	<1	
2075	135								NS	<1	
			120		15				NS	<1	
2070	140								NS	<1	
2065	145								NS	<1	
			120		16				NS	<1	
2060	150								NS	<1	
2055	155								NS	<1	
			120		17				NS	<1	
2050	160										

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-40
Sheet 4 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
								NS	<1	
2045	165						Becomes wet	NS	<1	
		60		18						
						SP	Brown fine to coarse sand with occasional gravel (loose, wet)	NS	<1	
2040	170									
						GP	Gray fine to coarse gravel with trace sand and occasional cobbles (loose, wet)	NS	<1	
2035	175									
		120		19		SP-SM	Brown fine to medium sand with silt and occasional gravel (loose, wet)			
2030	180							NS	<1	
								NS	<1	
2025	185							NS	<1	

MSW = municipal solid waste

Note: See Figure E-1 for explanation of symbols.

Log of Boring SB-13 (continued)

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-40
Sheet 5 of 5

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Date Excavated 5/19/2015	Total Depth (ft) 5	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2276.61		Easting (X) 2460640 Northing (Y) 218700		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2276	0				SP/ MSW	Brown fine to coarse sand with gravel, trace silt, occasional cobbles and MSW (metal, glass bottles, cans, plastic)			MSW starts at approximately 6 inches below ground surface
2275	1								
2274	2								
2273	3								
2272	4								
	5								

Test pit completed at 5 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-1

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-41
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	5.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2297.37			Easting (X) / Northing (Y)	2460640 / 218900			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2297					SP/ MSW	Brown to dark brown fine to coarse sand with gravel, trace silt, occasional cobbles and occasional MSW (metal, plastic, rubber tires)			
2296	1								
2295	2								
2294	3								
2293	4								
2292	5								

Test pit completed at 5½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-2

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-42
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	5.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2302.55			Easting (X) / Northing (Y)	2460670 / 219100			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2302	0			SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist)			
2301	1			SP/ MSW	Gray medium to coarse sand with gravel and MSW (plastic, medical waste, glass bottles)			
2300	2							
2299	3							
2298	4			SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist) (native)			
	5							

Test pit completed at 5½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-3E

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-43
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 5/19/2015	Total Depth (ft) 2	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2302.55		Easting (X) 2460650 Northing (Y) 219100		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2302					SP/ MSW	Brown fine to coarse sand with trace silt, gravel, occasional cobbles and MSW (plastic) (medium dense, moist)			MSW starts at approximately 6 inches below ground surface
	1								
2301									
	2								

Test pit completed at 2 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-3W

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-44
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	11.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2330.65			Easting (X) / Northing (Y)	2460730 / 219970			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2330	0				GP	Brown to dark brown fine to coarse gravel with sand and trace silt (loose, moist) (fill)			
2329	1								
2328	2								
2327	3								
2326	4				GP/ MSW	Dark brown fine to coarse gravel with sand, trace silt and MSW (household waste, charred wood waste, appliances) (loose, moist)			
2325	5								
2324	6								
2323	7								
2322	8								
2321	9								
2320	10								
	11								

Test pit completed at 11½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-4

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-45
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	9	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2327.16			Easting (X) / Northing (Y)	2460860 / 219920			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2327	0				GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)			
2326	1								
2325	2								
2324	3					Grades to dark brown			
2323	4								
2322	5								
2321	6								
2320	7								
2319	8								
	9					Test pit completed at 9 feet below ground surface No groundwater seepage observed No caving observed No municipal solid waste (MSW) observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-5A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-46
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	7	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2326.22			Easting (X) / Northing (Y)	2460860 / 219900			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2326	0				SP	Brown fine to coarse sand with occasional gravel and cobbles (medium dense, moist)			
2325	1								
2324	2								
					SP/ MSW	Brown fine to coarse sand with occasional gravel, cobbles and MSW (household waste) (medium dense, moist)			
2323	3								
2322	4								
2321	5				SP	Brown fine to coarse sand with occasional gravel and cobbles (medium dense, moist)			
2320	6								
	7								

Test pit completed at 7 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-5B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-47
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	8	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2321.17			Easting (X) / Northing (Y)	2461020 / 219920			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2321	0				SP	Brown fine to coarse sand with trace silt, occasional gravel and cobbles (medium dense, moist)			
2320	1								
2319	2								
2318	3				SP/ MSW	Brown fine to coarse sand with trace silt, occasional gravel, cobbles and MSW (medium dense, moist)			
2317	4				SP	Brown fine to coarse sand with trace silt, occasional gravel and cobbles (medium dense, moist)			
2316	5								
2315	6								
2314	7								
	8								

Test pit completed at 8 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-6

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-48
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	9.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2312.29			Easting (X) / Northing (Y)	2461130 / 219930	Coordinate System Horizontal Datum			

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2312	0				SP/ MSW	Brown to dark gray fine to coarse sand with gravel, trace silt and MSW (household waste) (medium dense, moist)			MSW starts at approximately 9 inches below ground surface
2311	1								
2310	2								
2309	3								
2308	4								
2307	5								
2306	6								
2305	7								
2304	8				SP	Brown fine to coarse sand with gravel and trace silt (medium dense, moist)			
2303	9								

Test pit completed at 9½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-7

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-49
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.00.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/5/2015	Total Depth (ft)	10	Logged By Checked By	JWR JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2253.49			Easting (X) Northing (Y)	2460740 218580	Coordinate System Horizontal Datum			

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2253	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2252	1								
2251	2								
2250	3								
2249	4								
2248	5								
2247	6								
2246	7								
2245	8				MSW	MSW (household waste)			
2244	9								
	10								

Test pit completed at 10 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-8

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-50
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2328.56			Easting (X) / Northing (Y)	2460650 / 219840			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2328	0				SP	Brown fine to medium sand with trace silt and gravel (loose, moist) (fill)			
2327	1				CL	Brown clay with sand (medium stiff, moist) (fill)			
2326	2								
2325	3				SP-SM	Brown fine to medium sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2324	4								
2323	5								
2322	6								
	7					Test pit completed at 7 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-9A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-51
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2328.56			Easting (X) Northing (Y)	2460650 219840			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2328	0				SP	Brown fine to medium sand with trace silt and gravel (medium dense, moist) (fill)			
2327	1				CL	Brown clay with sand (medium stiff, moist) (fill)			
2326	2								
2325	3				MSW	MSW (household waste)			
2324	4				SP-SM	Brown fine to medium sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2323	5								
2322	6								
	7								

Test pit completed at 7 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-9B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-52
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 8/7/2015	Total Depth (ft) 7	Logged By JWR Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2327.14		Easting (X) 2460660 Northing (Y) 219760		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2327	0				SP-SM	Brown fine to medium sand with silt, gravel and occasional cobbles (medium dense, moist)			
2326	1								
2325	2								
2324	3								
2323	4								
2322	5								
2321	6								
	7					Test pit completed at 7 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-10A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-53
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2326.67			Easting (X) / Northing (Y)	2460670 / 219760			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2326	0				SP	Brown fine to coarse sand with trace silt and gravel (loose, moist) (fill)			
2325	1				CL	Brown clay with sand (medium stiff, moist) (fill)			
2324	2								
2323	3								
2322	4				MSW	MSW (household waste)			
2321	5				SP-SM	Brown fine to medium sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2320	6								
	7					Test pit completed at 7 feet No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-10B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-54
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	5	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2316.49			Easting (X) / Northing (Y)	2460660 / 219490			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2316	0				GP-GM	Brown fine to coarse gravel with silt, sand and occasional cobbles (medium dense, moist) (fill)			
2315	1								
2314	2								
2313	3								
2312	4				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
	5					Test pit completed at 5 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-11A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-55
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2315.42			Easting (X) / Northing (Y)	2460670 / 219490			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2315	0				CL	Brown clay with sand (medium stiff, moist) (fill)			
2314	1				SP	Brown fine to coarse sand with trace silt and gravel (medium dense, moist) (fill)			
2313	2				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (household waste) (medium dense, moist) (fill)			
2312	3								
2311	4								
2310	5								
2309	6								
	7								

Test pit completed at 7 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-11B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-56
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	4	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2302.9			Easting (X) Northing (Y)	2460640 219280			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2302	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
2301	1								
2300	2								
2299	3								
	4					Test pit completed at 4 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-12A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-57
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2302.9			Easting (X) Northing (Y)	2460650 219280			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2302	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2301	1								
2300	2				SP	Brown fine to coarse sand with trace silt and gravel (medium dense, moist)			
2299	3				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (household waste) (medium dense, moist) (fill)			
2298	4								
2297	5								
2296	6								
	7								

Test pit completed at 7 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-12B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-58
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2237.46			Easting (X) / Northing (Y)	2460880 / 218590			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2237	0			SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2236	1							
2235	2							
2234	3							
2233	4							
2232	5							
2231	6			MSW	MSW (household waste)			
	7				Test pit completed at 7 feet No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-13

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-59
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 8/7/2015	Total Depth (ft) 2	Logged By JWR Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2265.54		Easting (X) 2461660 Northing (Y) 219920		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2265	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2264	1				MSW	MSW (household waste)			
	2					Test pit completed at 2 feet No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-14

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-60
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2243.56			Easting (X) / Northing (Y)	2461830 / 219950			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2243	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2242	1								
2241	2								
2240	3								
2239	4				MSW	MSW (household waste)			
2238	5				SP	Brown fine to coarse sand with trace silt, gravel and occasional cobbles (medium dense, moist) (native)			
2237	6								
	7								

Test pit completed at 7 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-15A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-61
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/7/2015	Total Depth (ft)	5	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2243.56			Easting (X) / Northing (Y)	2461840 / 219930			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2243	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2242	1								
2241	2								
2240	3				MSW	MSW (household waste)			
2239	4				SP	Brown fine to coarse sand with trace silt, gravel and occasional cobbles (medium dense, moist) (native)			
	5								

Test pit completed at 5 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-15B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-62
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	6.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2335.14			Easting (X) / Northing (Y)	2460540 / 220070			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2335	0				SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist)			
2334	1				SP/ MSW	Gray fine to coarse sand with gravel, trace silt, occasional cobbles and MSW (plastic, household waste) (medium dense, moist)			
2333	2								
2332	3					Grades to brown			
2331	4								
2330	5					Wood waste (branches, logs) present below 5½ feet			
2329	6								

Test pit completed at 6½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-1N

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-63
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	8	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2335.14			Easting (X) / Northing (Y)	2460550 / 220070			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2335	0				SP	Brown to gray fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist) (fill)			
2334	1								
2333	2				SP	Dark brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist) (native)			
2332	3								
2331	4								
2330	5								
2329	6								
2328	7								
	8					Test pit completed at 8 feet below ground surface No groundwater seepage observed No caving observed No municipal solid waste (MSW) observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-1S

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-64
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	7	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2334.11			Easting (X) / Northing (Y)	2460480 / 220010			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2334	0				SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist) (fill)			
2333	1					Grades to dark brown with increasing gravel			
2332	2								
2331	3				SP/ MSW	Dark brown sand with gravel, trace silt, occasional cobbles and MSW (household waste, wood) (medium dense, moist)			
2330	4								
2329	5								
2328	6				SP	Dark brown sand with gravel, trace silt and occasional cobbles (medium dense, moist)			
	7								

Test pit completed at 7 feet below ground surface
No groundwater seepage observed
Some caving observed at 2 to 7 feet
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Log of Test Pit TP-F-2N

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-65
Sheet 1 of 1

Date Excavated	5/19/2015	Total Depth (ft)	7.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2334.11			Easting (X) / Northing (Y)	2460490 / 220010			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2334	0			SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist)			
2333	1							
2332	2							
2331	3				Grades to dark brown with increased gravel content			
2330	4							
2329	5							
2328	6							
2327	7							

Test pit completed at 7½ feet below ground surface
No groundwater seepage observed
Some caving observed at 2 to 7 feet
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-2S

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-66
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	6.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2333.23			Easting (X) / Northing (Y)	2460330 / 220070			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2333	0				GP	Brown fine to coarse gravel with sand, trace silt, occasional cobbles and metal piping (medium dense, moist)			
2332	1								
2331	2				GP/ MSW	Brown fine to coarse gravel with sand, trace silt, occasional cobbles and MSW (plastic, household waste) (medium dense, moist)			
2330	3								
2329	4								
2328	5				SP	Dark brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist) (native)			
2327	6								

Test pit completed at 6½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-3N

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-67
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/19/2015	Total Depth (ft)	6.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2333.63			Easting (X) / Northing (Y)	2460340 / 220070			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2333	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2332	1								
2331	2					Grades to dark brown			
2330	3								
2329	4								
2328	5								
	6								

Test pit completed at 6½ feet below ground surface
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-3S

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-68
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	3.25	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2350.83			Easting (X) / Northing (Y)	2460280 / 220980			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2350	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
	1								
2349									
	2					Grades to dark brown			
2348									
	3								

Test pit completed at 3¼ feet below ground surface
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-4A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-69
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	7.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2350.83			Easting (X) / Northing (Y)	2460280 / 220970			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2350	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
	1				CL	Brown clay with sand (medium stiff, moist)			
2349	2								
2348	3								
2347	4				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2346	5								
2345	6								
2344	7								

Test pit completed at 7½ feet below ground surface
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-4B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-70
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	9.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2350.28			Easting (X) / Northing (Y)	2460280 / 220950			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2350	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2349	1				CL	Brown clay with sand (medium stiff, moist) (fill)			
2348	2								
2347	3				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel, occasional cobbles and MSW (household waste) (medium dense, moist)			
2346	4								
2345	5								
2344	6								
2343	7				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2342	8								
2341	9								

Test pit completed at 9½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-4C

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-71
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	8	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2348.2			Easting (X) / Northing (Y)	2460400 / 220940			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2348	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
2347	1								
					CL	Brown clay with sand (medium stiff, moist)			
2346	2								
2345	3								
					SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2344	4								
2343	5								
2342	6								
2341	7								
	8					Test pit completed at 8 feet below ground surface No groundwater seepage observed No caving observed No municipal solid waste (MSW) observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-5A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-72
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	10	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2348.52			Easting (X) / Northing (Y)	2460390 / 220920			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2348	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2347	1				CL	Brown clay with sand (medium stiff, moist) (fill)			
2346	2				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2345	3								
2344	4				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel, occasional cobbles and MSW (household waste) (medium dense, moist)			
2343	5								
2342	6								
2341	7				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
2340	8								
2339	9								
	10								

Test pit completed at 10 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-5B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-73
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	9	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2346.86			Easting (X) / Northing (Y)	2460470 / 220890			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2346	1				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
2345	2				CL	Brown clay with sand (medium stiff, moist)			
2344	3								
2343	4				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel, occasional cobbles and MSW (metal, wood) (medium dense, moist)			
2342	5								
2341	6								
2340	7				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
2339	8								
2338	9					Test pit completed at 9 feet below ground surface No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-6

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-74
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	9	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2345.77			Easting (X) / Northing (Y)	2460570 / 220800			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2344	1								
2343	2				GP	Dark brown fine to coarse gravel with trace silt and sand, and occasional cobbles (medium dense, moist)			
2342	3								
2341	4				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2340	5								
2339	6								
2338	7								
2337	8				GP	Brown fine to coarse gravel with trace silt and sand, and occasional cobbles (medium dense, moist)			
	9								

Test pit completed at 9 feet below ground surface
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-7A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-75
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	7.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2345.68			Easting (X) / Northing (Y)	2460550 / 220790			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2344	1								
	2				GP	Brown fine to coarse gravel with trace sand and silt, and occasional cobbles (medium dense, moist)			
2343									
	3								
2342									
	4								
2341					GP	Brown fine to coarse gravel with sand and trace silt, and cobbles (medium dense, moist)			
	5								
2340									
	6								
2339									
	7								

Test pit completed at 7½ feet below ground surface
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-7B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-76
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	8	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2346.05			Easting (X) / Northing (Y)	2460530 / 220780			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	1				GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)			
2344	2				CL	Brown clay with sand (medium stiff, moist)			
2343	3								
2342	4				GP-GM	Brown fine to coarse gravel with silt, sand and occasional cobbles (medium dense, moist)			
2341	5								
2340	6								
2339	7								
	8								

Test pit completed at 8 feet
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-7C

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-77
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	9.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2346.05			Easting (X) / Northing (Y)	2460510 / 220780			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	1				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2344	2				CL	Brown clay with sand (medium stiff, moist) (fill)			
2343	3				SP/ MSW	Brown fine to coarse sand with trace silt, occasional gravel and cobbles, and MSW (wood, plastic, household garbage)			
2342	4								
2341	5								
2340	6								
2339	7								
2338	8				SP	Brown fine to coarse sand with trace silt and occasional gravel, and cobbles			
2337	9								

Test pit completed at 9½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-7D

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-78
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	8.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2345.75			Easting (X) / Northing (Y)	2460570 / 220610			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
2344	2				CL	Brown clay with sand (medium stiff, moist)			
2342	3				GP-GM	Brown fine to coarse gravel with silt, sand and occasional cobbles (medium dense, moist)			
2338	8					Test pit completed at 8½ feet below ground surface No groundwater seepage observed No caving observed No municipal solid waste (MSW) observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-8A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-79
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	12	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2345.75			Easting (X) / Northing (Y)	2460550 / 220600			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	0				SP-SM	Brown fine to coarse sand with silt, occasional gravel and cobbles (medium dense, moist)			
2344	1				CL	Brown clay with sand (medium stiff, moist)			
2343	2				SP-SM/ MSW	Dark brown fine to coarse sand with silt, gravel, occasional cobbles and MSW (household garbage, tires) (medium dense, moist)			
2342	3								
2341	4								
2340	5								
2339	6								
2338	7								
2337	8								
2336	9								
2335	10								
2334	11				SP-SM	Dark brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
	12								

Test pit completed at 12 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-8B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-80
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	9.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2344.71			Easting (X) / Northing (Y)	2460590 / 220420			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2344	0				SM	Brown silty fine to medium sand with occasional gravel and cobbles (medium dense, moist) (fill)			
2343	1								
2342	2				CL	Brown clay with sand (medium stiff, moist) (fill)			
2341	3								
2340	4				SP/ MSW	Brown fine to coarse sand with gravel, trace silt, occasional cobbles and MSW (household waste) (medium dense, moist)			
2339	5								
2338	6								
2337	7				SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist)			
2336	8								
	9								

Test pit completed at 9½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-9

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-81
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 5/20/2015	Total Depth (ft) 10.5	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2340.29		Easting (X) 2460620 Northing (Y) 220220		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2340	0				SM	Brown silty fine to medium sand with occasional gravel (medium dense, moist)			
2339	1				CL	Brown clay with sand (medium stiff, moist)			
2338	2								
2337	3				SP/ MSW	Brown fine to coarse sand with gravel, trace silt, occasional cobbles and MSW (household waste) (medium dense, moist)			
2336	4								
2335	5								
2334	6								
2333	7								
2332	8				SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles			
2331	9								
2330	10								

Test pit completed at 10½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-10

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-82
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	6	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2335.81			Easting (X) / Northing (Y)	2460690 / 220090			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2335	0				GP/ MSW	Brown fine to coarse gravel with sand, trace silt, occasional cobbles and MSW (household waste, metal, wood debris) (loose, moist)			
2334	1								
2333	2								
2332	3								
2331	4								
2330	5								
	6								

Test pit completed at 6 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-11A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-83
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	3.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2335.81			Easting (X) / Northing (Y)	2460670 / 220100			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2335	0				SM	Brown silty fine to coarse sand with gravel (medium dense, moist)			
	1				SM/ MSW	Brown silty fine to coarse sand with gravel and MSW (wood debris, household waste)			
2334	2								
2333	3								

Test pit completed at 3½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-11B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-84
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	6.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2337.24			Easting (X) / Northing (Y)	2460650 / 220120			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2337	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2336	1				GP/ MSW	Brown fine to coarse gravel with sand, trace silt, occasional cobbles and MSW (household waste, wood debris) (medium dense, moist)			
2335	2								
2334	3								
2333	4								
2332	5				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2331	6								

Test pit completed at 6½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-11C

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-85
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/20/2015	Total Depth (ft)	11.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2337.19			Easting (X) / Northing (Y)	2460630 / 220130			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2337	0				SP	Brown fine to coarse sand with gravel, trace silt and occasional cobbles (medium dense, moist) (fill)			
2336	1								
2335	2								
2334	3				SP/ MSW	Brown fine to coarse sand with gravel, trace silt, occasional cobbles and MSW (household waste, wood debris)			
2333	4								
2332	5								
2331	6								
2330	7								
2329	8								
2328	9								
2327	10								
2326	11								Unable to determine if bottom of MSW was reached due to sloughing

Test pit completed at 11½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-11D

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-86
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 8/5/2015	Total Depth (ft) 10	Logged By JWR Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2350.84		Easting (X) 2460180 Northing (Y) 220930		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2350	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2349	1								
2348	2								
2347	3								
2346	4								
2345	5								
2344	6								
2343	7								
2342	8								
2341	9								
	10					Test pit completed at 10 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-12A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-87
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/5/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2350.84			Easting (X) / Northing (Y)	2460190 / 220930			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2350	0			SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2349	1							
2348	2							
2347	3							
2346	4							
2345	5			SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (household waste) (medium dense, moist)			
2344	6							
	7				Test pit completed at 7 feet No groundwater seepage observed No caving observed MSW = municipal household waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-12B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-88
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	8	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2346.89			Easting (X) / Northing (Y)	2460180 / 220710			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2346	0				SP	Brown fine to medium sand with trace silt, gravel and occasional cobbles (medium dense, moist) (native)			
2345	1								
2344	2								
2343	3								
2342	4								
2341	5								
2340	6								
2339	7								
	8					Test pit completed at 8 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-13A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-89
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	6	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2346.89			Easting (X) / Northing (Y)	2460190 / 220710			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2346	1				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2345	2								
2344	3				CL	Brown clay with sand (medium stiff, moist) (fill)			
2343	4				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (household waste) (medium dense, moist)			
2342	5								
2341	6					Test pit completed at 6 feet No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-13B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-90
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2344.81			Easting (X) / Northing (Y)	2460210 / 220490			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2344	0			SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2343	1							
2342	2							
2341	3			CL	Brown clay with sand (medium stiff, moist) (fill)			
2340	4							
2339	5			SP	Brown fine to coarse sand with trace silt, gravel and occasional cobbles (medium dense, moist) (native)			
2338	6							
	7				Test pit completed at 7 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-14A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-91
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	6	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2344.81			Easting (X) / Northing (Y)	2460220 / 220490			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2344	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2343	1								
	2				CL	Brown clay with sand (medium stiff, moist) (fill)			
2342	3								
2341	4				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (household waste) (medium dense, moist)			
2340	5								
2339	6					Test pit completed at 6 feet No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-14B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-92
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	7	Logged By Checked By	JWR JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2343.38			Easting (X) Northing (Y)	2460220 220330	Coordinate System Horizontal Datum			

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2343	0				SM	Brown silty fine to coarse sand with gravel and occasional cobbles (medium dense, moist) (native)			
2342	1								
2341	2								
2340	3								
2339	4								
2338	5								
2337	6								
	7					Test pit completed at 7 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-15A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-93
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	6.5	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2343.38			Easting (X) Northing (Y)	2460230 220340			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2343	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2342	1								
2341	2								
					CL	Brown clay with sand (medium stiff, moist) (fill)			
2340	3								
2339	4								
					SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (medium dense, moist)			
2338	5								
2337	6								

Test pit completed at 6½ feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-15B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-94
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 8/6/2015	Total Depth (ft) 7	Logged By JWR Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2338.49		Easting (X) 2460260 Northing (Y) 220190		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2338	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2337	1								
2336	2								
2335	3								
2334	4								
2333	5								
2332	6								
	7					Test pit completed at 7 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-16A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-95
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	8/6/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2338.6			Easting (X) Northing (Y)	2460270 220190	Coordinate System Horizontal Datum			

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2338	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2337	1								
	2				CL	Brown clay with sand (medium stiff, moist) (fill)			
2336	3								
2335	4								
2334	5				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel and occasional cobbles, and MSW (household waste) (medium dense, moist) (fill)			
2333	6								
2332	7								

Test pit completed at 7 feet
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-16B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-96
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/22/2015	Total Depth (ft)	11	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2345.76			Easting (X) / Northing (Y)	2460640 / 220690			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2345	0				SP-SM	Brown fine to coarse sand with silt, occasional gravel and cobbles (medium dense, moist) (fill)			
2344	1								
2343	2				SP-SM/ MSW	Brown fine to coarse sand with silt, occasional gravel and cobbles, and MSW (concrete, wires, hose) (medium dense, moist)			Waste largely composed of apparent construction debris
2342	3								
2341	4								
2340	5								
2339	6				SP-SM	Brown fine to coarse sand with silt, occasional gravel and cobbles (medium dense, moist)			
2338	7								
2337	8								
2336	9								
2335	10								
	11								

Test pit completed at 11 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-FE-1

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-97
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/22/2015	Total Depth (ft)	9	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2344.76			Easting (X) / Northing (Y)	2460710 / 220440			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2344	0				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (fill)			
2343	1				SP-SM/ MSW	Brown fine to coarse sand with silt, gravel, occasional cobbles and MSW (metal, concrete, asphalt, occasional household debris) (medium dense, moist)			Waste largely composed of apparent construction debris
2342	2								
2341	3								
2340	4								
2339	5								
2338	6								
2337	7								
2336	8				SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist)			
	9								

Test pit completed at 9 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-FE-2

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-98
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.00.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/22/2015	Total Depth (ft)	7.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2344.75			Easting (X) / Northing (Y)	2460720 / 220550			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2344	0			SP-SM	Brown fine to coarse sand with silt, occasional gravel and cobbles (medium dense, moist) (fill)			
2343	1			SP-SM/ MSW	Brown to dark brown fine to coarse sand with silt, occasional gravel and cobbles, and MSW (concrete, asphalt, metal)			Waste largely composed of apparent construction debris
2342	2							
2341	3							
2340	4							
2339	5							
2338	6							
	7							

Test pit completed at 7½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-FE-3

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-99
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	6	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2344.68			Easting (X) / Northing (Y)	2460320 / 220390			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2344	0				SP-SM	Brown fine to coarse sand with silt and occasional gravel (medium dense, moist) (fill)			
2343	1								
2342	2				CL	Brown clay (medium stiff, moist) (fill)			
2341	3				SP	Dark brown fine to coarse sand with trace silt and occasional gravel, and cobbles (medium dense, moist) (fill)			
2340	4								
2339	5				SP/ MSW	Dark brown fine to coarse sand with trace silt, occasional gravel and cobbles, and MSW (household waste) (medium dense, moist)			Methane odor coincident with MSW
	6								

Test pit completed at 6 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-TOP1

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-100
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	8.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2346.84			Easting (X) / Northing (Y)	2460280 / 220730			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2346	1				SP-SM	Brown fine to coarse sand with silt, occasional gravel and cobbles (medium dense, moist)			
2345	2				CL	Brown clay (medium stiff, moist)			Methane odor below 2 feet in depth
2344	3								
2343	4				SP	Dark brown fine to coarse sand with trace silt, occasional gravel and cobbles (medium dense, moist)			
2342	5								
2341	6								
2340	7				SP/ MSW	Dark brown fine to coarse sand with trace silt, occasional gravel and cobbles, and MSW (medium dense, moist)			
2339	8								

Test pit completed at 8½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-F-TOP2

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-101
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 5/21/2015	Total Depth (ft) 12	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2332.15		Easting (X) 2460750 Northing (Y) 220020		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2332	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2331	1								
2330	2								
2329	3								
2328	4								
2327	5				GP/ MSW	Brown fine to coarse gravel with sand, trace silt, occasional cobbles and occasional MSW (plastic, metal, wood debris) (medium dense, moist)			
2326	6								
2325	7				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2324	8								
2323	9								
2322	10								
2321	11								
	12								

Test pit completed at 12 feet below ground surface
No groundwater seepage observed
Minimal caving observed at 4 to 12 feet
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-M-1A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-102
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 5/21/2015	Total Depth (ft) 11	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2333.07		Easting (X) 2460700 Northing (Y) 220040		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2333	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2332	1								
2331	2				GP-GM/ MSW	Brown fine to coarse gravel with silt, sand, occasional cobbles and MSW (household waste) (medium dense, moist)			
2330	3								
2329	4								
2328	5								
2327	6								
2326	7								
2325	8								
2324	9								
2323	10								
	11								

Test pit completed at 11 feet below ground surface
No groundwater seepage observed
Minor caving observed at 4 to 6 feet
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-M-1B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-103
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 5/21/2015	Total Depth (ft) 10.5	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2332.08		Easting (X) 2460620 Northing (Y) 219960		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2332	0				GP	Brown fine to coarse gravel with sand, trace silt and occasional cobbles (medium dense, moist)			
2331	1								
2330	2								
2329	3				GP-GM/ MSW	Brown fine to coarse gravel with silt, sand, occasional cobbles and occasional MSW (plastic, metal, appliances) (medium dense, moist)			
2328	4								
2327	5								
2326	6				GP-GM	Brown fine to coarse gravel with silt, sand and occasional cobbles (medium dense, moist)			
2325	7								
2324	8								
2323	9								
2322	10								

Test pit completed at 10½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-M-2

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-104
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/21/2015	Total Depth (ft)	9	Logged By Checked By	KAH JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2334.06			Easting (X) Northing (Y)	2460600 220030	Coordinate System Horizontal Datum			

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2333	1				GP/ MSW	Brown fine to coarse gravel with sand, trace silt and MSW (household waste) (medium dense, moist)			
2332	2								
2331	3								
2330	4								
2329	5								
2328	6								
2327	7				GP	Brown fine to coarse gravel with sand, trace silt and MSW (household waste) (medium dense, moist)			
2326	8								
	9								

Test pit completed at 9 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-M-3

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-105
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated 5/21/2015	Total Depth (ft) 9.5	Logged By KAH Checked By JER	Excavator Able Clean-up Technologies, Inc.	Excavation Equipment CAT 420E Loader/Backhoe	
Surface Elevation (ft) Vertical Datum 2338.09		Easting (X) 2460680 Northing (Y) 220160		Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2338	0				GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)			
2337	1								
2336	2				GP/ MSW	Dark brown fine to coarse gravel with sand, trace silt and MSW (household waste, metal, wood) (medium dense, moist)			
2335	3								
2334	4								
2333	5								
2332	6				GP	Dark brown fine to coarse gravel with sand and trace silt (medium dense, moist)			
2331	7								
2330	8								
2329	9								

Test pit completed at 9½ feet below ground surface
No groundwater seepage observed
Caving observed at 4 to 6 feet
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Log of Test Pit TP-M-4A

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-106
Sheet 1 of 1

Date Excavated	5/21/2015	Total Depth (ft)	10	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2337.58			Easting (X) / Northing (Y)	2460700 / 220150			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2337	0				GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)			
2336	1					Scattered MSW observed (tire at 1½ feet; plastic bag at 2 feet)			
2335	2				GP-GM	Dark brown to gray fine to coarse gravel with silt and sand (medium dense, moist)			
2334	3								
2333	4								
2332	5								
2331	6								
2330	7								
2329	8								
2328	9								
	10					Test pit completed at 10 feet below ground surface No groundwater seepage observed No caving observed MSW = municipal solid waste			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-M-4B

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-107
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104.00.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/22/2015	Total Depth (ft)	9.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2332.81			Easting (X) / Northing (Y)	2460780 / 220070	Coordinate System Horizontal Datum			

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2332	0				SP-SM	Brown to gray fine to coarse sand with silt (medium dense, moist)			
2331	1					Grades to dark brown			
2330	2								
2329	3								
2328	4				SP	Dark brown fine to coarse sand with trace silt, occasional gravel and cobbles (medium dense, moist)			
2327	5								
2326	6								
2325	7								
2324	8								
	9								

Test pit completed at 9½ feet below ground surface
No groundwater seepage observed
No caving observed
No municipal solid waste (MSW) observed

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Log of Test Pit TP-M-5

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-108
Sheet 1 of 1

Date Excavated	8/6/2015	Total Depth (ft)	7	Logged By / Checked By	JWR / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2330.34			Easting (X) / Northing (Y)	2460490 / 219880			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2330	0			SP-SM	Brown fine to coarse sand with silt, gravel and occasional cobbles (medium dense, moist) (native)			
2329	1							
2328	2							
2327	3							
2326	4							
2325	5							
2324	6							
	7				Test pit completed at 7 feet No groundwater seepage observed No caving observed No municipal solid waste observed			

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-M-6

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-109
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/22/2015	Total Depth (ft)	6.5	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2312.91			Easting (X) / Northing (Y)	2460690 / 219470			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2312	1				SM	Brown silty fine to coarse sand (medium dense, moist)			
2311	2								
2310	3				SP	Dark brown fine to coarse sand with trace silt, occasional gravel and cobbles (medium dense, moist)			
2309	4				SP/ MSW	Dark brown fine to coarse sand with trace silt, occasional gravel and cobbles, and MSW (household waste) (medium dense, moist)			
2308	5								
2307	6								

Test pit completed at 6½ feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-TEST-1

GeoEngineers

Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-110
Sheet 1 of 1

Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

Date Excavated	5/22/2015	Total Depth (ft)	9	Logged By / Checked By	KAH / JER	Excavator	Able Clean-up Technologies, Inc.	Excavation Equipment	CAT 420E Loader/Backhoe
Surface Elevation (ft) Vertical Datum	2322.96			Easting (X) / Northing (Y)	2460690 / 219660			Coordinate System Horizontal Datum	

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
2322	1				SP	Brown fine to coarse sand with trace silt, occasional gravel and cobbles (medium dense, moist)			
2321	2				SM	Brown silty fine to coarse sand (medium dense, moist)			
2320	3				SP/ MSW	Dark brown fine to coarse sand with gravel, trace silt, occasional cobbles and scattered MSW (plastic, metal) (medium dense, moist)			
2319	4								
2318	5								
2317	6								
2316	7								
2315	8								
2314	9								

Test pit completed at 9 feet below ground surface
No groundwater seepage observed
No caving observed
MSW = municipal solid waste

Notes: See Figure E-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Log of Test Pit TP-TEST-2

GeoEngineers

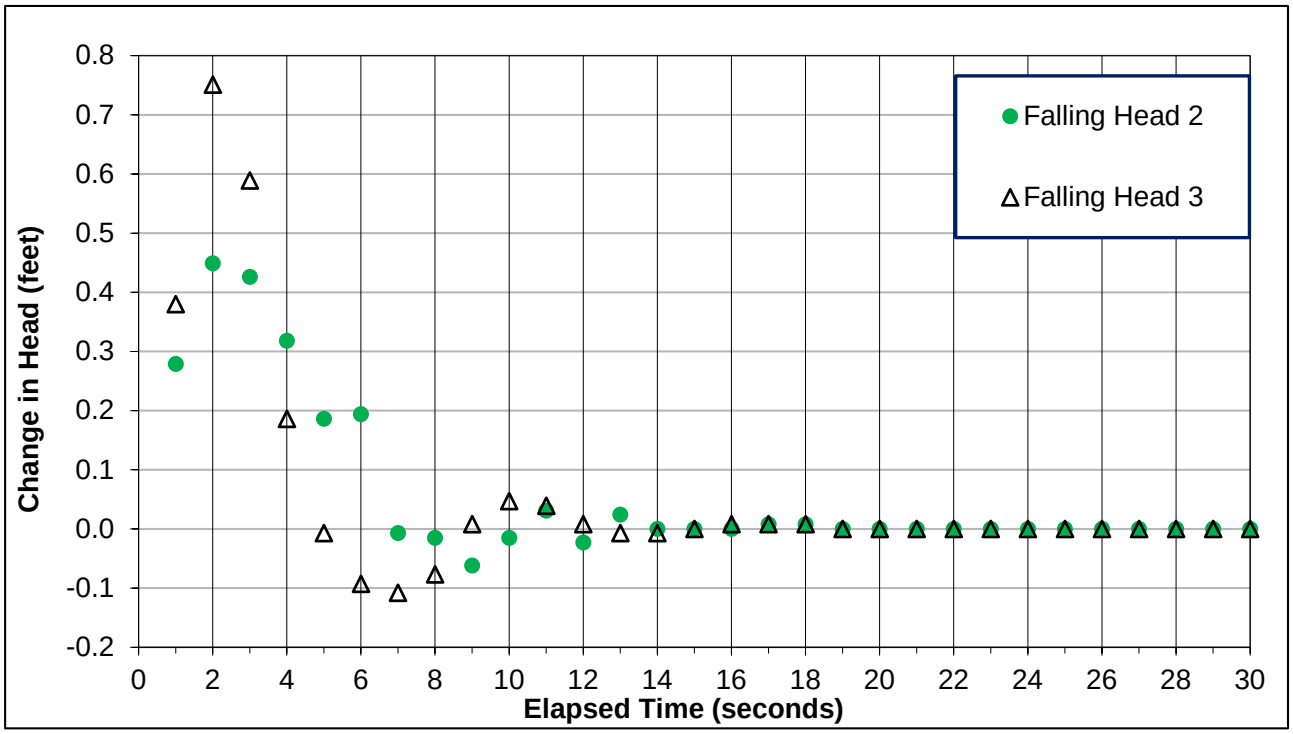
Project: Marshall Landfill
Project Location: Spokane County, Washington
Project Number: 0504-104-00

Figure E-111
Sheet 1 of 1

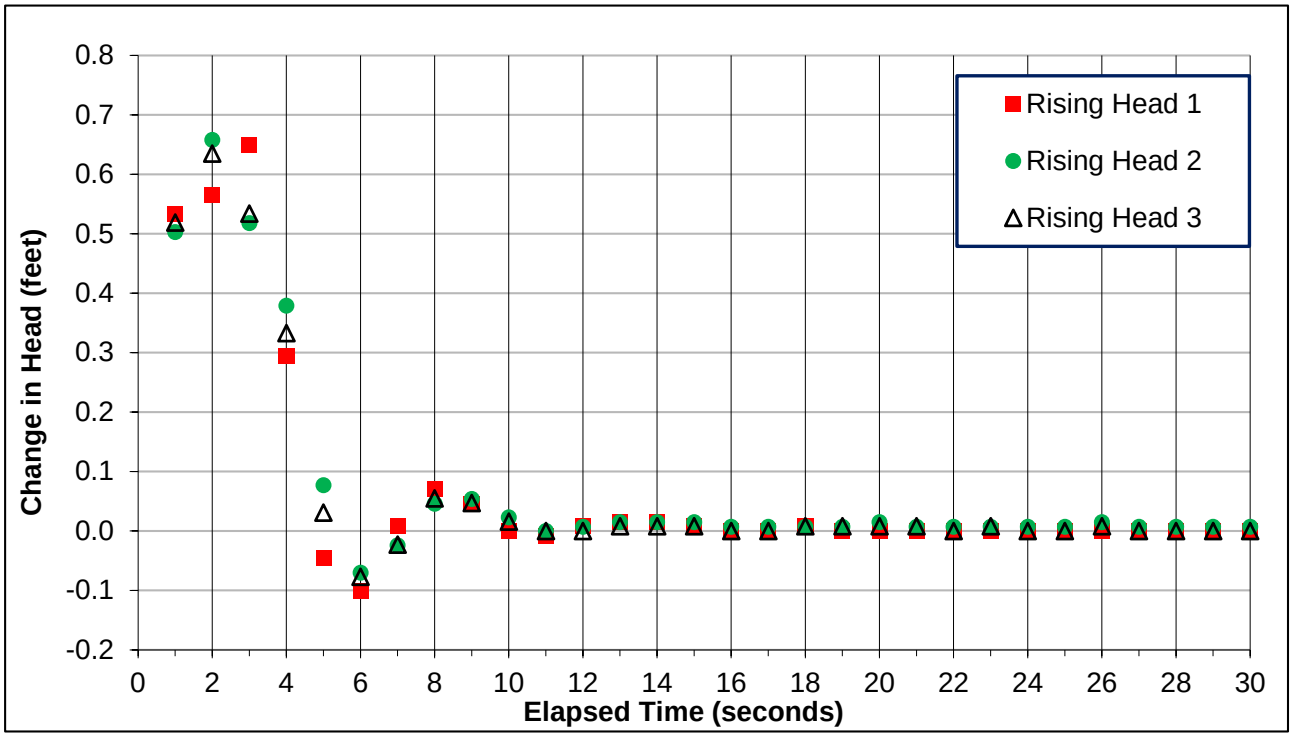
Spokane: Date:3/8/17 Path:P:\0\0504104\GINT\0504104000.GPJ DBTemplate\LibTemplate:GEOENGINEERS_DF_STD_US.GDT/GEIB_TESTPIT_1P_ENV

APPENDIX F
Hydraulic Testing Plots

(A) Falling Head Tests



(B) Rising Head Tests



Notes:

1. Slug testing was conducted on November 12, 2015.
2. Falling Head Test 1 was performed, however the frequency of data collection (5-second interval) was insufficient for the observed hydraulic response.

MW-14 Slug Testing

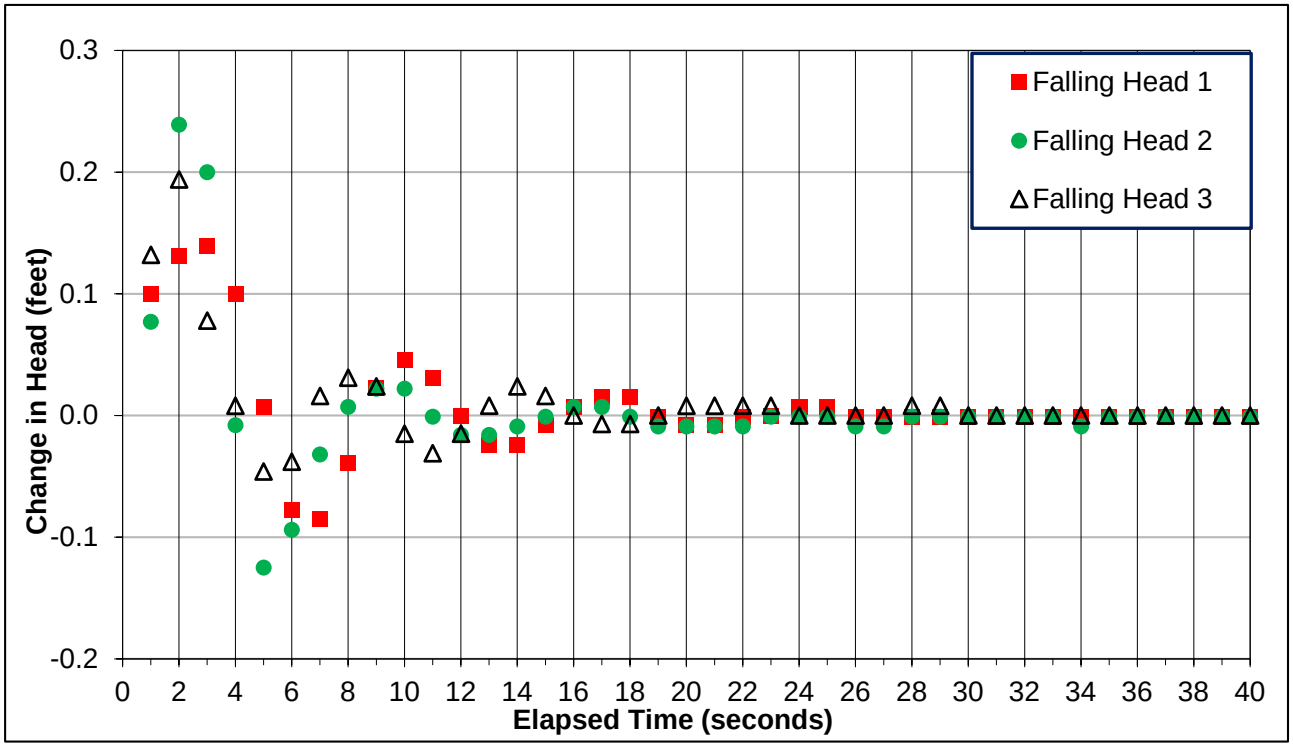
Marshall Landfill
Marshall, Washington

GeoEngineers

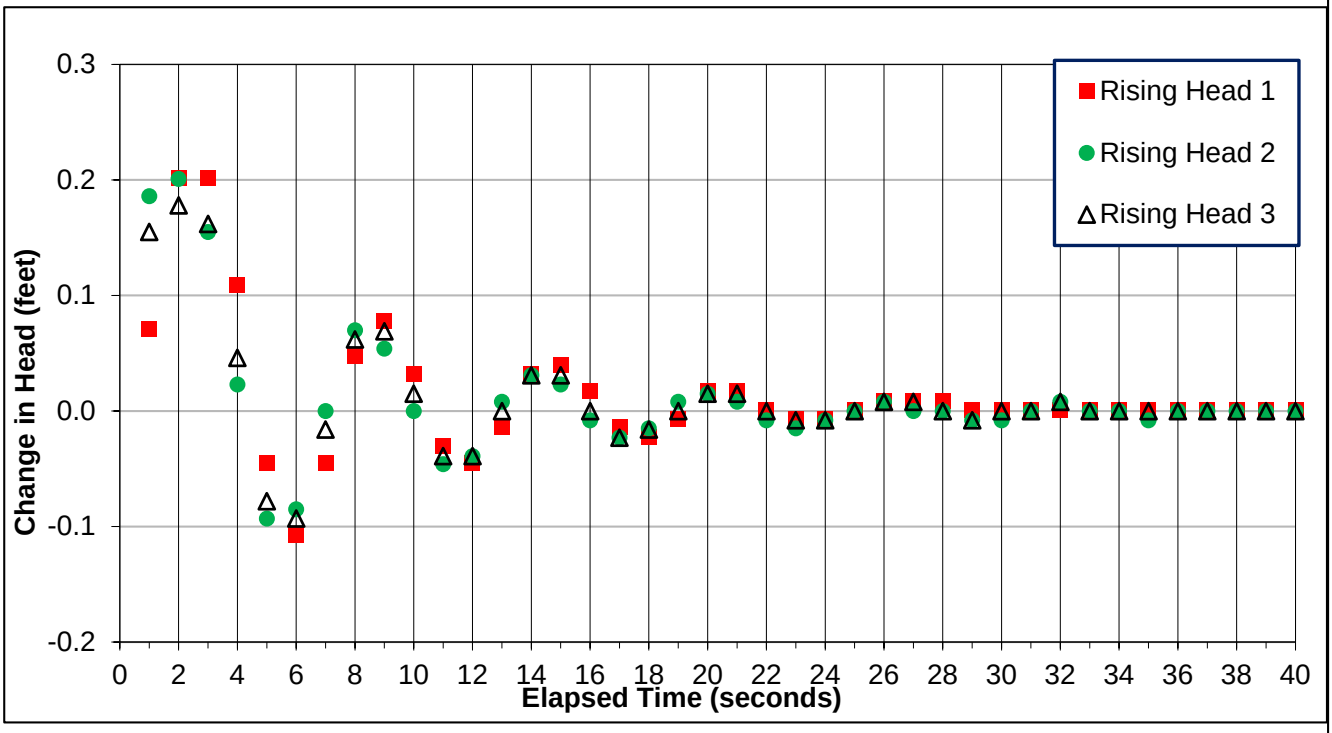
Figure F-1

File No. 3595-007-02

(A) Falling Head Tests



(B) Rising Head Tests



Notes:

1. Slug testing was conducted on November 12, 2015.

MW-15A Slug Testing

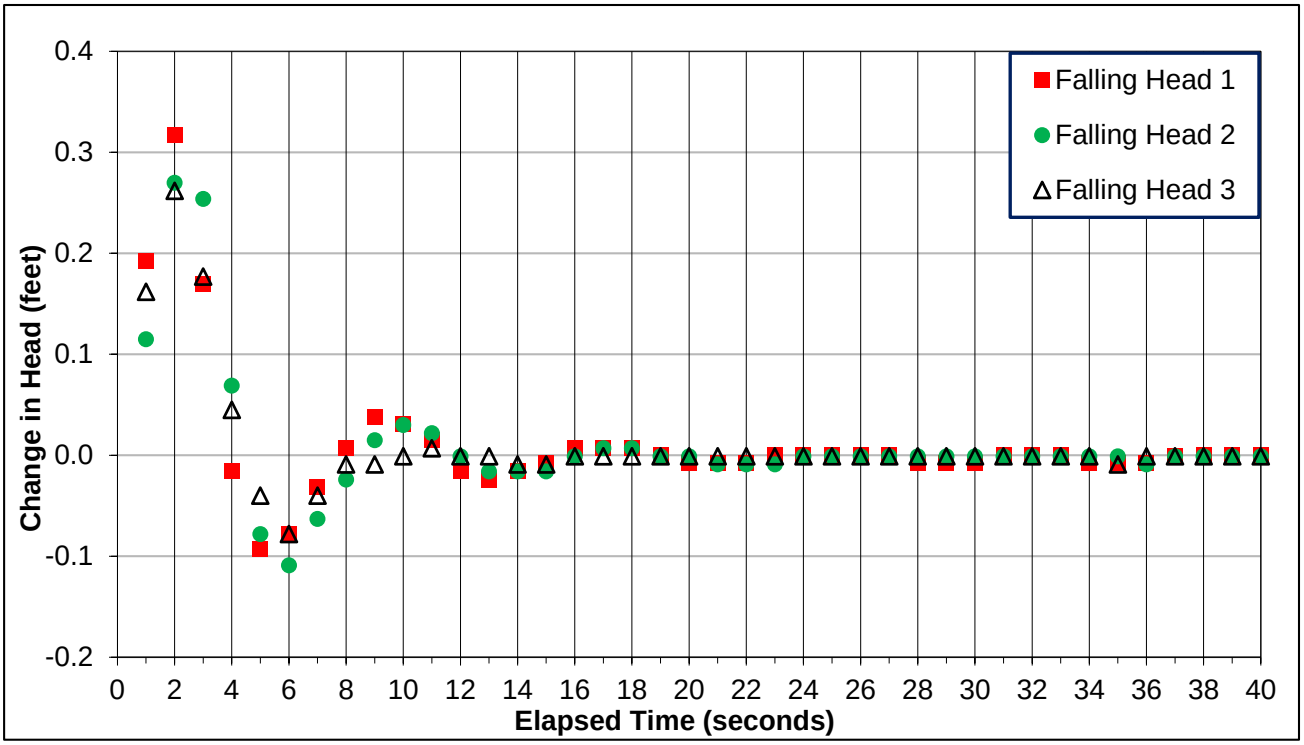
Marshall Landfill
Marshall, Washington

GeoEngineers

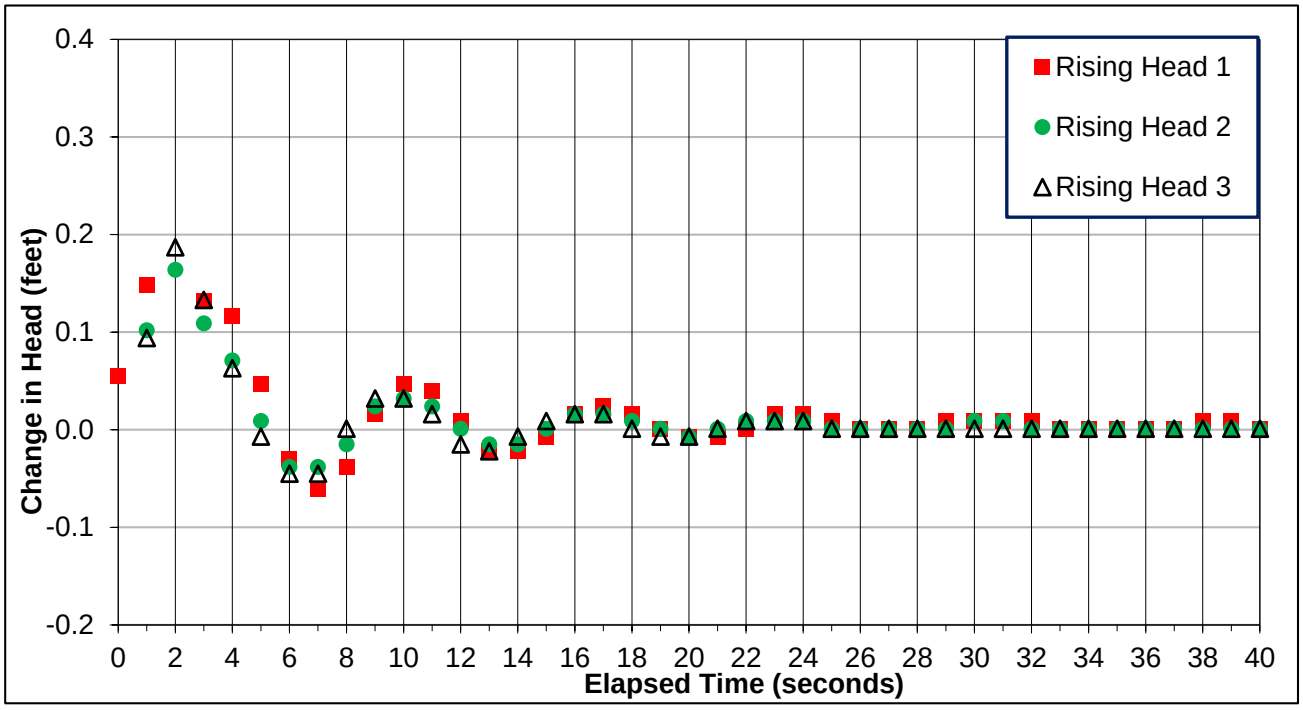
Figure F-2

File No. 3595-007-02

(A) Falling Head Tests



(B) Rising Head Tests



Notes:

1. Slug testing was conducted on November 12, 2015.

MW-16A Slug Testing

Marshall Landfill
Marshall, Washington

GeoEngineers

Figure F-3

File No. 3595-007-02

APPENDIX G
Laboratory Analytical Reports and Data Validation

Project:	Marshall Landfill Site 2015 Samples
GEI File No:	00504-104-00
Date:	January 27, 2017

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA 2009) of analytical data from the analyses of soil, water, and air samples collected as part of the 2015 sampling events, and the associated laboratory quality control samples. The samples were obtained from the Marshall Landfill site located in Spokane County, Washington.

In summary and in our opinion, the quality and accuracy of the analytical data are acceptable for the intended use, with the qualifications applied from the data validation. The primary data validation qualifiers were: (1) GeoEngineers, Inc. (GeoEngineers) qualified selected data as estimated (J/UJ) because of holding time, accuracy, and precision outliers; (2) GeoEngineers qualified selected data as non-detected (U) because of method blank contamination; (3) GeoEngineers qualified one data result as rejected (R) because of an accuracy outlier; and (4) GeoEngineers qualified one data result as estimated (J) because of instrument calibration range exceedance.

The evaluation criteria and qualifications are discussed in greater detail below; a summary of qualified samples is listed in Table 2.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Inorganic Superfund Data Review (EPA 2010) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Remedial Investigation/Feasibility Study Work Plan (GeoEngineers 2015), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries

- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory Duplicates
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-1109-1	MW-15:(164-165)
590-1230-1	LFB-1: (30-31), LFB-2: (52-53)
590-1281-1	LFB-3:(68-69), LFB-4 :(92-93), LFB-5:(49-50)
590-1429-1	LFB-8 (17-18), LFB-9 (11-12), LFB-10 (45-46), MW-16 (69-70)
590-1460-1	LFB-11 (42-43)
590-1569-1	LFB-12 (29-30), LFB-13 (72-73), LFB-14 (97-98), LFB-15 (35-37), LFB-16 (35-37), LFB-17 (42-43)
590-1655-1	SB-12 (235-236.5)
590-1807-1	MW-7D (169-170.5), MW-15A (204-205)
590-1968-1	LFB-3:091615, LFB-4:091615, LFB-5:091615, LFB-8:091615, LFB-9:091615, LFB-10:091615, LFB-11:091615, LFB-15:091615, LFB-16:091615, LFB-17:091615

CHEMICAL ANALYSIS PERFORMED

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

Soil

- Hydrocarbon Identification (NWTPH-HCID) by Method NWTPH-HCID;
- Volatile Organic Compounds (VOCs) by Method SW8260B;
- Semi-volatile Organic Compounds (SVOCs) by Method SW8270C;
- Polychlorinated Biphenyls (PCBs) by Method SW8082A;
- Organochlorine Pesticides by Method SW8081A;
- Organophosphorous Pesticides by Method SW8141A;
- Chlorinated Herbicides by Method SW8151A;
- Total Metals by Methods EPA6020A/7471B; and
- Total Cyanide by Method EPA9012A.

Air

- VOCs in Air (VOCs-Air) by Method TO-15

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory, with the following exception:

SDG 590-1655-1: The sample ID for MW-14 (235-236.5), as listed on the COC, was changed to SB-12 (235-236.5) at GeoEngineers' request.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis, with the exceptions noted below. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

SDG 590-1109-1: The sample cooler temperature recorded at the laboratory was 7.1 degrees Celsius. The sample was received at the laboratory the same day it was collected. It is possible that the elevated sample cooler temperature has impacted the resulting analytical data; however, the degree of impact cannot be quantified.

(VOCs) The 48-hour holding time for sample extraction in unpreserved samples for VOC analysis was exceeded by 5 days in Sample MW-15:(164-165). The positive result for methylene chloride and the reporting limits for the remaining VOC target analytes were qualified as estimated (J and UJ, respectively) in this sample.

SDG 590-1230-1: (VOCs) The 14-day holding time for sample extraction for VOC analysis was exceeded by 13 days in Samples LFB-1: (30-31) and LFB-2: (52-53). The positive results for benzene, methylene chloride, and toluene and the reporting limits for the remaining VOC target analytes were qualified as estimated (J and UJ, respectively) in Sample LFB-1: (30-31). The positive results for methylene chloride and trichlorofluoromethane and the reporting limits for the remaining VOC target analytes were qualified as estimated (J and UJ, respectively) in Sample LFB-2: (52-53).

SDG 590-1281-1: (VOCs) The 14-day holding time for sample extraction for VOC analysis was exceeded by 8 to 9 days (depending on the sample) in Samples LFB-3:(68-69), LFB-4:(92-93), and LFB-5:(49-50). The positive results and reporting limits for the VOC target analytes were qualified as estimated (J and UJ, respectively) in these samples. See Table 2 for a full list of qualified analytes.

SDG 590-1460-1: The sample cooler temperature recorded at the laboratory was 7.8 degrees Celsius. It is possible that the elevated sample cooler temperature has impacted the resulting analytical data; however, the degree of impact cannot be quantified.

(VOCs) The 48-hour holding time for sample extraction in unpreserved samples for VOC analysis was exceeded by 11 days in Sample LFB-11 (42-43). The reporting limits for the VOC target analytes were qualified as estimated (UJ) in this sample.

SDG 590-1807-1: The sample cooler temperature recorded at the laboratory was 0.5 degrees Celsius. Since the samples were not frozen, this temperature should likely not affect the sample analytical results.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-1230-1: (Organochlorine Pesticides) The percent recovery for surrogate decachlorobiphenyl was less than the control limits in Sample LFB-2: (52-53). The reporting limits for organochlorine pesticides target analytes were qualified as estimated (UJ) in this sample.

SDG 590-1281-1: (PCBs) The percent recovery for surrogate decachlorobiphenyl was less than the control limits in Sample LFB-5:(49-50). The positive result for PCB-1254 and the reporting limits for the remaining PCB target analytes were qualified as estimated (J and UJ, respectively) in this sample.

SDG 590-1569-1: (NWTPH-HCID) The percent recovery for surrogate n-Triacontane-d62 was greater than the control limits in Sample LFB-15 (35-37). The positive result for residual-range organics was qualified as estimated (J) in this sample.

(VOCs) The percent recovery for surrogate 1,2-Dichloroethane-d4 was less than the control limits in Sample LFB-17 (42-43); however, the sample was spiked with four additional surrogates and in each case the percent recoveries were within their respective control limits. No action was required for this outlier.

(PCBs) The percent recovery for surrogate decachlorobiphenyl was less than the control limits in Samples LFB-12 (29-30) and LFB-16 (35-37). The reporting limits for PCB target analytes were qualified as estimated (UJ) in these samples.

SDG 590-1807-1: (VOCs) The percent recoveries for surrogates 1,2-Dichloroethane-d4 and dibromofluoromethane were less than the control limits in Sample MW-15A (204-205); however, the sample was spiked with three additional surrogates and in each case the percent recoveries were within their respective control limits. No action was required for these outliers.

SDG 590-1968-1: (VOCs-Air) The percent recovery for surrogate 4-Bromofluorobenzene was greater than the control limits in Samples LFB-3:091615 and LFB-4:091615; however, the samples were spiked with two additional surrogates and in each case the percent recoveries were within their respective control limits. No action was required for these outliers.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exceptions:

SDG 590-1109-1: (VOCs) There was a positive result for methylene chloride detected above the method detection limit, but below the reporting limit in the method blank extracted on 6/25/2015. The positive result for methylene chloride was greater than 10X the concentration in the method blank for Sample MW-15:(164-165); therefore, no qualification was required.

(SVOCs) There were positive results for bis(2-ethylhexyl) phthalate and butyl benzyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/1/2015. The positive results for bis(2-ethylhexyl) phthalate and butyl benzyl phthalate were qualified as non-detected (U) in Sample MW-15:(164-165).

SDG 590-1230-1: (SVOCs) There was a positive result for butyl benzyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/2/2015. The positive results for butyl benzyl phthalate were qualified as non-detected (U) in Samples LFB-1: (30-31) and LFB-2: (52-53).

SDG 590-1281-1: (SVOCs) There were positive results for butyl benzyl phthalate and diethyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/8/2015. The positive results for butyl benzyl phthalate and diethyl phthalate were qualified as non-detected (U) in Samples LFB-3:(68-69), LFB-4:(92-93), and LFB-5:(49-50).

SDG 590-1429-1: (SVOCs) There were positive results for butyl benzyl phthalate and diethyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/21/2015. The positive results for diethyl phthalate were qualified as non-detected (U) in Samples MW-16 (69-70) and LFB-10 (45-46). The positive result for butyl benzyl phthalate was qualified as non-detected (U) in Sample LFB-8 (17-18). There were no positive results for butyl benzyl phthalate in Samples MW-16 (69-70) and LFB-10 (45-46); there were no positive results for diethyl phthalate in Sample LFB-8 (17-18); and there were no positive results for butyl benzyl phthalate and diethyl phthalate in Sample LFB-9 (11-12); therefore, no qualifications were required.

(Herbicides) There was a positive result for 2,4-DB detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/27/2015. The positive result for 2,4-DB was qualified as non-detected (U) in Sample LFB-8 (17-18). There were no positive results for 2,4-DB in Samples LFB-9 (11-12) and LFB-10 (45-46); therefore, no qualifications were required.

SDG 590-1460-1: (VOCs) There was a positive result for methylene chloride detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/30/2015. The positive result for methylene chloride was qualified as non-detected (U) in Sample LFB-11 (42-43).

(SVOCs) There was a positive result for benzyl alcohol detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/28/2015. The positive result for benzyl alcohol was qualified as non-detected (U) in Sample LFB-11 (42-43).

(Herbicides) There was a positive result for 2,4-DB detected above the method detection limit, but below the reporting limit in the method blank extracted on 7/27/2015. The positive result for 2,4-DB was qualified as non-detected (U) in Sample LFB-11 (42-43).

SDG 590-1569-1: (VOCs) There was a positive result for methylene chloride detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/7/2015. The positive results for methylene chloride were qualified as non-detected (U) in Samples LFB-12 (29-30), LFB-13 (72-73), LFB-14 (97-98), LFB-16 (35-37), and LFB-17 (42-43). There were no positive results for methylene chloride in Sample LFB-15 (35-37); therefore, no qualification was required.

(Metals) There was a positive result for total beryllium detected above the method detection limit, but below the reporting limit in the method blank digested on 8/11/2015. The positive results for total beryllium were qualified as non-detected (U) in Samples LFB-12 (29-30), LFB-13 (72-73), LFB-14 (97-98), and LFB-16 (35-37). The positive results for total beryllium were greater than 10X the concentration in the method blank for Samples LFB-15 (35-37) and LFB-17 (42-43); therefore, no qualifications were required.

SDG 590-1655-1: (VOCs) There was a positive result for methylene chloride detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/19/2015. The positive result for methylene chloride was qualified as non-detected (U) in Sample SB-12 (235-236.5).

(SVOCs) There was a positive result for diethyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/18/2015. The positive result for diethyl phthalate was qualified as non-detected (U) in Sample SB-12 (235-236.5).

SDG 590-1807-1: (VOCs) There was a positive result for methylene chloride detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/28/2015. The positive results for methylene chloride were greater than 10X the concentration in the method blank for Samples MW-7D (169-170.5) and MW-15A (204-205); therefore, no qualifications were required.

(PCBs) There was a positive result for PCB-1254 detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/28/2015. There were no positive results for PCB-1254 in Samples MW-7D (169-170.5) and MW-15A (204-205); therefore, no qualifications were required.

(Metals) There was a positive result for total copper detected above the method detection limit, but below the reporting limit in the method blank digested on 9/1/2015. The positive results for total copper were greater than 10X the concentration in the method blank for Samples MW-7D (169-170.5) and MW-15A (204-205); therefore, no qualifications were required.

SDG 590-1968-1: (VOCs-Air) There was a positive result for toluene detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/30/2015. The positive results for toluene were greater than 2X the concentration in the method blank for Samples LFB-8:091615, LFB-9:091615, LFB-10:091615, LFB-11:091615, LFB-15:091615, and LFB-16:09161; therefore, no qualifications were required.

There were positive results for m,p-Xylene, o-Xylene, and styrene detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/29/2015. The positive results for m,p-Xylene and o-Xylene were greater than 2X the concentration in the method blank for Sample LFB-3:091615; the positive results for m,p-Xylene, o-Xylene, and styrene were greater than 2X the concentration in the method blank for Samples LFB-4:091615, LFB-5:091615, and LFB-17:091615; and

there were no positive results for styrene in Sample LFB-3:091615; therefore, no qualifications were required.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-1109-1: (SVOCs) The laboratory performed an MS/MSD sample set on Sample MW-15:(164-165). The percent recoveries for benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno[1,2,3-cd]pyrene were less than the control limits in the MS/MSD extracted on 7/1/2015. The reporting limits for these target analytes were qualified as estimated (UJ) in Sample MW-15:(164-165).

(Metals) The laboratory performed an MS/MSD sample set on Sample MW-15:(164-165). The percent recoveries for total chromium and total vanadium were greater than the control limits in the MS digested on 6/23/2015; however, the percent recoveries for these target analytes were within the control limits in the corresponding MSD. No action was required for these outliers. Additionally, in the same MS/MSD sample set, the percent recoveries for total iron and total manganese were greater than the control limits. The parent sample concentration for these target analytes were greater than four times the amount spiked into the sample; therefore, no qualifications were required.

SDG 590-1230-1: (Total Cyanide) The laboratory performed an MS/MSD sample set on Sample LFB-1: (30-31). The percent recoveries for total cyanide were less than the control limits in the MS/MSD extracted on 7/1/2015. The reporting limit for total cyanide was qualified as estimated (UJ) in this sample.

SDG 590-1281-1: (SVOCs) The laboratory performed an MS/MSD sample set on Sample LFB-3:(68-69). The percent recoveries for 4-Nitrophenol were greater than the control limits in the MS/MSD extracted on 7/8/2015. There were no positive results for this target analyte in this sample; therefore, no qualification was required.

SDG 590-1429-1: (SVOCs) The laboratory performed an MS/MSD sample set on Sample LFB-8 (17-18). The percent recovery for hexachlorocyclopentadiene was less than the control limits in the MS and the percent recoveries for 2,4-Dinitrophenol and pentachlorophenol were less than the control limits in the MSD extracted on 7/21/2015; however, the percent recoveries for these target analytes were within the control limits in the corresponding MSD and MS. No action was required for these outliers.

Additionally, the same MS/MSD sample set, the percent recoveries for 4,6-Dinitro-2-methylphenol were less than the control limits and the percent recoveries for 4-Nitrophenol were greater than the control limits in both the MS and MSD. The reporting limit for 4,6-Dinitro-2-methylphenol was qualified as

estimated (UJ) in Sample LFB-8 (17-18). There were no positive results for 4-Nitrophenol in Sample LFB-8 (17-18); therefore, no qualification was required.

Lastly, in the same MS/MSD sample set, the percent recoveries for benzoic acid were less than the control limits in both the MS and MSD at 0%. Because the percent recovery was less than 10 percent, the reporting limit for this target analyte was qualified as rejected (R) in Sample LFB-8 (17-18).

SDG 590-1569-1: (SVOCs) The laboratory performed an MS/MSD sample set on Sample LFB-17 (42-43). The percent recovery for 4-Chloroaniline was less than the control limits and the percent recovery for bis(2-ethylhexyl) phthalate was greater than the control limits in the MS extracted on 8/3/2015; however, the percent recoveries for these target analytes were within the control limits in the corresponding MSD. No action was required for these outliers. Additionally, in the same MS/MSD sample set, the RPD for bis(2-ethylhexyl) phthalate was greater than the control limit. The positive result for this target analyte was qualified as estimated (J) in Sample LFB-17 (42-43).

(Organochlorine Pesticides) The laboratory performed an MS/MSD sample set on Sample LFB-12 (29-30). The percent recovery for endosulfan sulfate was less than the control limits in the MS extracted on 8/3/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding MSD. No action was required for this outlier. Additionally, in the same MS/MSD sample set, the percent recoveries for endosulfan II and endrin aldehyde were less than the control limits in both the MS and MSD. The positive result for endrin aldehyde and the reporting limit for endosulfan II were qualified as estimated (J and UJ, respectively) in Sample LFB-12 (29-30).

(Herbicides) The laboratory performed an MS/MSD sample set on Sample LFB-13 (72-73). The percent recovery for silvex was less than the control limits in the MSD extracted on 8/2/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding MS. No action was required for this outlier.

SDG 590-1655-1: (Metals) The laboratory performed an MS/MSD sample set on Sample SB-12 (235-236.5). The RPD for total mercury was greater than the control limit in the MS/MSD digested on 8/19/2015. The positive result for total mercury was qualified as estimated (J) in this sample.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-1109-1: (VOCs) The percent recoveries for 1,1,1,2-Tetrachloroethane, 1,2-Dichlorobenzene, and methyl tert-butyl ether were greater than the control limits in the LCS extracted on 6/25/2015; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD. No action was required for these outliers.

(SVOCs) The percent recoveries for benzoic acid were less than the control limits and the RPD for benzoic acid was greater than the control limit in the LCS/LCSD extracted on 7/1/2015. The reporting limit for this target analyte was qualified as estimated (UJ) in Sample MW-15:(164-165).

SDG 590-1230-1: (SVOCs) The RPD for pentachlorophenol was greater than the control limit in the LCS/LCSD extracted on 7/2/2015. There were no positive results for this target analyte in the associated field samples; therefore, no qualifications were required.

(Organochlorine Pesticides) The percent recovery for aldrin was less than the control limits in the LCSD extracted on 7/7/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier.

SDG 590-1281-1: (Herbicides) The percent recoveries for dalapon and MCPP were greater than the control limits in the LCS extracted on 7/9/2015. There were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

SDG 590-1429-1: (SVOCs) The percent recoveries for 4-Nitrophenol were greater than the control limits in the LCS/LCSD extracted on 7/21/2015. There were no positive results for this target analyte in the associated field samples; therefore, no qualifications were required.

SDG 590-1460-1: (VOCs) The percent recoveries for 1,1,2-Trichloroethane, 1,2-Dibromo-3-Chloropropane, ethylene dibromide, and trans-1,3-Dichloropropene were greater than the control limits in the LCS extracted on 7/30/2015; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the percent recoveries for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, 1,3-Dichloropropane, bromoform, dibromomethane, and methyl tert-butyl ether were greater than the control limits in both the LCS and LCSD. There were no positive results for these target analytes in the associated field sample; therefore, no qualifications were required.

SDG 590-1569-1: (VOCs) The percent recoveries for most of the VOC target analytes were greater than the control limits in the LCS/LCSD extracted on 8/7/2015. There were no positive results for the affected target analytes in the associated field samples and therefore, no qualifications were required, with the exception of 4-Isopropyltoluene and o-Xylene in Sample LFB-15 (35-37). The positive results for 4-Isopropyltoluene and o-Xylene were qualified as estimated (J) in Sample LFB-15 (35-37).

(SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits in the LCS extracted on 8/3/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the RPD values for 4,6-Dinitro-2-methylphenol and benzoic acid were greater than the control limits. There were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

SDG 590-1655-1: (VOCs) The percent recoveries for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, 1,2-Dibromo-3-Chloropropane, and 1,2-Dichlorobenzene were greater than the control limits in the LCSD extracted on 8/19/2015; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the percent recoveries for 1,4-Dichlorobenzene were greater than the control limits in both the LCS and LCSD. There were no positive results for this target analyte in the associated field sample; therefore, no qualification was required.

(SVOCs) The percent recovery for di-n-octyl phthalate was less than the control limits in the LCS extracted on 8/18/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier.

SDG 590-1807-1: (SVOCs) The percent recoveries for 4-Nitrophenol were greater than the control limits in the LCS/LCSD extracted on 8/27/2015. There were no positive results for this target analyte in the associated field samples; therefore, no qualifications were required.

SDG 590-1968-1: (VOCs-Air) The percent recovery for chloromethane was greater than the control limits in the LCSD extracted on 9/29/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the RPD for chloroethane was greater than the control limits. There were no positive results for chloroethane in Samples LFB-4:091615, LFB-5:091615, and LFB-17:091615; therefore, no qualifications were required.

The percent recovery for 1,2-Dichloro-1,1,2,2-tetrafluoroethane was greater than the control limits in the LCSD extracted on 9/30/2015; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier.

LABORATORY DUPLICATES

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exceptions:

SDG 590-1109-1: (Total Metals) A laboratory duplicate analysis was performed on Sample MW-15:(164-165). The RPD values for total chromium and total lead were greater than the control limit. The positive results for these target analytes were qualified as estimated (J) in this sample.

SDG 590-1569-1: (Total Metals) A laboratory duplicate analysis was performed on Sample LFB-12 (29-30). The RPD for total mercury was greater than the control limit. The positive result for this target analyte was qualified as estimated (J) in this sample.

MISCELLANEOUS

SDG 590-1968-1: (VOCs-Air) The result for ethylbenzene exceeded the instrument calibration range in Sample LFB-4:091615. For this reason, the positive result for this target analyte was qualified as estimated (J) in this sample.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
LFB-1: (30-31)	Benzene	J	Holding Time
	Butyl benzyl phthalate	U	Method Blank Contamination
	Total cyanide	UJ	MS.MSD Recovery
	Methylene chloride	J	Holding Time
	Toluene	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
LFB-2: (52-53)	Butyl benzyl phthalate	U	Method Blank Contamination
	Methylene chloride	J	Holding Time
	Trichlorofluoromethane	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
	All organochlorine pesticides	UJ	Surrogate Recovery
LFB-3:(68-69)	Butyl benzyl phthalate	U	Method Blank Contamination
	Diethyl phthalate	U	Method Blank Contamination
	Methylene chloride	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
LFB-4:(92-93)	Butyl benzyl phthalate	U	Method Blank Contamination
	Diethyl phthalate	U	Method Blank Contamination
	Methylene chloride	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
LFB-4:091615	Ethylbenzene	J	See Miscellaneous
LFB-5:(49-50)	1,2,4-Trimethylbenzene	J	Holding Time
	1,3,5-Trimethylbenzene	J	Holding Time
	4-Isopropyltoluene	J	Holding Time
	Butyl benzyl phthalate	U	Method Blank Contamination
	cis-1,2-Dichloroethene	J	Holding Time
	Diethyl phthalate	U	Method Blank Contamination
	Ethylbenzene	J	Holding Time
	Isopropylbenzene	J	Holding Time
	Methylene Chloride	J	Holding Time
	m-Xylene & p-Xylene	J	Holding Time
	Naphthalene (VOCs)	J	Holding Time
	n-Butylbenzene	J	Holding Time
	PCB-1254	J	Surrogate Recovery
	Toluene	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
	All other PCB target analytes	UJ	Surrogate Recovery
LFB-8 (17-18)	2,4-DB	U	Method Blank Contamination
	4,6-Dinitro-2-methylphenol	UJ	MS/MSD Recovery
	Benzoic acid	R	MS/MSD Recovery
	Butyl benzyl phthalate	U	Method Blank Contamination
LFB-10 (45-46)	Diethyl phthalate	U	Method Blank Contamination

Sample ID	Analyte	Qualifier	Reason
LFB-11 (42-43)	2,4-DB	U	Method Blank Contamination
	Benzyl alcohol	U	Method Blank Contamination
	Methylene chloride	UJ	Holding Time/Method Blank Contamination
	All other VOC target analytes	UJ	Holding Time
LFB-12 (29-30)	Total beryllium	U	Method Blank Contamination
	Endosulfan II	UJ	MS/MSD Recovery
	Endrin aldehyde	J	MS/MSD Recovery
	Total mercury	J	Laboratory Duplicate RPD
	Methylene chloride	U	Method Blank Contamination
	All PCB target analytes	UJ	Surrogate Recovery
LFB-13 (72-73)	Total beryllium	U	Method Blank Contamination
	Methylene chloride	U	Method Blank Contamination
LFB-14 (97-98)	Total beryllium	U	Method Blank Contamination
	Methylene chloride	U	Method Blank Contamination
LFB-15 (35-37)	4-Isopropyltoluene	J	LCS/LCSD Recovery
	o-Xylene	J	LCS/LCSD Recovery
	Residual-range organics	J	Surrogate Recovery
LFB-16 (35-37)	Total beryllium	U	Method Blank Contamination
	Methylene chloride	U	Method Blank Contamination
	All PCB target analytes	UJ	Surrogate Recovery
LFB-17 (42-43)	Bis(2-ethylhexyl) phthalate	J	MS/MSD RPD
	Methylene chloride	U	Method Blank Contamination
MW-15:(164-165)	Benzo(g,h,i)perylene	UJ	MS/MSD Recovery
	Benzoic acid	UJ	LCS/LCSD Recovery and RPD
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	Butyl benzyl phthalate	U	Method Blank Contamination
	Total chromium	J	Laboratory Duplicate RPD
	Dibenzo(a,h)anthracene	UJ	MS/MSD Recovery
	Indeno[1,2,3-cd]pyrene	UJ	MS/MSD Recovery
	Total Lead	J	Laboratory Duplicate RPD
	Methylene chloride	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
MW-16 (69-70)	Diethyl phthalate	U	Method Blank Contamination
SB-12 (235-236.5)	Diethyl phthalate	U	Method Blank Contamination
	Total mercury	J	MS/MSD RPD
	Methylene chloride	U	Method Blank Contamination

REFERENCES

U.S. Environmental Protection Agency (EPA). "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," EPA-540-R-08-01. June 2008.

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U.S. Environmental Protection Agency (EPA). "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," EPA-540-R-10-011. January 2010.

GeoEngineers, Inc. "Remedial Investigation/Feasibility Study Work Plan," prepared for Washington State Department of Ecology. May 14, 2015.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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TestAmerica Job ID: 590-1109-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
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Attn: Josh Lee

Authorized for release by:
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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-1109-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 6/18/2015 3:40 PM; the samples arrived in good condition. The temperature of the cooler at receipt was 7.1º C.

GC/MS VOA Method 8260B:
The method blank for batch 193205 contained Methylene chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

The laboratory control sample (LCS) for batch 193205 recovered outside control limits for the following analytes: 1,2-dichlorobenzene, Methyl tert-butyl ether and 1,1,1,2-Tetrachloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The following sample was received as a bulk soil sample outside of the 48 hour holding time for unpreserved/unfrozen soil: MW-15: (164-165) (590-1109-22). Therefore, analysis was performed outside of hold and qualified results are reported.

The continuing calibration verification (CCV) analyzed in 580-193205 was outside the method criteria for the following analyte: vinyl chloride. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The method blank for prep batch 580-193707 contained Butyl benzyl phthalate and Bis(2-ethylhexyl)phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

The following analytes recovered outside control limits for the LCS/LCSD associated with prep batch 580-193707: Benzoic acid. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported. Affected samples: MW-15:(164-165) (590-1109-22), (LCS 580-193707/2-A), (LCSD 580-193707/3-A), (590-1109-B-22-J MS) and (590-1109-B-22-K MSD)

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-193707 recovered outside control limits for the following analytes: Benzoic acid.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1109-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1109-22	MW-15:(164-165)	Solid	06/18/15 09:40	06/18/15 15:40

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1109-1

Client Sample ID: MW-15:(164-165)
Date Collected: 06/18/15 09:40
Date Received: 06/18/15 15:40

Lab Sample ID: 590-1109-22
Matrix: Solid
Percent Solids: 87.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	* H	0.77	0.18	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,1,1-Trichloroethane	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,1,2,2-Tetrachloroethane	ND	H	3.1	0.69	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,1,2-Trichloroethane	ND	H	1.5	0.19	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,1-Dichloroethane	ND	H	0.77	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,1-Dichloroethene	ND	H	3.8	0.38	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,1-Dichloropropene	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2,3-Trichlorobenzene	ND	H	2.3	0.46	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2,3-Trichloropropane	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2,4-Trichlorobenzene	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2,4-Trimethylbenzene	ND	H	1.5	0.12	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2-Dibromo-3-Chloropropane	ND	H	7.7	1.2	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2-Dichlorobenzene	ND	* H	1.5	0.24	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2-Dichloroethane	ND	H	0.77	0.12	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,2-Dichloropropane	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,3,5-Trimethylbenzene	ND	H	3.8	0.13	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,3-Dichlorobenzene	ND	H	1.5	0.20	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,3-Dichloropropane	ND	H	1.5	0.18	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
1,4-Dichlorobenzene	ND	H	0.77	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
2,2-Dichloropropane	ND	H	3.8	0.69	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
2-Chlorotoluene	ND	H	1.5	0.13	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
4-Chlorotoluene	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
4-Isopropyltoluene	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Benzene	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Bromobenzene	ND	H	7.7	1.8	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Bromoform	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Bromomethane	ND	H	0.77	0.16	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Carbon tetrachloride	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Chlorobenzene	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Chlorobromomethane	ND	H	1.5	0.19	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Chlorodibromomethane	ND	H	1.5	0.21	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Chloroethane	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Chloroform	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Chloromethane	ND	H	0.77	0.11	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
cis-1,2-Dichloroethene	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
cis-1,3-Dichloropropene	ND	H	0.77	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Dibromomethane	ND	H	0.77	0.13	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Dichlorobromomethane	ND	H	0.77	0.14	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Dichlorodifluoromethane	ND	H	1.5	0.38	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Ethylbenzene	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Ethylene Dibromide	ND	H	0.77	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Hexachlorobutadiene	ND	H	2.3	0.46	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Isopropylbenzene	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Methyl tert-butyl ether	ND	* H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Methylene Chloride	**5.9**	**J B H**	12	0.18	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
m-Xylene & p-Xylene	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Naphthalene	ND	H	7.7	1.4	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
n-Butylbenzene	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
N-Propylbenzene	ND	H	1.5	0.25	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1

Client Sample ID: MW-15:(164-165)
Date Collected: 06/18/15 09:40
Date Received: 06/18/15 15:40

Lab Sample ID: 590-1109-22
Matrix: Solid
Percent Solids: 87.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	H	1.5	0.20	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
sec-Butylbenzene	ND	H	1.5	0.19	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Styrene	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
tert-Butylbenzene	ND	H	1.5	0.15	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Tetrachloroethene	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Toluene	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
trans-1,2-Dichloroethene	ND	H	1.5	0.31	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
trans-1,3-Dichloropropene	ND	H	7.7	1.1	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Trichloroethene	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Trichlorofluoromethane	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1
Vinyl chloride	ND	H	1.5	0.23	ug/Kg	☼	06/25/15 13:30	06/25/15 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*71 - 136*	*06/25/15 13:30*	*06/25/15 18:02*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*	*06/25/15 13:30*	*06/25/15 18:02*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 132*	*06/25/15 13:30*	*06/25/15 18:02*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*06/25/15 13:30*	*06/25/15 18:02*	*1*
Trifluorotoluene (Surr)	*102*		*65 - 140*	*06/25/15 13:30*	*06/25/15 18:02*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		57	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
1,2-Dichlorobenzene	ND		63	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
1,3-Dichlorobenzene	ND		57	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
1,4-Dichlorobenzene	ND		57	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
1-Methylnaphthalene	ND		34	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,4,5-Trichlorophenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,4,6-Trichlorophenol	ND		170	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,4-Dichlorophenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,4-Dimethylphenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,4-Dinitrophenol	ND		1100	230	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,4-Dinitrotoluene	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2,6-Dinitrotoluene	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2-Chloronaphthalene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2-Chlorophenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2-Methylnaphthalene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2-Methylphenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2-Nitroaniline	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
2-Nitrophenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
3 & 4 Methylphenol	ND		230	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
3,3'-Dichlorobenzidine	ND		230	34	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
3-Nitroaniline	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4-Bromophenyl phenyl ether	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4-Chloro-3-methylphenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4-Chloroaniline	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4-Chlorophenyl phenyl ether	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4-Nitroaniline	ND		110	23	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
4-Nitrophenol	ND		1100	280	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Acenaphthene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1

Client Sample ID: MW-15:(164-165)
Date Collected: 06/18/15 09:40
Date Received: 06/18/15 15:40

Lab Sample ID: 590-1109-22
Matrix: Solid
Percent Solids: 87.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Anthracene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzo[a]anthracene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzo[a]pyrene	ND		34	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzo[b]fluoranthene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzo[g,h,i]perylene	ND	F1	28	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzo[k]fluoranthene	ND		28	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzoic acid	ND	*	2800	850	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Benzyl alcohol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
bis (2-chloroisopropyl) ether	ND		280	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Bis(2-chloroethoxy)methane	ND		110	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Bis(2-chloroethyl)ether	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Bis(2-ethylhexyl) phthalate	**280**	**J B**	680	57	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Butyl benzyl phthalate	**88**	**J B**	230	57	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Carbazole	ND		110	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Chrysene	ND		28	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Dibenz(a,h)anthracene	ND	F1	45	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Dibenzofuran	ND		110	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Diethyl phthalate	ND		230	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Dimethyl phthalate	ND		110	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Di-n-butyl phthalate	ND		570	57	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Di-n-octyl phthalate	ND		570	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Fluoranthene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Fluorene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Hexachlorobenzene	ND		57	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Hexachlorobutadiene	ND		57	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Hexachlorocyclopentadiene	ND		110	11	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Hexachloroethane	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Indeno[1,2,3-cd]pyrene	ND	F1	45	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Isophorone	ND		110	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Naphthalene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Nitrobenzene	ND		110	39	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
N-Nitrosodi-n-propylamine	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
N-Nitrosodiphenylamine	ND		57	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Pentachlorophenol	ND		230	23	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Phenanthrene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Phenol	ND		110	17	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1
Pyrene	ND		23	5.7	ug/Kg	☼	07/01/15 09:03	07/09/15 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*28 - 143*	*07/01/15 09:03*	*07/09/15 18:28*	*1*
2-Fluorobiphenyl	*77*		*42 - 140*	*07/01/15 09:03*	*07/09/15 18:28*	*1*
2-Fluorophenol	*81*		*36 - 145*	*07/01/15 09:03*	*07/09/15 18:28*	*1*
Nitrobenzene-d5	*88*		*38 - 141*	*07/01/15 09:03*	*07/09/15 18:28*	*1*
Phenol-d5	*90*		*38 - 149*	*07/01/15 09:03*	*07/09/15 18:28*	*1*
Terphenyl-d14	*105*		*42 - 151*	*07/01/15 09:03*	*07/09/15 18:28*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		46	46	mg/Kg	☼	06/23/15 11:09	06/25/15 10:19	1

Client Sample ID: MW-15:(164-165)

Date Collected: 06/18/15 09:40
Date Received: 06/18/15 15:40

Lab Sample ID: 590-1109-22

Matrix: Solid
Percent Solids: 87.6

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		110	110	mg/Kg	☼	06/23/15 11:09	06/25/15 10:19	1
Residual Range Organics (RRO) (C25-C36)	ND		110	110	mg/Kg	☼	06/23/15 11:09	06/25/15 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*142*		*50 - 150*	*06/23/15 11:09*	*06/25/15 10:19*	*1*
n-Triacontane-d62	*132*		*50 - 150*	*06/23/15 11:09*	*06/25/15 10:19*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.32**		0.22	0.045	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Arsenic	**4.6**		0.54	0.19	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Barium	**44**		0.54	0.084	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Beryllium	**0.32**		0.22	0.038	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Cadmium	**0.10**	**J**	0.22	0.021	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Chromium	**6.4**	**F1**	0.54	0.068	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Copper	**13**		0.43	0.11	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Iron	**20000**		43	12	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Lead	**7.6**		0.54	0.052	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Manganese	**380**		1.1	0.18	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Nickel	**10**		0.54	0.087	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Selenium	**0.86**	**J**	1.1	0.22	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Silver	**0.035**	**J**	0.22	0.013	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Thallium	**0.17**	**J**	0.43	0.14	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Zinc	**39**		5.4	1.2	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10
Vanadium	**21**	**F1**	2.2	0.51	mg/Kg	☼	06/23/15 06:43	06/23/15 18:18	10

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**25**		16	0.65	ug/Kg	☼	06/22/15 13:20	06/23/15 15:55	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.2	2.2	mg/Kg	☼	06/23/15 16:38	06/23/15 16:38	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-193219/1-A
Matrix: Solid
Analysis Batch: 193205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193219

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Benzene	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Bromobenzene	ND		10	2.3	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Bromoform	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Bromomethane	ND		1.0	0.21	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Chloroethane	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Chloroform	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Chloromethane	ND		1.0	0.14	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Dibromomethane	ND		1.0	0.17	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Methylene Chloride	0.510	J	15	0.24	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Naphthalene	ND		10	1.8	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-193219/1-A
Matrix: Solid
Analysis Batch: 193205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193219

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
o-Xylene	ND		2.0	0.26	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Styrene	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Toluene	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Trichloroethene	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		06/25/15 12:00	06/25/15 13:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 136*	*06/25/15 12:00*	*06/25/15 13:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 120*	*06/25/15 12:00*	*06/25/15 13:27*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 132*	*06/25/15 12:00*	*06/25/15 13:27*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*06/25/15 12:00*	*06/25/15 13:27*	*1*
Trifluorotoluene (Surr)	*93*		*65 - 140*	*06/25/15 12:00*	*06/25/15 13:27*	*1*

Lab Sample ID: LCS 580-193219/2-A
Matrix: Solid
Analysis Batch: 193205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	51.2	*	ug/Kg		128	72 - 123
1,1,1-Trichloroethane	40.0	42.7		ug/Kg		107	63 - 135
1,1,2,2-Tetrachloroethane	40.0	46.9		ug/Kg		117	73 - 125
1,1,2-Trichloroethane	40.0	43.5		ug/Kg		109	77 - 124
1,1-Dichloroethane	40.0	48.3		ug/Kg		121	70 - 128
1,1-Dichloroethene	40.0	41.5		ug/Kg		104	70 - 133
1,1-Dichloropropene	40.0	45.6		ug/Kg		114	77 - 125
1,2,3-Trichlorobenzene	40.0	49.1		ug/Kg		123	61 - 130
1,2,3-Trichloropropane	40.0	40.6		ug/Kg		101	77 - 123
1,2,4-Trichlorobenzene	40.0	50.7		ug/Kg		127	61 - 130
1,2,4-Trimethylbenzene	40.0	47.8		ug/Kg		120	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	44.5		ug/Kg		111	53 - 132
1,2-Dichlorobenzene	40.0	47.9	*	ug/Kg		120	79 - 117
1,2-Dichloroethane	40.0	40.6		ug/Kg		102	71 - 128
1,2-Dichloropropane	40.0	46.3		ug/Kg		116	76 - 161
1,3,5-Trimethylbenzene	40.0	46.8		ug/Kg		117	80 - 125
1,3-Dichlorobenzene	40.0	43.9		ug/Kg		110	79 - 119
1,3-Dichloropropane	40.0	41.1		ug/Kg		103	77 - 123
1,4-Dichlorobenzene	40.0	40.5		ug/Kg		101	79 - 117
2,2-Dichloropropane	40.0	51.8		ug/Kg		129	56 - 144
2-Chlorotoluene	40.0	46.2		ug/Kg		116	79 - 122
4-Chlorotoluene	40.0	42.7		ug/Kg		107	80 - 122
4-Isopropyltoluene	40.0	39.4		ug/Kg		98	78 - 126
Benzene	40.0	45.0		ug/Kg		112	70 - 128

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-193219/2-A
Matrix: Solid
Analysis Batch: 193205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	40.0	41.5		ug/Kg		104	80 - 120
Bromoform	40.0	40.1		ug/Kg		100	50 - 124
Bromomethane	49.9	58.0		ug/Kg		116	57 - 148
Carbon tetrachloride	40.0	42.3		ug/Kg		106	59 - 145
Chlorobenzene	40.0	41.5		ug/Kg		104	75 - 120
Chlorobromomethane	40.0	48.5		ug/Kg		121	78 - 123
Chlorodibromomethane	40.0	44.4		ug/Kg		111	42 - 129
Chloroethane	50.0	55.8		ug/Kg		112	48 - 167
Chloroform	40.0	44.7		ug/Kg		112	78 - 125
Chloromethane	50.1	55.7		ug/Kg		111	55 - 136
cis-1,2-Dichloroethene	40.0	48.6		ug/Kg		121	70 - 130
cis-1,3-Dichloropropene	40.0	46.1		ug/Kg		115	69 - 129
Dibromomethane	40.0	43.3		ug/Kg		108	78 - 126
Dichlorobromomethane	40.0	43.3		ug/Kg		108	58 - 133
Dichlorodifluoromethane	49.9	45.6		ug/Kg		91	38 - 150
Ethylbenzene	40.0	43.9		ug/Kg		110	78 - 126
Ethylene Dibromide	40.0	41.1		ug/Kg		103	69 - 126
Hexachlorobutadiene	40.0	37.7		ug/Kg		94	68 - 134
Isopropylbenzene	40.0	47.3		ug/Kg		118	79 - 127
Methyl tert-butyl ether	40.0	51.3	*	ug/Kg		128	65 - 125
Methylene Chloride	40.0	46.7		ug/Kg		117	57 - 146
m-Xylene & p-Xylene	40.0	44.2		ug/Kg		110	78 - 126
Naphthalene	40.0	46.7		ug/Kg		117	14 - 170
n-Butylbenzene	40.0	43.8		ug/Kg		110	78 - 128
N-Propylbenzene	40.0	43.5		ug/Kg		109	81 - 127
o-Xylene	40.0	47.7		ug/Kg		119	77 - 127
sec-Butylbenzene	40.0	44.8		ug/Kg		112	78 - 128
Styrene	40.0	43.8		ug/Kg		110	79 - 127
tert-Butylbenzene	40.0	44.6		ug/Kg		112	71 - 136
Tetrachloroethene	40.0	41.3		ug/Kg		103	56 - 155
Toluene	40.0	42.7		ug/Kg		107	75 - 126
trans-1,2-Dichloroethene	40.0	48.4		ug/Kg		121	76 - 131
trans-1,3-Dichloropropene	40.0	44.4		ug/Kg		111	72 - 129
Trichloroethene	40.0	41.8		ug/Kg		104	83 - 124
Trichlorofluoromethane	50.1	50.4		ug/Kg		101	47 - 165

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 136*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*
Dibromofluoromethane (Surr)	*110*		*75 - 132*
Toluene-d8 (Surr)	*106*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-193219/3-A
Matrix: Solid
Analysis Batch: 193205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193219

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	44.0		ug/Kg		110	72 - 123	15	20
1,1,1-Trichloroethane	40.0	37.7		ug/Kg		94	63 - 135	13	20
1,1,2,2-Tetrachloroethane	40.0	41.7		ug/Kg		104	73 - 125	12	22
1,1,2-Trichloroethane	40.0	41.8		ug/Kg		104	77 - 124	4	18
1,1-Dichloroethane	40.0	42.5		ug/Kg		106	70 - 128	13	21
1,1-Dichloroethene	40.0	36.4		ug/Kg		91	70 - 133	13	23
1,1-Dichloropropene	40.0	42.6		ug/Kg		106	77 - 125	7	16
1,2,3-Trichlorobenzene	40.0	40.5		ug/Kg		101	61 - 130	19	23
1,2,3-Trichloropropane	40.0	37.0		ug/Kg		93	77 - 123	9	23
1,2,4-Trichlorobenzene	40.0	42.4		ug/Kg		106	61 - 130	18	22
1,2,4-Trimethylbenzene	40.0	43.3		ug/Kg		108	79 - 124	10	18
1,2-Dibromo-3-Chloropropane	40.0	38.0		ug/Kg		95	53 - 132	16	27
1,2-Dichlorobenzene	40.0	43.4		ug/Kg		108	79 - 117	10	17
1,2-Dichloroethane	40.0	37.7		ug/Kg		94	71 - 128	7	18
1,2-Dichloropropane	40.0	43.7		ug/Kg		109	76 - 161	6	15
1,3,5-Trimethylbenzene	40.0	42.7		ug/Kg		107	80 - 125	9	18
1,3-Dichlorobenzene	40.0	41.0		ug/Kg		103	79 - 119	7	17
1,3-Dichloropropane	40.0	40.4		ug/Kg		101	77 - 123	2	19
1,4-Dichlorobenzene	40.0	40.0		ug/Kg		100	79 - 117	1	18
2,2-Dichloropropane	40.0	43.8		ug/Kg		110	56 - 144	17	21
2-Chlorotoluene	40.0	42.4		ug/Kg		106	79 - 122	9	18
4-Chlorotoluene	40.0	41.1		ug/Kg		103	80 - 122	4	18
4-Isopropyltoluene	40.0	38.1		ug/Kg		95	78 - 126	3	18
Benzene	40.0	42.0		ug/Kg		105	70 - 128	7	19
Bromobenzene	40.0	40.0		ug/Kg		100	80 - 120	4	19
Bromoform	40.0	38.0		ug/Kg		95	50 - 124	5	25
Bromomethane	49.9	49.5		ug/Kg		99	57 - 148	16	29
Carbon tetrachloride	40.0	36.8		ug/Kg		92	59 - 145	14	19
Chlorobenzene	40.0	39.3		ug/Kg		98	75 - 120	5	21
Chlorobromomethane	40.0	42.7		ug/Kg		107	78 - 123	13	19
Chlorodibromomethane	40.0	42.3		ug/Kg		106	42 - 129	5	23
Chloroethane	50.0	48.7		ug/Kg		97	48 - 167	14	53
Chloroform	40.0	39.6		ug/Kg		99	78 - 125	12	17
Chloromethane	50.1	48.2		ug/Kg		96	55 - 136	15	26
cis-1,2-Dichloroethene	40.0	43.0		ug/Kg		107	70 - 130	12	19
cis-1,3-Dichloropropene	40.0	46.4		ug/Kg		116	69 - 129	1	19
Dibromomethane	40.0	41.0		ug/Kg		102	78 - 126	6	18
Dichlorobromomethane	40.0	41.0		ug/Kg		103	58 - 133	6	19
Dichlorodifluoromethane	49.9	38.9		ug/Kg		78	38 - 150	16	26
Ethylbenzene	40.0	41.0		ug/Kg		103	78 - 126	7	23
Ethylene Dibromide	40.0	40.1		ug/Kg		100	69 - 126	2	21
Hexachlorobutadiene	40.0	34.1		ug/Kg		85	68 - 134	10	21
Isopropylbenzene	40.0	42.2		ug/Kg		105	79 - 127	11	20
Methyl tert-butyl ether	40.0	44.0		ug/Kg		110	65 - 125	15	30
Methylene Chloride	40.0	40.9		ug/Kg		102	57 - 146	13	21
m-Xylene & p-Xylene	40.0	40.7		ug/Kg		102	78 - 126	8	23
Naphthalene	40.0	38.7		ug/Kg		97	14 - 170	19	50
n-Butylbenzene	40.0	39.6		ug/Kg		99	78 - 128	10	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-193219/3-A
Matrix: Solid
Analysis Batch: 193205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193219

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	40.6		ug/Kg		101	81 - 127	7	20
o-Xylene			40.0	43.0		ug/Kg		108	77 - 127	10	22
sec-Butylbenzene			40.0	41.6		ug/Kg		104	78 - 128	7	17
Styrene			40.0	41.5		ug/Kg		104	79 - 127	6	21
tert-Butylbenzene			40.0	42.8		ug/Kg		107	71 - 136	4	27
Tetrachloroethene			40.0	38.6		ug/Kg		97	56 - 155	7	27
Toluene			40.0	40.2		ug/Kg		100	75 - 126	6	19
trans-1,2-Dichloroethene			40.0	41.5		ug/Kg		104	76 - 131	15	18
trans-1,3-Dichloropropene			40.0	45.5		ug/Kg		114	72 - 129	2	20
Trichloroethene			40.0	40.2		ug/Kg		101	83 - 124	4	17
Trichlorofluoromethane			50.1	42.8		ug/Kg		86	47 - 165	16	54

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*71 - 136*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*
Dibromofluoromethane (Surr)	*105*		*75 - 132*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*89*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-193707/1-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193707

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2-Chlorophenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2-Methylphenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2-Nitroaniline	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
2-Nitrophenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
3-Nitroaniline	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		07/01/15 09:03	07/09/15 11:56	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-193707/1-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193707

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
4-Chloroaniline	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
4-Nitroaniline	ND		100	20	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
4-Nitrophenol	ND		1000	250	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Acenaphthene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Acenaphthylene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Anthracene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzoic acid	ND		2500	750	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Benzyl alcohol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Bis(2-ethylhexyl) phthalate	53.9	J	600	50	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Butyl benzyl phthalate	59.8	J	200	50	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Carbazole	ND		100	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Chrysene	ND		25	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Dibenzofuran	ND		100	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Diethyl phthalate	ND		200	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Fluoranthene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Fluorene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Hexachlorobutadiene	ND		50	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Hexachloroethane	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Isophorone	ND		100	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Naphthalene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Nitrobenzene	ND		100	34	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Pentachlorophenol	ND		200	20	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Phenanthrene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Phenol	ND		100	15	ug/Kg		07/01/15 09:03	07/09/15 11:56	1
Pyrene	ND		20	5.0	ug/Kg		07/01/15 09:03	07/09/15 11:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*75*		*28 - 143*	*07/01/15 09:03*	*07/09/15 11:56*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-193707/1-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193707

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	99		42 - 140	07/01/15 09:03	07/09/15 11:56	1
2-Fluorophenol	96		36 - 145	07/01/15 09:03	07/09/15 11:56	1
Nitrobenzene-d5	107		38 - 141	07/01/15 09:03	07/09/15 11:56	1
Phenol-d5	109		38 - 149	07/01/15 09:03	07/09/15 11:56	1
Terphenyl-d14	117		42 - 151	07/01/15 09:03	07/09/15 11:56	1

Lab Sample ID: LCS 580-193707/2-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	970		ug/Kg		97	66 - 115
1,2-Dichlorobenzene	1000	894		ug/Kg		89	64 - 112
1,3-Dichlorobenzene	1000	851		ug/Kg		85	64 - 111
1,4-Dichlorobenzene	1000	871		ug/Kg		87	65 - 110
1-Methylnaphthalene	1000	1000		ug/Kg		100	62 - 118
2,4,5-Trichlorophenol	1000	979		ug/Kg		98	57 - 133
2,4,6-Trichlorophenol	1000	927		ug/Kg		93	62 - 133
2,4-Dichlorophenol	1000	1100		ug/Kg		110	68 - 125
2,4-Dimethylphenol	1000	590		ug/Kg		59	54 - 139
2,4-Dinitrophenol	2000	1340		ug/Kg		67	20 - 141
2,4-Dinitrotoluene	1000	936		ug/Kg		94	68 - 121
2,6-Dinitrotoluene	1000	995		ug/Kg		99	66 - 123
2-Chloronaphthalene	1000	985		ug/Kg		99	68 - 112
2-Chlorophenol	1000	977		ug/Kg		98	68 - 117
2-Methylnaphthalene	1000	1020		ug/Kg		102	64 - 119
2-Methylphenol	1000	932		ug/Kg		93	71 - 116
2-Nitroaniline	1000	1060		ug/Kg		106	64 - 112
2-Nitrophenol	1000	1000		ug/Kg		100	67 - 127
3 & 4 Methylphenol	1000	972		ug/Kg		97	70 - 116
3,3'-Dichlorobenzidine	2000	1200		ug/Kg		60	20 - 103
3-Nitroaniline	1000	808		ug/Kg		81	27 - 103
4,6-Dinitro-2-methylphenol	2000	1760		ug/Kg		88	48 - 130
4-Bromophenyl phenyl ether	1000	1040		ug/Kg		104	68 - 122
4-Chloro-3-methylphenol	1000	966		ug/Kg		97	69 - 121
4-Chloroaniline	1000	636		ug/Kg		64	20 - 103
4-Chlorophenyl phenyl ether	1000	992		ug/Kg		99	75 - 108
4-Nitroaniline	1000	890		ug/Kg		89	58 - 108
4-Nitrophenol	2000	1940		ug/Kg		97	20 - 165
Acenaphthene	1000	965		ug/Kg		97	68 - 116
Acenaphthylene	1000	1020		ug/Kg		102	68 - 120
Anthracene	1000	905		ug/Kg		91	73 - 116
Benzo[a]anthracene	1000	1060		ug/Kg		106	76 - 119
Benzo[a]pyrene	1000	874		ug/Kg		87	72 - 117
Benzo[b]fluoranthene	1000	1040		ug/Kg		104	63 - 132
Benzo[g,h,i]perylene	1000	862		ug/Kg		86	55 - 139
Benzo[k]fluoranthene	1000	794		ug/Kg		79	63 - 119
Benzoic acid	2010	ND	*	ug/Kg		16	29 - 158

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-193707/2-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	1000	912		ug/Kg		91	55 - 123
bis (2-chloroisopropyl) ether	1000	1020		ug/Kg		102	41 - 126
Bis(2-chloroethoxy)methane	1000	1040		ug/Kg		104	69 - 107
Bis(2-chloroethyl)ether	1000	974		ug/Kg		97	62 - 110
Bis(2-ethylhexyl) phthalate	1000	1130		ug/Kg		113	62 - 144
Butyl benzyl phthalate	1000	1050		ug/Kg		105	69 - 142
Carbazole	1000	1070		ug/Kg		107	76 - 135
Chrysene	1000	933		ug/Kg		93	75 - 114
Dibenz(a,h)anthracene	1000	858		ug/Kg		86	56 - 134
Dibenzofuran	1000	970		ug/Kg		97	72 - 109
Diethyl phthalate	1000	925		ug/Kg		92	73 - 116
Dimethyl phthalate	1000	1020		ug/Kg		102	78 - 117
Di-n-butyl phthalate	1000	993		ug/Kg		99	66 - 140
Di-n-octyl phthalate	1000	988		ug/Kg		99	65 - 141
Fluoranthene	1000	968		ug/Kg		97	73 - 125
Fluorene	1000	916		ug/Kg		92	70 - 121
Hexachlorobenzene	1000	1020		ug/Kg		102	66 - 117
Hexachlorobutadiene	1000	975		ug/Kg		97	65 - 116
Hexachlorocyclopentadiene	1000	994		ug/Kg		99	46 - 131
Hexachloroethane	1000	945		ug/Kg		94	62 - 120
Indeno[1,2,3-cd]pyrene	1000	1010		ug/Kg		101	56 - 127
Isophorone	1000	1030		ug/Kg		103	67 - 119
Naphthalene	1000	892		ug/Kg		89	62 - 112
Nitrobenzene	1000	1030		ug/Kg		103	64 - 118
N-Nitrosodi-n-propylamine	1000	1000		ug/Kg		100	62 - 116
N-Nitrosodiphenylamine	2010	1840		ug/Kg		92	73 - 115
Pentachlorophenol	2000	1400		ug/Kg		70	45 - 117
Phenanthrene	1000	944		ug/Kg		94	73 - 106
Phenol	1000	941		ug/Kg		94	63 - 111
Pyrene	1000	958		ug/Kg		96	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*101*		*28 - 143*
2-Fluorobiphenyl	*91*		*42 - 140*
2-Fluorophenol	*93*		*36 - 145*
Nitrobenzene-d5	*101*		*38 - 141*
Phenol-d5	*103*		*38 - 149*
Terphenyl-d14	*108*		*42 - 151*

Lab Sample ID: LCSD 580-193707/3-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	1010		ug/Kg		101	66 - 115	4	28
1,2-Dichlorobenzene	1000	927		ug/Kg		93	64 - 112	4	30
1,3-Dichlorobenzene	1000	904		ug/Kg		90	64 - 111	6	30
1,4-Dichlorobenzene	1000	904		ug/Kg		90	65 - 110	4	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-193707/3-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	1000	1030		ug/Kg		103	62 - 118	2	30
2,4,5-Trichlorophenol	1000	963		ug/Kg		96	57 - 133	2	30
2,4,6-Trichlorophenol	1000	958		ug/Kg		96	62 - 133	3	30
2,4-Dichlorophenol	1000	1120		ug/Kg		112	68 - 125	2	30
2,4-Dimethylphenol	1000	604		ug/Kg		60	54 - 139	2	30
2,4-Dinitrophenol	2000	1200		ug/Kg		60	20 - 141	12	36
2,4-Dinitrotoluene	1000	967		ug/Kg		97	68 - 121	3	30
2,6-Dinitrotoluene	1000	1000		ug/Kg		100	66 - 123	1	30
2-Chloronaphthalene	1000	1010		ug/Kg		101	68 - 112	2	25
2-Chlorophenol	1000	972		ug/Kg		97	68 - 117	1	27
2-Methylnaphthalene	1000	1060		ug/Kg		106	64 - 119	3	27
2-Methylphenol	1000	944		ug/Kg		94	71 - 116	1	25
2-Nitroaniline	1000	1060		ug/Kg		106	64 - 112	0	22
2-Nitrophenol	1000	1040		ug/Kg		104	67 - 127	4	30
3 & 4 Methylphenol	1000	995		ug/Kg		100	70 - 116	2	27
3,3'-Dichlorobenzidine	2000	1070		ug/Kg		54	20 - 103	11	60
3-Nitroaniline	1000	825		ug/Kg		82	27 - 103	2	33
4,6-Dinitro-2-methylphenol	2000	1770		ug/Kg		88	48 - 130	0	22
4-Bromophenyl phenyl ether	1000	1070		ug/Kg		107	68 - 122	2	30
4-Chloro-3-methylphenol	1000	974		ug/Kg		97	69 - 121	1	27
4-Chloroaniline	1000	581		ug/Kg		58	20 - 103	9	60
4-Chlorophenyl phenyl ether	1000	1010		ug/Kg		101	75 - 108	2	30
4-Nitroaniline	1000	879		ug/Kg		88	58 - 108	1	32
4-Nitrophenol	2000	2000		ug/Kg		100	20 - 165	3	30
Acenaphthene	1000	983		ug/Kg		98	68 - 116	2	27
Acenaphthylene	1000	1020		ug/Kg		102	68 - 120	0	28
Anthracene	1000	893		ug/Kg		89	73 - 116	1	27
Benzo[a]anthracene	1000	1070		ug/Kg		107	76 - 119	1	27
Benzo[a]pyrene	1000	863		ug/Kg		86	72 - 117	1	30
Benzo[b]fluoranthene	1000	1010		ug/Kg		101	63 - 132	3	30
Benzo[g,h,i]perylene	1000	850		ug/Kg		85	55 - 139	1	28
Benzo[k]fluoranthene	1000	814		ug/Kg		81	63 - 119	2	30
Benzoic acid	2010	ND	*	ug/Kg		24	29 - 158	44	28
Benzyl alcohol	1000	933		ug/Kg		93	55 - 123	2	60
bis (2-chloroisopropyl) ether	1000	1070		ug/Kg		107	41 - 126	5	57
Bis(2-chloroethoxy)methane	1000	1060		ug/Kg		106	69 - 107	2	30
Bis(2-chloroethyl)ether	1000	1000		ug/Kg		100	62 - 110	3	22
Bis(2-ethylhexyl) phthalate	1000	1020		ug/Kg		102	62 - 144	11	30
Butyl benzyl phthalate	1000	1070		ug/Kg		107	69 - 142	1	30
Carbazole	1000	1090		ug/Kg		109	76 - 135	2	30
Chrysene	1000	964		ug/Kg		96	75 - 114	3	26
Dibenz(a,h)anthracene	1000	862		ug/Kg		86	56 - 134	0	30
Dibenzofuran	1000	971		ug/Kg		97	72 - 109	0	30
Diethyl phthalate	1000	936		ug/Kg		94	73 - 116	1	26
Dimethyl phthalate	1000	1020		ug/Kg		102	78 - 117	0	30
Di-n-butyl phthalate	1000	986		ug/Kg		99	66 - 140	1	30
Di-n-octyl phthalate	1000	989		ug/Kg		99	65 - 141	0	30
Fluoranthene	1000	971		ug/Kg		97	73 - 125	0	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-193707/3-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193707

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluorene			1000	921		ug/Kg		92	70 - 121	1	30
Hexachlorobenzene			1000	1030		ug/Kg		103	66 - 117	1	30
Hexachlorobutadiene			1000	1010		ug/Kg		101	65 - 116	4	30
Hexachlorocyclopentadiene			1000	1020		ug/Kg		102	46 - 131	2	29
Hexachloroethane			1000	984		ug/Kg		98	62 - 120	4	30
Indeno[1,2,3-cd]pyrene			1000	1040		ug/Kg		104	56 - 127	3	29
Isophorone			1000	1070		ug/Kg		107	67 - 119	3	30
Naphthalene			1000	929		ug/Kg		93	62 - 112	4	26
Nitrobenzene			1000	1100		ug/Kg		110	64 - 118	7	30
N-Nitrosodi-n-propylamine			1000	1060		ug/Kg		106	62 - 116	6	28
N-Nitrosodiphenylamine			2010	1890		ug/Kg		94	73 - 115	3	30
Pentachlorophenol			2000	1380		ug/Kg		69	45 - 117	1	23
Phenanthrene			1000	943		ug/Kg		94	73 - 106	0	28
Phenol			1000	945		ug/Kg		95	63 - 111	0	26
Pyrene			1000	979		ug/Kg		98	70 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*108*		*28 - 143*
2-Fluorobiphenyl	*97*		*42 - 140*
2-Fluorophenol	*98*		*36 - 145*
Nitrobenzene-d5	*110*		*38 - 141*
Phenol-d5	*106*		*38 - 149*
Terphenyl-d14	*115*		*42 - 151*

Lab Sample ID: 590-1109-22 MS
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		1110	990		ug/Kg	☼	89	66 - 115
1,2-Dichlorobenzene	ND		1110	862		ug/Kg	☼	78	64 - 112
1,3-Dichlorobenzene	ND		1110	862		ug/Kg	☼	78	64 - 111
1,4-Dichlorobenzene	ND		1110	874		ug/Kg	☼	79	65 - 110
1-Methylnaphthalene	ND		1110	993		ug/Kg	☼	89	62 - 118
2,4,5-Trichlorophenol	ND		1110	1060		ug/Kg	☼	96	57 - 133
2,4,6-Trichlorophenol	ND		1110	1020		ug/Kg	☼	92	62 - 133
2,4-Dichlorophenol	ND		1110	1110		ug/Kg	☼	100	68 - 125
2,4-Dimethylphenol	ND		1110	907		ug/Kg	☼	82	54 - 139
2,4-Dinitrophenol	ND		2220	1420		ug/Kg	☼	64	20 - 141
2,4-Dinitrotoluene	ND		1110	1010		ug/Kg	☼	91	68 - 121
2,6-Dinitrotoluene	ND		1110	1040		ug/Kg	☼	94	66 - 123
2-Chloronaphthalene	ND		1110	991		ug/Kg	☼	89	68 - 112
2-Chlorophenol	ND		1110	976		ug/Kg	☼	88	68 - 117
2-Methylnaphthalene	ND		1110	1020		ug/Kg	☼	92	64 - 119
2-Methylphenol	ND		1110	958		ug/Kg	☼	86	71 - 116
2-Nitroaniline	ND		1110	1120		ug/Kg	☼	101	64 - 112
2-Nitrophenol	ND		1110	1070		ug/Kg	☼	97	67 - 127
3 & 4 Methylphenol	ND		1110	978		ug/Kg	☼	88	70 - 116

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1109-22 MS
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	ND		2220	1610		ug/Kg	☼	73	20 - 103
3-Nitroaniline	ND		1110	860		ug/Kg	☼	77	27 - 103
4,6-Dinitro-2-methylphenol	ND		2220	1540		ug/Kg	☼	69	48 - 130
4-Bromophenyl phenyl ether	ND		1110	1050		ug/Kg	☼	95	68 - 122
4-Chloro-3-methylphenol	ND		1110	993		ug/Kg	☼	89	69 - 121
4-Chloroaniline	ND		1110	657		ug/Kg	☼	59	20 - 103
4-Chlorophenyl phenyl ether	ND		1110	1010		ug/Kg	☼	91	75 - 108
4-Nitroaniline	ND		1110	906		ug/Kg	☼	82	58 - 108
4-Nitrophenol	ND		2220	2180		ug/Kg	☼	98	20 - 165
Acenaphthene	ND		1110	961		ug/Kg	☼	87	68 - 116
Acenaphthylene	ND		1110	1020		ug/Kg	☼	92	68 - 120
Anthracene	ND		1110	928		ug/Kg	☼	84	73 - 116
Benzo[a]anthracene	ND		1110	1140		ug/Kg	☼	103	76 - 119
Benzo[a]pyrene	ND		1110	969		ug/Kg	☼	87	72 - 117
Benzo[b]fluoranthene	ND		1110	1300		ug/Kg	☼	117	63 - 132
Benzo[g,h,i]perylene	ND	F1	1110	417	F1	ug/Kg	☼	38	55 - 139
Benzo[k]fluoranthene	ND		1110	971		ug/Kg	☼	87	63 - 119
Benzoic acid	ND	*	2230	1910	J	ug/Kg	☼	86	29 - 158
Benzyl alcohol	ND		1110	947		ug/Kg	☼	85	55 - 123
bis (2-chloroisopropyl) ether	ND		1110	1040		ug/Kg	☼	94	41 - 126
Bis(2-chloroethoxy)methane	ND		1110	1030		ug/Kg	☼	93	69 - 107
Bis(2-chloroethyl)ether	ND		1110	972		ug/Kg	☼	88	62 - 110
Bis(2-ethylhexyl) phthalate	280	J B	1110	1530		ug/Kg	☼	112	62 - 144
Butyl benzyl phthalate	88	J B	1110	1180		ug/Kg	☼	98	69 - 142
Carbazole	ND		1110	1140		ug/Kg	☼	102	76 - 135
Chrysene	ND		1110	982		ug/Kg	☼	88	75 - 114
Dibenz(a,h)anthracene	ND	F1	1110	436	F1	ug/Kg	☼	39	56 - 134
Dibenzofuran	ND		1110	949		ug/Kg	☼	85	72 - 109
Diethyl phthalate	ND		1110	960		ug/Kg	☼	86	73 - 116
Dimethyl phthalate	ND		1110	1030		ug/Kg	☼	92	78 - 117
Di-n-butyl phthalate	ND		1110	1090		ug/Kg	☼	98	66 - 140
Di-n-octyl phthalate	ND		1110	1500		ug/Kg	☼	135	65 - 141
Fluoranthene	ND		1110	1080		ug/Kg	☼	97	73 - 125
Fluorene	ND		1110	909		ug/Kg	☼	82	70 - 121
Hexachlorobenzene	ND		1110	1050		ug/Kg	☼	94	66 - 117
Hexachlorobutadiene	ND		1110	994		ug/Kg	☼	90	65 - 116
Hexachlorocyclopentadiene	ND		1110	605		ug/Kg	☼	54	46 - 131
Hexachloroethane	ND		1110	946		ug/Kg	☼	85	62 - 120
Indeno[1,2,3-cd]pyrene	ND	F1	1110	536	F1	ug/Kg	☼	48	56 - 127
Isophorone	ND		1110	1060		ug/Kg	☼	95	67 - 119
Naphthalene	ND		1110	912		ug/Kg	☼	82	62 - 112
Nitrobenzene	ND		1110	1040		ug/Kg	☼	94	64 - 118
N-Nitrosodi-n-propylamine	ND		1110	1020		ug/Kg	☼	92	62 - 116
N-Nitrosodiphenylamine	ND		2230	1860		ug/Kg	☼	83	73 - 115
Pentachlorophenol	ND		2220	1870		ug/Kg	☼	84	45 - 117
Phenanthrene	ND		1110	954		ug/Kg	☼	86	73 - 106
Phenol	ND		1110	921		ug/Kg	☼	83	63 - 111
Pyrene	ND		1110	1080		ug/Kg	☼	97	70 - 120

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1109-22 MS
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193707

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*28 - 143*
2-Fluorobiphenyl	*76*		*42 - 140*
2-Fluorophenol	*83*		*36 - 145*
Nitrobenzene-d5	*89*		*38 - 141*
Phenol-d5	*91*		*38 - 149*
Terphenyl-d14	*116*		*42 - 151*

Lab Sample ID: 590-1109-22 MSD
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		1140	1020		ug/Kg	☼	90	66 - 115	3	28
1,2-Dichlorobenzene	ND		1140	918		ug/Kg	☼	81	64 - 112	6	60
1,3-Dichlorobenzene	ND		1140	900		ug/Kg	☼	79	64 - 111	4	60
1,4-Dichlorobenzene	ND		1140	898		ug/Kg	☼	79	65 - 110	3	32
1-Methylnaphthalene	ND		1140	1020		ug/Kg	☼	90	62 - 118	3	30
2,4,5-Trichlorophenol	ND		1140	1100		ug/Kg	☼	97	57 - 133	4	60
2,4,6-Trichlorophenol	ND		1140	1070		ug/Kg	☼	94	62 - 133	5	60
2,4-Dichlorophenol	ND		1140	1180		ug/Kg	☼	103	68 - 125	6	60
2,4-Dimethylphenol	ND		1140	1010		ug/Kg	☼	88	54 - 139	11	60
2,4-Dinitrophenol	ND		2280	1730		ug/Kg	☼	76	20 - 141	20	60
2,4-Dinitrotoluene	ND		1140	1070		ug/Kg	☼	94	68 - 121	6	31
2,6-Dinitrotoluene	ND		1140	1110		ug/Kg	☼	97	66 - 123	7	60
2-Chloronaphthalene	ND		1140	1010		ug/Kg	☼	89	68 - 112	2	25
2-Chlorophenol	ND		1140	1010		ug/Kg	☼	88	68 - 117	3	27
2-Methylnaphthalene	ND		1140	1040		ug/Kg	☼	91	64 - 119	2	27
2-Methylphenol	ND		1140	1030		ug/Kg	☼	90	71 - 116	7	25
2-Nitroaniline	ND		1140	1140		ug/Kg	☼	100	64 - 112	2	60
2-Nitrophenol	ND		1140	1120		ug/Kg	☼	98	67 - 127	4	60
3 & 4 Methylphenol	ND		1140	1040		ug/Kg	☼	91	70 - 116	6	27
3,3'-Dichlorobenzidine	ND		2280	1710		ug/Kg	☼	75	20 - 103	6	60
3-Nitroaniline	ND		1140	874		ug/Kg	☼	77	27 - 103	2	60
4,6-Dinitro-2-methylphenol	ND		2280	1880		ug/Kg	☼	82	48 - 130	20	60
4-Bromophenyl phenyl ether	ND		1140	1100		ug/Kg	☼	96	68 - 122	4	60
4-Chloro-3-methylphenol	ND		1140	1030		ug/Kg	☼	90	69 - 121	4	27
4-Chloroaniline	ND		1140	676		ug/Kg	☼	59	20 - 103	3	60
4-Chlorophenyl phenyl ether	ND		1140	1050		ug/Kg	☼	92	75 - 108	4	60
4-Nitroaniline	ND		1140	908		ug/Kg	☼	80	58 - 108	0	60
4-Nitrophenol	ND		2280	2250		ug/Kg	☼	99	20 - 165	3	33
Acenaphthene	ND		1140	994		ug/Kg	☼	87	68 - 116	3	27
Acenaphthylene	ND		1140	1070		ug/Kg	☼	93	68 - 120	5	28
Anthracene	ND		1140	973		ug/Kg	☼	85	73 - 116	5	27
Benzo[a]anthracene	ND		1140	1140		ug/Kg	☼	100	76 - 119	0	27
Benzo[a]pyrene	ND		1140	1000		ug/Kg	☼	88	72 - 117	3	30
Benzo[b]fluoranthene	ND		1140	1290		ug/Kg	☼	114	63 - 132	0	31
Benzo[g,h,i]perylene	ND	F1	1140	417	F1	ug/Kg	☼	37	55 - 139	0	28
Benzo[k]fluoranthene	ND		1140	1050		ug/Kg	☼	92	63 - 119	7	31

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1109-22 MSD
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193707

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzoic acid	ND	*	2290	2030	J	ug/Kg	☼	89	29 - 158	6	60
Benzyl alcohol	ND		1140	993		ug/Kg	☼	87	55 - 123	5	60
bis (2-chloroisopropyl) ether	ND		1140	1090		ug/Kg	☼	95	41 - 126	4	60
Bis(2-chloroethoxy)methane	ND		1140	1060		ug/Kg	☼	93	69 - 107	3	60
Bis(2-chloroethyl)ether	ND		1140	1020		ug/Kg	☼	90	62 - 110	5	60
Bis(2-ethylhexyl) phthalate	280	J B	1140	1650		ug/Kg	☼	120	62 - 144	8	60
Butyl benzyl phthalate	88	J B	1140	1260		ug/Kg	☼	103	69 - 142	7	60
Carbazole	ND		1140	1170		ug/Kg	☼	103	76 - 135	3	60
Chrysene	ND		1140	1000		ug/Kg	☼	88	75 - 114	2	26
Dibenz(a,h)anthracene	ND	F1	1140	454	F1	ug/Kg	☼	40	56 - 134	4	30
Dibenzofuran	ND		1140	999		ug/Kg	☼	88	72 - 109	5	60
Diethyl phthalate	ND		1140	988		ug/Kg	☼	87	73 - 116	3	26
Dimethyl phthalate	ND		1140	1060		ug/Kg	☼	93	78 - 117	3	60
Di-n-butyl phthalate	ND		1140	1130		ug/Kg	☼	99	66 - 140	3	60
Di-n-octyl phthalate	ND		1140	1590		ug/Kg	☼	139	65 - 141	5	31
Fluoranthene	ND		1140	1110		ug/Kg	☼	97	73 - 125	3	36
Fluorene	ND		1140	937		ug/Kg	☼	82	70 - 121	3	31
Hexachlorobenzene	ND		1140	1090		ug/Kg	☼	95	66 - 117	4	60
Hexachlorobutadiene	ND		1140	1030		ug/Kg	☼	90	65 - 116	3	60
Hexachlorocyclopentadiene	ND		1140	701		ug/Kg	☼	61	46 - 131	15	60
Hexachloroethane	ND		1140	1020		ug/Kg	☼	89	62 - 120	7	60
Indeno[1,2,3-cd]pyrene	ND	F1	1140	556	F1	ug/Kg	☼	49	56 - 127	4	29
Isophorone	ND		1140	1100		ug/Kg	☼	97	67 - 119	4	60
Naphthalene	ND		1140	918		ug/Kg	☼	80	62 - 112	1	26
Nitrobenzene	ND		1140	1100		ug/Kg	☼	97	64 - 118	6	60
N-Nitrosodi-n-propylamine	ND		1140	1100		ug/Kg	☼	96	62 - 116	7	28
N-Nitrosodiphenylamine	ND		2290	1900		ug/Kg	☼	83	73 - 115	2	60
Pentachlorophenol	ND		2280	1900		ug/Kg	☼	83	45 - 117	2	68
Phenanthrene	ND		1140	984		ug/Kg	☼	86	73 - 106	3	28
Phenol	ND		1140	961		ug/Kg	☼	84	63 - 111	4	26
Pyrene	ND		1140	1100		ug/Kg	☼	97	70 - 120	2	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*105*		*28 - 143*
2-Fluorobiphenyl	*82*		*42 - 140*
2-Fluorophenol	*87*		*36 - 145*
Nitrobenzene-d5	*92*		*38 - 141*
Phenol-d5	*96*		*38 - 149*
Terphenyl-d14	*113*		*42 - 151*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2019/1-A
Matrix: Solid
Analysis Batch: 2074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2019

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		06/23/15 11:09	06/25/15 09:43	1

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Lab Sample ID: MB 590-2019/1-A
Matrix: Solid
Analysis Batch: 2074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2019

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		06/23/15 11:09	06/25/15 09:43	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		06/23/15 11:09	06/25/15 09:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*06/23/15 11:09*	*06/25/15 09:43*	*1*
n-Triacontane-d62	*68*		*50 - 150*	*06/23/15 11:09*	*06/25/15 09:43*	*1*

Lab Sample ID: 590-1109-22 DU
Matrix: Solid
Analysis Batch: 2074

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 2019

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND			ND		mg/Kg	☼			NC	25
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	25
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*88*		*50 - 150*
n-Triacontane-d62	*65*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-192902/17-A
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 192902

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.042	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Arsenic	ND		0.50	0.18	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Barium	ND		0.50	0.078	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Beryllium	ND		0.20	0.035	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Cadmium	ND		0.20	0.019	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Chromium	ND		0.50	0.063	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Copper	ND		0.40	0.098	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Iron	ND		40	11	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Lead	ND		0.50	0.048	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Manganese	ND		1.0	0.17	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Nickel	ND		0.50	0.081	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Selenium	ND		1.0	0.20	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Silver	ND		0.20	0.012	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Thallium	ND		0.40	0.13	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Zinc	ND		5.0	1.1	mg/Kg		06/23/15 06:43	06/23/15 17:49	10
Vanadium	ND		2.0	0.47	mg/Kg		06/23/15 06:43	06/23/15 17:49	10

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-192902/18-A
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 192902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	150	146		mg/Kg		97	80 - 120
Arsenic	200	199		mg/Kg		99	80 - 120
Barium	200	196		mg/Kg		98	80 - 120
Beryllium	5.00	4.68		mg/Kg		94	80 - 120
Cadmium	5.00	4.98		mg/Kg		100	80 - 120
Chromium	20.0	20.4		mg/Kg		102	80 - 120
Copper	25.0	25.2		mg/Kg		101	80 - 120
Iron	1100	1140		mg/Kg		104	80 - 120
Lead	50.0	49.9		mg/Kg		100	80 - 120
Manganese	50.0	49.9		mg/Kg		100	80 - 120
Nickel	50.0	50.5		mg/Kg		101	80 - 120
Selenium	200	197		mg/Kg		98	80 - 120
Silver	30.0	30.6		mg/Kg		102	80 - 120
Thallium	200	199		mg/Kg		99	80 - 120
Zinc	200	195		mg/Kg		98	80 - 120
Vanadium	50.0	49.4		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-192902/19-A
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 192902

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	152		mg/Kg		101	80 - 120	4	20
Arsenic	200	209		mg/Kg		105	80 - 120	5	20
Barium	200	206		mg/Kg		103	80 - 120	5	20
Beryllium	5.00	5.26		mg/Kg		105	80 - 120	12	20
Cadmium	5.00	5.25		mg/Kg		105	80 - 120	5	20
Chromium	20.0	20.8		mg/Kg		104	80 - 120	2	20
Copper	25.0	26.4		mg/Kg		105	80 - 120	5	20
Iron	1100	1180		mg/Kg		108	80 - 120	4	20
Lead	50.0	51.9		mg/Kg		104	80 - 120	4	20
Manganese	50.0	53.2		mg/Kg		106	80 - 120	6	20
Nickel	50.0	52.4		mg/Kg		105	80 - 120	4	20
Selenium	200	208		mg/Kg		104	80 - 120	5	20
Silver	30.0	31.7		mg/Kg		106	80 - 120	4	20
Thallium	200	209		mg/Kg		104	80 - 120	5	20
Zinc	200	203		mg/Kg		102	80 - 120	4	20
Vanadium	50.0	51.7		mg/Kg		103	80 - 120	4	20

Lab Sample ID: 590-1109-22 MS
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 192902

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.32		164	165		mg/Kg	☼	100	80 - 120
Arsenic	4.6		219	231		mg/Kg	☼	103	80 - 120
Barium	44		219	292		mg/Kg	☼	113	80 - 120
Beryllium	0.32		5.48	6.06		mg/Kg	☼	105	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-1109-22 MS
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 192902

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.10	J	5.48	6.06		mg/Kg	☼	109	80 - 120
Chromium	6.4	F1	21.9	36.3	F1	mg/Kg	☼	137	80 - 120
Copper	13		27.4	42.5		mg/Kg	☼	107	80 - 120
Iron	20000		1200	25900	4	mg/Kg	☼	468	80 - 120
Lead	7.6		54.8	63.1		mg/Kg	☼	101	80 - 120
Manganese	380		54.8	403	4	mg/Kg	☼	39	80 - 120
Nickel	10		54.8	68.2		mg/Kg	☼	106	80 - 120
Selenium	0.86	J	219	224		mg/Kg	☼	102	80 - 120
Silver	0.035	J	32.9	34.4		mg/Kg	☼	105	80 - 120
Thallium	0.17	J	219	223		mg/Kg	☼	102	80 - 120
Zinc	39		219	272		mg/Kg	☼	106	80 - 120
Vanadium	21	F1	54.8	90.3	F1	mg/Kg	☼	126	80 - 120

Lab Sample ID: 590-1109-22 MSD
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 192902

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.32		163	162		mg/Kg	☼	100	80 - 120	1	20
Arsenic	4.6		217	229		mg/Kg	☼	103	80 - 120	1	20
Barium	44		217	276		mg/Kg	☼	107	80 - 120	6	20
Beryllium	0.32		5.42	6.25		mg/Kg	☼	110	80 - 120	3	20
Cadmium	0.10	J	5.42	5.62		mg/Kg	☼	102	80 - 120	8	20
Chromium	6.4	F1	21.7	31.6		mg/Kg	☼	116	80 - 120	14	20
Copper	13		27.1	41.4		mg/Kg	☼	104	80 - 120	3	20
Iron	20000		1190	23400	4	mg/Kg	☼	265	80 - 120	10	20
Lead	7.6		54.2	62.6		mg/Kg	☼	101	80 - 120	1	20
Manganese	380		54.2	440	4	mg/Kg	☼	109	80 - 120	9	20
Nickel	10		54.2	64.7		mg/Kg	☼	101	80 - 120	5	20
Selenium	0.86	J	217	218		mg/Kg	☼	100	80 - 120	3	20
Silver	0.035	J	32.5	33.7		mg/Kg	☼	104	80 - 120	2	20
Thallium	0.17	J	217	222		mg/Kg	☼	102	80 - 120	1	20
Zinc	39		217	258		mg/Kg	☼	101	80 - 120	5	20
Vanadium	21	F1	54.2	83.9		mg/Kg	☼	116	80 - 120	7	20

Lab Sample ID: 590-1109-22 DU
Matrix: Solid
Analysis Batch: 193070

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 192902

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.32		0.318		mg/Kg	☼	2	20
Arsenic	4.6		5.03		mg/Kg	☼	8	20
Barium	44		43.2		mg/Kg	☼	3	20
Beryllium	0.32		0.377		mg/Kg	☼	18	20
Cadmium	0.10	J	0.0603	J F5	mg/Kg	☼	50	20
Chromium	6.4	F1	9.12	F3	mg/Kg	☼	35	20
Copper	13		12.2		mg/Kg	☼	7	20
Iron	20000		20800		mg/Kg	☼	3	20
Lead	7.6		6.21	F3	mg/Kg	☼	21	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-1109-22 DU — **Client Sample ID: MW-15:(164-165)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 193070 — **Prep Batch: 192902**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Manganese	380		332		mg/Kg	☼	14	20
Nickel	10		9.12		mg/Kg	☼	9	20
Selenium	0.86	J	0.761	J	mg/Kg	☼	12	20
Silver	0.035	J	0.0321	J	mg/Kg	☼	9	20
Thallium	0.17	J	ND		mg/Kg	☼	NC	20
Zinc	39		36.5		mg/Kg	☼	5	20
Vanadium	21	F1	22.4		mg/Kg	☼	5	20

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 590-2000/18-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2048 — **Prep Batch: 2000**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		06/23/15 15:02	06/23/15 15:29	1

Lab Sample ID: LCS 590-2000/8-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2048 — **Prep Batch: 2000**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	193		ug/Kg		97	80 - 120

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-193014/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 193127 — **Prep Batch: 193014**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg		06/23/15 16:38	06/23/15 16:38	1

Lab Sample ID: LCS 580-193014/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 193127 — **Prep Batch: 193014**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	10.0	9.61		mg/Kg		96	80 - 120

Lab Sample ID: 590-1109-22 MS — **Client Sample ID: MW-15:(164-165)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 193127 — **Prep Batch: 193014**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		10.9	10.4		mg/Kg	☼	95	80 - 120

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 590-1109-22 MSD
Matrix: Solid
Analysis Batch: 193127

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193014

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		11.1	10.6		mg/Kg	☼	96	80 - 120	2	20

Lab Sample ID: 590-1109-22 DU
Matrix: Solid
Analysis Batch: 193127

Client Sample ID: MW-15:(164-165)
Prep Type: Total/NA
Prep Batch: 193014

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/Kg	☼			NC	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1109-1

Client Sample ID: MW-15:(164-165)

Lab Sample ID: 590-1109-22
Date Collected: 06/18/15 09:40
Matrix: Solid
Date Received: 06/18/15 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2021	06/23/15 11:20	IAB	TAL SPK

Client Sample ID: MW-15:(164-165)

Lab Sample ID: 590-1109-22
Date Collected: 06/18/15 09:40
Matrix: Solid
Date Received: 06/18/15 15:40
Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.436 g	10 mL	193219	06/25/15 13:30	SOC	TAL SEA
Total/NA	Analysis	8260B		1	7.436 g	10 mL	193205	06/25/15 18:02	D1R	TAL SEA
Total/NA	Prep	3550B			10.040 g	10 mL	193707	07/01/15 09:03	DCV	TAL SEA
Total/NA	Analysis	8270C		1	10.040 g	10 mL	194394	07/09/15 18:28	AHP	TAL SEA
Total/NA	Prep	NWTPH-HCID			10.00 g	20 mL	2019	06/23/15 11:09	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.00 g	20 mL	2074	06/25/15 10:19	NMI	TAL SPK
Total/NA	Prep	3050B			1.0579 g	50 mL	192902	06/23/15 06:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.0579 g	50 mL	193070	06/23/15 18:18	HJM	TAL SEA
Total/NA	Prep	7471B			1.77 g	50 mL	2000	06/22/15 13:20	JSP	TAL SPK
Total/NA	Analysis	7471B		1	1.77 g	50 mL	2048	06/23/15 15:55	JSP	TAL SPK
Total/NA	Analysis	9012A		1	5.10 g	100 mL	193127	06/23/15 16:38	JLS	TAL SEA
Total/NA	Prep	9012A			5.10 g	100 mL	193014	06/23/15 16:38	JLS	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1109-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1109-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 ☒
9405 SW Nimbus Ave , Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 ☐
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 ☐

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers, Inc.

REPORT TO: jhaney@geoengineers.com

ADDRESS: 523 E. Second Ave
Spokane, WA 99202

PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO: Dept. of Ecology

P.O. NUMBER:

PROJECT NAME: Marshall Landfill

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: ☒ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: ☒ STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	MW-13: (3-4)	6-16-2015 0935	S	2		
2	MW-13: (15-16)	0950				
3	MW-13: (35-36)	1115				
4	MW-13: (40.5-41.5)	1140				
5	MW-13: (47-48)	1210				
6	MW-13: (60-61)	1300				
7	MW-15: (9-10)	6-17-2015 1000				
8	MW-15: (19-20)	1005				
9	MW-15: (29-30)	1020				
10	MW-15: (39-40)	1030				

RELEASED BY: [signature] DATE: 6/18/15
PRINT NAME: Josh Lee FIRM: GEI TIME: 1540

RECEIVED BY: [signature] DATE: 6/18/15
PRINT NAME: Chris Williams FIRM: TA-Spk TIME: 1540

RELEASED BY DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME

ADDITIONAL REMARKS: Hold samples not marked for testing

7.1 °C
12.1 °C

TEMP:

PAGE 1 OF 3

590-1109-01 Chain of Custody

TAL-1000 (0714)

7/13/2015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Geo Engineers, Inc.
REPORT TO: jhuey@geoengineers.com
ADDRESS: 523 E Second Ave Spokane WA 99202
PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Marshall Landfill
PROJECT NUMBER: 0504-104-00
SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: [X] STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-15: (49-50)	6-17-2015 1050			S	2		
2 MW-15: (59-60)	1120						
3 MW-15: (69-70)	1130						
4 MW-15: (79-80)	1150						
5 MW-15: (89-90)	1210						
6 MW-15: (99-100)	1240						
7 MW-15: (109-110)	1330						
8 MW-15: (119-120)	1400						
9 MW-15: (129-130)	1430						
10 MW-15: (139-140)	1550						

RELEASED BY:		DATE: 6/14/15	RECEIVED BY:		DATE: 6/18/15
PRINT NAME: Josh Lee	FIRM: GEI	TIME: 1510	PRINT NAME: Chris Williams	FIRM: TA-Spk	TIME: 1540
RELEASED BY:		DATE:	RECEIVED BY:		DATE:
PRINT NAME:	FIRM:	TIME:	PRINT NAME:	FIRM:	TIME:

ADDITIONAL REMARKS: Hold samples not marked for testing.

TEMP:

PAGE 2 OF 3

TAL-1000 (0714)

590-1109-02 Chain of Custody

7/13/2015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 [X]
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [ ]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Geo Engineers, Inc.

REPORT TO: jhoney@geoengineers.com

ADDRESS: 523 E. Second Ave Spokane, WA 99202

PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Marshall Landfill

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: [X] STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: HCID WITPH-Meta DX	8260 VOCs	EDB	8270 SVOCs	8081A Pesticides Chlordane Only	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-15:(149-150)	6-17-2015 1630							S	2		
2 MW-15:(164-165)	6-18-2015 0940		X	X	X	X	X	S	5		
3 MW-15:(170-171)	" 0950							S	2		
4 MW-15:(179-180)	" 1050							S	2		
5											
6											
7											
8											
9											
10											

590-1109-03 Chain of Custody

RELEASED BY:		DATE: 6/15/15	RECEIVED BY:		DATE: 6/18/15
PRINT NAME: Josh Lee	FIRM: GEI	TIME: 1540	PRINT NAME: Chris Williams	FIRM: TA-SPK	TIME: 1540
RELEASED BY.		DATE:	RECEIVED BY:		DATE
PRINT NAME	FIRM:	TIME:	PRINT NAME:	FIRM:	TIME.

ADDITIONAL REMARKS: Hold Samples not marked for testing. *Metals = Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Fe, Mn, Ni, Se, Ag, Ti, V, Zn, CN, Hg

TEMP:

PAGE 3 OF 3

TAL-1000 (0714)

7/13/2015

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1109-1

Login Number: 1109
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1109-1

Login Number: 1109
List Number: 2
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 06/22/15 09:52 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	TALs labels are affixed to pre-tared vials.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1230-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
7/27/2015 12:03:25 PM

Randee Arrington, Project Manager II
(509)924-9200
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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Job ID: 590-1230-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 6/29/2015 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.5º C.

GC/MS VOA Method 8260B:
The following samples was analyzed outside of analytical holding time. LFB-1: (30-31) (590-1230-22) and LFB-2: (52-53) (590-1230-24).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The method blank for prep batch 580-193860 contained Butyl benzyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-193860 recovered outside control limits for the following analyte: Pentachlorophenol. The individual LCS/LCSD recoveries were in control.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA Method 8151A:
Continuing calibration verification (CCVs) associated with 8151A batch 280-284920 recovered outside acceptance criteria, low biased, for 2,4-DB on the rear column. The front column was in-control. A reporting limit (RL) standard was analyzed below the reporting limit for 2,4-DB, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Continuing calibration verifications (CCVs) associated with 8151A batch 280-284920 recovered above the upper control limit for multiple targets on the back column. All samples were non-detects for the affected analytes; therefore, they did not need confirmation. The front column was in-control. All affected QC were reported from the in-control column. The confirmation column CCV did not adversely affect data quality.

GC Semi VOA Method 8081A:
In analytical batch 580-195465, the following samples from preparation batch 580-194135 and 580-194135 required a Florisil clean-up, via EPA Method 3620C, to reduce matrix interferences: LFB-1: (30-31) (590-1230-22), LFB-2: (52-53) (590-1230-24), (LCS 580-194135/2-A), (LCS 580-194135/24-A), (LCSD 580-194135/25-A), (LCSD 580-194135/3-A), (MB 580-194135/1-A), (580-51082-B-9-E), (580-51082-B-9-F MS) and (580-51082-B-9-G MSD). The Florisil lot used was ID: 1298295.

The following analyte recovered outside control limits for the LCSD associated with preparation batch 580-194135 and analytical batch 580-195465: Aldrin This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals Method 6020A:
The continuing calibration blank (CCB) for analytical batch 194353 contained chromium above the reporting limit (RL). All reported samples associated with this CCB contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: The following sample foamed when concentrated HCl was added: LFB-2: (52-53) (590-1230-24).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1230-22	LFB-1: (30-31)	Solid	06/26/15 13:20	06/29/15 17:20
590-1230-24	LFB-2: (52-53)	Solid	06/26/15 09:20	06/29/15 17:20

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Client Sample ID: LFB-1: (30-31)
Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid
Percent Solids: 94.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	0.81	0.20	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,1,1-Trichloroethane	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,1,2,2-Tetrachloroethane	ND	H	3.3	0.73	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,1,2-Trichloroethane	ND	H	1.6	0.20	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,1-Dichloroethane	ND	H	0.81	0.15	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,1-Dichloroethene	ND	H	4.1	0.41	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,1-Dichloropropene	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2,3-Trichlorobenzene	ND	H	2.4	0.49	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2,3-Trichloropropane	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2,4-Trichlorobenzene	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2,4-Trimethylbenzene	ND	H	1.6	0.13	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2-Dibromo-3-Chloropropane	ND	H	8.1	1.3	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2-Dichlorobenzene	ND	H	1.6	0.25	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2-Dichloroethane	ND	H	0.81	0.12	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,2-Dichloropropane	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,3,5-Trimethylbenzene	ND	H	4.1	0.14	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,3-Dichlorobenzene	ND	H	1.6	0.21	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,3-Dichloropropane	ND	H	1.6	0.19	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
1,4-Dichlorobenzene	ND	H	0.81	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
2,2-Dichloropropane	ND	H	4.1	0.73	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
2-Chlorotoluene	ND	H	1.6	0.14	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
4-Chlorotoluene	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
4-Isopropyltoluene	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Benzene	**0.40**	**J H**	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Bromobenzene	ND	H	8.1	1.9	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Bromoform	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Bromomethane	ND	H	0.81	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Carbon tetrachloride	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Chlorobenzene	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Chlorobromomethane	ND	H	1.6	0.20	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Chlorodibromomethane	ND	H	1.6	0.22	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Chloroethane	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Chloroform	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Chloromethane	ND	H	0.81	0.11	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
cis-1,2-Dichloroethene	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
cis-1,3-Dichloropropene	ND	H	0.81	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Dibromomethane	ND	H	0.81	0.14	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Dichlorobromomethane	ND	H	0.81	0.15	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Dichlorodifluoromethane	ND	H	1.6	0.40	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Ethylbenzene	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Ethylene Dibromide	ND	H	0.81	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Hexachlorobutadiene	ND	H	2.4	0.49	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Isopropylbenzene	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Methyl tert-butyl ether	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Methylene Chloride	**2.4**	**J H**	12	0.20	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
m-Xylene & p-Xylene	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Naphthalene	ND	H	8.1	1.5	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
n-Butylbenzene	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
N-Propylbenzene	ND	H	1.6	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Client Sample ID: LFB-1: (30-31)
Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid
Percent Solids: 94.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	H	1.6	0.21	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
sec-Butylbenzene	ND	H	1.6	0.20	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Styrene	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
tert-Butylbenzene	ND	H	1.6	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Tetrachloroethene	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Toluene	**0.30**	**J H**	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
trans-1,2-Dichloroethene	ND	H	1.6	0.33	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
trans-1,3-Dichloropropene	ND	H	8.1	1.1	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Trichloroethene	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Trichlorofluoromethane	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1
Vinyl chloride	ND	H	1.6	0.24	ug/Kg	☼	07/23/15 19:04	07/23/15 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*71 - 136*	*07/23/15 19:04*	*07/23/15 20:28*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*	*07/23/15 19:04*	*07/23/15 20:28*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 132*	*07/23/15 19:04*	*07/23/15 20:28*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*07/23/15 19:04*	*07/23/15 20:28*	*1*
Trifluorotoluene (Surr)	*96*		*65 - 140*	*07/23/15 19:04*	*07/23/15 20:28*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,4,5-Trichlorophenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,4-Dichlorophenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,4-Dimethylphenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,4-Dinitrophenol	ND		990	200	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,4-Dinitrotoluene	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2,6-Dinitrotoluene	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2-Chlorophenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2-Methylphenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2-Nitroaniline	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
2-Nitrophenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
3 & 4 Methylphenol	ND		200	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
3-Nitroaniline	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4,6-Dinitro-2-methylphenol	ND		990	99	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4-Bromophenyl phenyl ether	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4-Chloro-3-methylphenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4-Chloroaniline	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4-Chlorophenyl phenyl ether	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4-Nitroaniline	ND		99	20	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
4-Nitrophenol	ND		990	250	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Acenaphthene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1

Client Sample ID: LFB-1: (30-31)
Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid
Percent Solids: 94.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Anthracene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzoic acid	ND		2500	750	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Benzyl alcohol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Bis(2-chloroethoxy)methane	ND		99	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Bis(2-chloroethyl)ether	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Butyl benzyl phthalate	**55**	**J B**	200	50	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Carbazole	ND		99	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Chrysene	ND		25	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Dibenzofuran	ND		99	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Diethyl phthalate	ND		200	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Dimethyl phthalate	ND		99	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Di-n-butyl phthalate	ND		500	50	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Fluoranthene	**9.0**	**J**	20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Fluorene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Hexachlorobenzene	ND		50	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Hexachlorobutadiene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Hexachlorocyclopentadiene	ND		99	9.9	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Hexachloroethane	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Isophorone	ND		99	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Naphthalene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Nitrobenzene	ND		99	34	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
N-Nitrosodi-n-propylamine	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Pentachlorophenol	ND	*	200	20	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Phenanthrene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Phenol	ND		99	15	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1
Pyrene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*102*		*28 - 143*	*07/02/15 09:33*	*07/09/15 20:37*	*1*
2-Fluorobiphenyl	*90*		*42 - 140*	*07/02/15 09:33*	*07/09/15 20:37*	*1*
2-Fluorophenol	*91*		*36 - 145*	*07/02/15 09:33*	*07/09/15 20:37*	*1*
Nitrobenzene-d5	*102*		*38 - 141*	*07/02/15 09:33*	*07/09/15 20:37*	*1*
Phenol-d5	*99*		*38 - 149*	*07/02/15 09:33*	*07/09/15 20:37*	*1*
Terphenyl-d14	*120*		*42 - 151*	*07/02/15 09:33*	*07/09/15 20:37*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1

Client Sample ID: LFB-1: (30-31)
Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid
Percent Solids: 94.8

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.1	0.15	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
alpha-BHC	ND		1.0	0.29	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
beta-BHC	ND		1.0	0.34	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Endosulfan I	ND		1.0	0.11	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Endrin	ND		2.1	0.17	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Endrin aldehyde	ND		2.1	0.21	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Endrin ketone	ND		2.1	0.27	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Heptachlor	ND		2.1	0.49	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Methoxychlor	ND		10	0.27	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1
Toxaphene	ND		100	24	ug/Kg	☼	07/07/15 10:00	07/21/15 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*60 - 128*	*07/07/15 10:00*	*07/21/15 14:46*	*1*
Tetrachloro-m-xylene	*57*		*35 - 129*	*07/07/15 10:00*	*07/21/15 14:46*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1
PCB-1221	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1
PCB-1232	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1
PCB-1242	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1
PCB-1248	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1
PCB-1254	**2.4**	**J**	10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1
PCB-1260	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*51.9 - 151*	*07/06/15 09:13*	*07/06/15 18:23*	*1*
DCB Decachlorobiphenyl (Surr)	*91*		*73.5 - 164*	*07/06/15 09:13*	*07/06/15 18:23*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.4	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
2,4-D	ND		82	14	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
2,4-DB	ND		82	7.6	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
Dalapon	ND		41	1.4	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
Dicamba	ND		41	1.4	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
Dichlorprop	ND		82	3.3	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
MCPA	ND		8200	2000	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
MCPP	ND		8200	2000	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg	☼	07/01/15 21:45	07/07/15 09:32	1

Client Sample ID: LFB-1: (30-31)

Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid
Percent Solids: 94.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	*62*		*31 - 105*	*07/01/15 21:45*	*07/07/15 09:32*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		41	41	mg/Kg	☼	07/02/15 14:53	07/03/15 09:25	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	07/02/15 14:53	07/03/15 09:25	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	07/02/15 14:53	07/03/15 09:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*90*		*50 - 150*	*07/02/15 14:53*	*07/03/15 09:25*	*1*
n-Triacontane-d62	*77*		*50 - 150*	*07/02/15 14:53*	*07/03/15 09:25*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.15**	**J**	0.19	0.039	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Arsenic	**1.9**		0.47	0.17	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Barium	**82**		0.47	0.073	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Beryllium	**0.28**		0.19	0.033	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Cadmium	**0.20**		0.19	0.018	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Chromium	**9.2**	**^**	0.47	0.059	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Copper	**18**		0.38	0.092	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Iron	**48000**		38	10	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Lead	**2.0**		0.47	0.045	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Manganese	**720**		0.94	0.16	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Nickel	**14**		0.47	0.076	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Selenium	**1.4**		0.94	0.19	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Silver	**0.015**	**J**	0.19	0.011	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Thallium	ND		0.38	0.12	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Zinc	**62**		4.7	1.1	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10
Vanadium	**55**		1.9	0.44	mg/Kg	☼	07/08/15 12:36	07/08/15 19:19	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**3.7**	**J**	46	1.9	ug/Kg	☼	07/02/15 09:44	07/02/15 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	2.1	2.1	mg/Kg	☼	07/01/15 18:00	07/06/15 12:06	1

Client Sample ID: LFB-2: (52-53)

Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid
Percent Solids: 95.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	0.87	0.21	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,1,1-Trichloroethane	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,1,2,2-Tetrachloroethane	ND	H	3.5	0.78	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,1,2-Trichloroethane	ND	H	1.7	0.22	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,1-Dichloroethane	ND	H	0.87	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1

Client Sample ID: LFB-2: (52-53)
Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid
Percent Solids: 95.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND	H	4.3	0.43	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,1-Dichloropropene	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2,3-Trichlorobenzene	ND	H	2.6	0.52	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2,3-Trichloropropane	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2,4-Trichlorobenzene	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2,4-Trimethylbenzene	ND	H	1.7	0.14	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2-Dibromo-3-Chloropropane	ND	H	8.7	1.4	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2-Dichlorobenzene	ND	H	1.7	0.27	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2-Dichloroethane	ND	H	0.87	0.13	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,2-Dichloropropane	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,3,5-Trimethylbenzene	ND	H	4.3	0.15	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,3-Dichlorobenzene	ND	H	1.7	0.23	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,3-Dichloropropane	ND	H	1.7	0.20	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
1,4-Dichlorobenzene	ND	H	0.87	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
2,2-Dichloropropane	ND	H	4.3	0.78	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
2-Chlorotoluene	ND	H	1.7	0.15	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
4-Chlorotoluene	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
4-Isopropyltoluene	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Benzene	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Bromobenzene	ND	H	8.7	2.0	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Bromoform	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Bromomethane	ND	H	0.87	0.18	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Carbon tetrachloride	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Chlorobenzene	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Chlorobromomethane	ND	H	1.7	0.22	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Chlorodibromomethane	ND	H	1.7	0.23	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Chloroethane	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Chloroform	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Chloromethane	ND	H	0.87	0.12	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
cis-1,2-Dichloroethene	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
cis-1,3-Dichloropropene	ND	H	0.87	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Dibromomethane	ND	H	0.87	0.15	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Dichlorobromomethane	ND	H	0.87	0.16	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Dichlorodifluoromethane	ND	H	1.7	0.42	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Ethylbenzene	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Ethylene Dibromide	ND	H	0.87	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Hexachlorobutadiene	ND	H	2.6	0.52	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Isopropylbenzene	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Methyl tert-butyl ether	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Methylene Chloride	**2.5**	**J H**	13	0.21	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
m-Xylene & p-Xylene	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Naphthalene	ND	H	8.7	1.6	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
n-Butylbenzene	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
N-Propylbenzene	ND	H	1.7	0.28	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
o-Xylene	ND	H	1.7	0.23	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
sec-Butylbenzene	ND	H	1.7	0.22	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Styrene	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
tert-Butylbenzene	ND	H	1.7	0.17	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Tetrachloroethene	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1

Client Sample ID: LFB-2: (52-53)
Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid
Percent Solids: 95.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
trans-1,2-Dichloroethene	ND	H	1.7	0.35	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
trans-1,3-Dichloropropene	ND	H	8.7	1.2	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Trichloroethene	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Trichlorofluoromethane	**0.42**	**J H**	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1
Vinyl chloride	ND	H	1.7	0.26	ug/Kg	☼	07/23/15 19:04	07/23/15 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*71 - 136*	*07/23/15 19:04*	*07/23/15 20:55*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 120*	*07/23/15 19:04*	*07/23/15 20:55*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 132*	*07/23/15 19:04*	*07/23/15 20:55*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*07/23/15 19:04*	*07/23/15 20:55*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*07/23/15 19:04*	*07/23/15 20:55*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2-Methylphenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
3 & 4 Methylphenol	**16**	**J**	200	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4-Chloroaniline	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4-Nitroaniline	ND		100	20	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
4-Nitrophenol	ND		1000	250	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Acenaphthene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Acenaphthylene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Anthracene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Benzo[a]anthracene	**7.8**	**J**	20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Benzo[a]pyrene	**14**	**J**	30	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Benzo[b]fluoranthene	**15**	**J**	20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1

Client Sample ID: LFB-2: (52-53)
Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid
Percent Solids: 95.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Benzo[k]fluoranthene	**10**	**J**	25	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Benzoic acid	ND		2500	760	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Benzyl alcohol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Bis(2-ethylhexyl) phthalate	**57**	**J**	600	50	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Butyl benzyl phthalate	**58**	**J B**	200	50	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Carbazole	ND		100	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Chrysene	ND		25	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Dibenzofuran	ND		100	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Diethyl phthalate	ND		200	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Dimethyl phthalate	ND		100	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Di-n-butyl phthalate	ND		500	50	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Fluoranthene	**20**		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Fluorene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Hexachlorobenzene	ND		50	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Hexachlorobutadiene	ND		50	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Hexachloroethane	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Isophorone	ND		100	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Naphthalene	ND		20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Nitrobenzene	ND		100	34	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Pentachlorophenol	ND	*	200	20	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Phenanthrene	**13**	**J**	20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Phenol	ND		100	15	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1
Pyrene	**16**	**J**	20	5.0	ug/Kg	☼	07/02/15 09:33	07/09/15 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*95*		*28 - 143*	*07/02/15 09:33*	*07/09/15 21:02*	*1*
2-Fluorobiphenyl	*84*		*42 - 140*	*07/02/15 09:33*	*07/09/15 21:02*	*1*
2-Fluorophenol	*86*		*36 - 145*	*07/02/15 09:33*	*07/09/15 21:02*	*1*
Nitrobenzene-d5	*96*		*38 - 141*	*07/02/15 09:33*	*07/09/15 21:02*	*1*
Phenol-d5	*96*		*38 - 149*	*07/02/15 09:33*	*07/09/15 21:02*	*1*
Terphenyl-d14	*109*		*42 - 151*	*07/02/15 09:33*	*07/09/15 21:02*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
4,4'-DDE	ND		2.0	0.14	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
4,4'-DDT	ND		2.0	0.15	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Aldrin	ND		1.0	0.22	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
alpha-BHC	ND		1.0	0.28	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1

Client Sample ID: LFB-2: (52-53)
Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid
Percent Solids: 95.5

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	ND		1.0	0.32	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Dieldrin	ND		2.0	0.12	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Endosulfan II	ND		2.0	0.17	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Endrin	ND		2.0	0.16	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Endrin ketone	ND		2.0	0.26	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
gamma-Chlordane	ND		1.0	0.13	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Heptachlor	ND		2.0	0.46	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Methoxychlor	ND		10	0.26	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1
Toxaphene	ND		100	23	ug/Kg	☼	07/07/15 10:00	07/21/15 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*52*	*X*	*60 - 128*	*07/07/15 10:00*	*07/21/15 15:03*	*1*
Tetrachloro-m-xylene	*51*		*35 - 129*	*07/07/15 10:00*	*07/21/15 15:03*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1
PCB-1221	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1
PCB-1232	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1
PCB-1242	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1
PCB-1248	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1
PCB-1254	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1
PCB-1260	ND		10	2.3	ug/Kg	☼	07/06/15 09:13	07/06/15 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*51.9 - 151*	*07/06/15 09:13*	*07/06/15 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*86*		*73.5 - 164*	*07/06/15 09:13*	*07/06/15 18:44*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
2,4-D	ND		81	14	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
2,4-DB	ND		81	7.5	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
Dalapon	ND		40	1.4	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
Dicamba	ND		40	1.4	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
Dichlorprop	ND		81	3.2	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
MCPA	ND		8100	2000	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
MCPP	ND		8100	2000	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg	☼	07/01/15 21:45	07/07/15 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*57*		*31 - 105*	*07/01/15 21:45*	*07/07/15 11:54*	*1*

Client Sample ID: LFB-2: (52-53)

Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24

Matrix: Solid
Percent Solids: 95.5

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg	☼	07/02/15 14:53	07/03/15 09:42	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	07/02/15 14:53	07/03/15 09:42	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	07/02/15 14:53	07/03/15 09:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*50 - 150*	*07/02/15 14:53*	*07/03/15 09:42*	*1*
n-Triacontane-d62	*82*		*50 - 150*	*07/02/15 14:53*	*07/03/15 09:42*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.55**		0.15	0.032	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Arsenic	**10**		0.38	0.14	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Barium	**89**		0.38	0.059	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Beryllium	**0.38**		0.15	0.027	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Cadmium	**0.14**	**J**	0.15	0.014	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Chromium	**8.8**	**^**	0.38	0.048	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Copper	**11**		0.30	0.075	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Iron	**20000**		30	8.2	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Lead	**9.0**		0.38	0.037	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Manganese	**340**		0.76	0.13	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Nickel	**11**		0.38	0.062	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Selenium	**0.69**	**J**	0.76	0.15	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Silver	**0.061**	**J**	0.15	0.0091	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Thallium	**0.11**	**J**	0.30	0.099	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Zinc	**73**		3.8	0.85	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10
Vanadium	**26**		1.5	0.36	mg/Kg	☼	07/08/15 12:36	07/08/15 19:26	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**13**	**J**	26	1.0	ug/Kg	☼	07/02/15 09:44	07/02/15 16:11	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**3.4**		1.9	1.9	mg/Kg	☼	07/01/15 18:00	07/06/15 12:06	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-195845/1-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Benzene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromobenzene	ND		10	2.3	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromoform	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromomethane	ND		1.0	0.21	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloroethane	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloroform	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloromethane	ND		1.0	0.14	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dibromomethane	ND		1.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Methylene Chloride	ND		15	0.24	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Naphthalene	ND		10	1.8	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-195845/1-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
o-Xylene	ND		2.0	0.26	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Styrene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Toluene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Trichloroethene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*71 - 136*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 132*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Trifluorotoluene (Surr)	*96*		*65 - 140*	*07/23/15 17:52*	*07/23/15 17:11*	*1*

Lab Sample ID: LCS 580-195845/2-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	40.4		ug/Kg		101	72 - 123
1,1,1-Trichloroethane	40.0	42.5		ug/Kg		106	63 - 135
1,1,2,2-Tetrachloroethane	40.0	40.7		ug/Kg		102	73 - 125
1,1,2-Trichloroethane	40.0	44.7		ug/Kg		112	77 - 124
1,1-Dichloroethane	40.0	42.4		ug/Kg		106	70 - 128
1,1-Dichloroethene	40.0	43.6		ug/Kg		109	70 - 133
1,1-Dichloropropene	40.0	41.9		ug/Kg		105	77 - 125
1,2,3-Trichlorobenzene	40.0	39.3		ug/Kg		98	61 - 130
1,2,3-Trichloropropane	40.0	42.1		ug/Kg		105	77 - 123
1,2,4-Trichlorobenzene	40.0	40.3		ug/Kg		101	61 - 130
1,2,4-Trimethylbenzene	40.0	44.5		ug/Kg		111	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	44.8		ug/Kg		112	53 - 132
1,2-Dichlorobenzene	40.0	40.4		ug/Kg		101	79 - 117
1,2-Dichloroethane	40.0	45.4		ug/Kg		113	71 - 128
1,2-Dichloropropane	40.0	43.7		ug/Kg		109	76 - 161
1,3,5-Trimethylbenzene	40.0	43.1		ug/Kg		108	80 - 125
1,3-Dichlorobenzene	40.0	42.6		ug/Kg		107	79 - 119
1,3-Dichloropropane	40.0	44.4		ug/Kg		111	77 - 123
1,4-Dichlorobenzene	40.0	40.1		ug/Kg		100	79 - 117
2,2-Dichloropropane	40.0	44.0		ug/Kg		110	56 - 144
2-Chlorotoluene	40.0	41.1		ug/Kg		103	79 - 122
4-Chlorotoluene	40.0	41.4		ug/Kg		104	80 - 122
4-Isopropyltoluene	40.0	42.4		ug/Kg		106	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-195845/2-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	41.8		ug/Kg		105	70 - 128
Bromobenzene	40.0	42.8		ug/Kg		107	80 - 120
Bromoform	40.0	41.0		ug/Kg		103	50 - 124
Bromomethane	49.9	39.5		ug/Kg		79	57 - 148
Carbon tetrachloride	40.0	42.2		ug/Kg		106	59 - 145
Chlorobenzene	40.0	42.6		ug/Kg		107	75 - 120
Chlorobromomethane	40.0	43.0		ug/Kg		107	78 - 123
Chlorodibromomethane	40.0	43.5		ug/Kg		109	42 - 129
Chloroethane	50.0	39.7		ug/Kg		79	48 - 167
Chloroform	40.0	42.7		ug/Kg		107	78 - 125
Chloromethane	50.1	42.4		ug/Kg		85	55 - 136
cis-1,2-Dichloroethene	40.0	41.3		ug/Kg		103	70 - 130
cis-1,3-Dichloropropene	40.0	43.8		ug/Kg		110	69 - 129
Dibromomethane	40.0	43.3		ug/Kg		108	78 - 126
Dichlorobromomethane	40.0	43.1		ug/Kg		108	58 - 133
Dichlorodifluoromethane	49.9	42.6		ug/Kg		85	38 - 150
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126
Ethylene Dibromide	40.0	43.7		ug/Kg		109	69 - 126
Hexachlorobutadiene	40.0	41.9		ug/Kg		105	68 - 134
Isopropylbenzene	40.0	39.6		ug/Kg		99	79 - 127
Methyl tert-butyl ether	40.0	46.0		ug/Kg		115	65 - 125
Methylene Chloride	40.0	44.3		ug/Kg		111	57 - 146
m-Xylene & p-Xylene	40.0	43.2		ug/Kg		108	78 - 126
Naphthalene	40.0	47.0		ug/Kg		117	14 - 170
n-Butylbenzene	40.0	41.8		ug/Kg		104	78 - 128
N-Propylbenzene	40.0	42.8		ug/Kg		107	81 - 127
o-Xylene	40.0	43.1		ug/Kg		108	77 - 127
sec-Butylbenzene	40.0	46.1		ug/Kg		115	78 - 128
Styrene	40.0	43.2		ug/Kg		108	79 - 127
tert-Butylbenzene	40.0	43.3		ug/Kg		108	71 - 136
Tetrachloroethene	40.0	39.3		ug/Kg		98	56 - 155
Toluene	40.0	43.1		ug/Kg		108	75 - 126
trans-1,2-Dichloroethene	40.0	39.4		ug/Kg		99	76 - 131
trans-1,3-Dichloropropene	40.0	45.7		ug/Kg		114	72 - 129
Trichloroethene	40.0	40.5		ug/Kg		101	83 - 124
Trichlorofluoromethane	50.1	40.1		ug/Kg		80	47 - 165
Vinyl chloride	50.0	35.8		ug/Kg		72	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*71 - 136*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 132*
Toluene-d8 (Surr)	*97*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195845/3-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	41.4		ug/Kg		103	72 - 123	2	20
1,1,1-Trichloroethane	40.0	43.5		ug/Kg		109	63 - 135	2	20
1,1,2,2-Tetrachloroethane	40.0	41.1		ug/Kg		103	73 - 125	1	22
1,1,2-Trichloroethane	40.0	44.0		ug/Kg		110	77 - 124	2	18
1,1-Dichloroethane	40.0	43.3		ug/Kg		108	70 - 128	2	21
1,1-Dichloroethene	40.0	44.6		ug/Kg		111	70 - 133	2	23
1,1-Dichloropropene	40.0	42.3		ug/Kg		106	77 - 125	1	16
1,2,3-Trichlorobenzene	40.0	37.6		ug/Kg		94	61 - 130	5	23
1,2,3-Trichloropropane	40.0	41.7		ug/Kg		104	77 - 123	1	23
1,2,4-Trichlorobenzene	40.0	38.7		ug/Kg		97	61 - 130	4	22
1,2,4-Trimethylbenzene	40.0	45.7		ug/Kg		114	79 - 124	3	18
1,2-Dibromo-3-Chloropropane	40.0	43.3		ug/Kg		108	53 - 132	3	27
1,2-Dichlorobenzene	40.0	40.2		ug/Kg		101	79 - 117	0	17
1,2-Dichloroethane	40.0	44.7		ug/Kg		112	71 - 128	1	18
1,2-Dichloropropane	40.0	43.0		ug/Kg		107	76 - 161	2	15
1,3,5-Trimethylbenzene	40.0	44.7		ug/Kg		112	80 - 125	4	18
1,3-Dichlorobenzene	40.0	42.4		ug/Kg		106	79 - 119	1	17
1,3-Dichloropropane	40.0	43.7		ug/Kg		109	77 - 123	1	19
1,4-Dichlorobenzene	40.0	39.3		ug/Kg		98	79 - 117	2	18
2,2-Dichloropropane	40.0	44.8		ug/Kg		112	56 - 144	2	21
2-Chlorotoluene	40.0	41.6		ug/Kg		104	79 - 122	1	18
4-Chlorotoluene	40.0	42.4		ug/Kg		106	80 - 122	2	18
4-Isopropyltoluene	40.0	43.3		ug/Kg		108	78 - 126	2	18
Benzene	40.0	42.1		ug/Kg		105	70 - 128	1	19
Bromobenzene	40.0	43.0		ug/Kg		107	80 - 120	0	19
Bromoform	40.0	39.9		ug/Kg		100	50 - 124	3	25
Bromomethane	49.9	39.1		ug/Kg		78	57 - 148	1	29
Carbon tetrachloride	40.0	43.3		ug/Kg		108	59 - 145	3	19
Chlorobenzene	40.0	42.7		ug/Kg		107	75 - 120	0	21
Chlorobromomethane	40.0	42.9		ug/Kg		107	78 - 123	0	19
Chlorodibromomethane	40.0	43.1		ug/Kg		108	42 - 129	1	23
Chloroethane	50.0	39.0		ug/Kg		78	48 - 167	2	53
Chloroform	40.0	43.6		ug/Kg		109	78 - 125	2	17
Chloromethane	50.1	41.0		ug/Kg		82	55 - 136	3	26
cis-1,2-Dichloroethene	40.0	41.8		ug/Kg		104	70 - 130	1	19
cis-1,3-Dichloropropene	40.0	43.9		ug/Kg		110	69 - 129	0	19
Dibromomethane	40.0	43.2		ug/Kg		108	78 - 126	0	18
Dichlorobromomethane	40.0	44.1		ug/Kg		110	58 - 133	2	19
Dichlorodifluoromethane	49.9	41.7		ug/Kg		83	38 - 150	2	26
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126	0	23
Ethylene Dibromide	40.0	43.2		ug/Kg		108	69 - 126	1	21
Hexachlorobutadiene	40.0	41.2		ug/Kg		103	68 - 134	1	21
Isopropylbenzene	40.0	40.5		ug/Kg		101	79 - 127	2	20
Methyl tert-butyl ether	40.0	46.1		ug/Kg		115	65 - 125	0	30
Methylene Chloride	40.0	42.6		ug/Kg		106	57 - 146	4	21
m-Xylene & p-Xylene	40.0	43.3		ug/Kg		108	78 - 126	0	23
Naphthalene	40.0	44.3		ug/Kg		111	14 - 170	6	50
n-Butylbenzene	40.0	41.7		ug/Kg		104	78 - 128	0	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195845/3-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195845

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	44.5		ug/Kg		111	81 - 127	4	20
o-Xylene			40.0	43.1		ug/Kg		108	77 - 127	0	22
sec-Butylbenzene			40.0	48.2		ug/Kg		120	78 - 128	5	17
Styrene			40.0	42.3		ug/Kg		106	79 - 127	2	21
tert-Butylbenzene			40.0	44.9		ug/Kg		112	71 - 136	4	27
Tetrachloroethene			40.0	40.2		ug/Kg		101	56 - 155	2	27
Toluene			40.0	43.7		ug/Kg		109	75 - 126	1	19
trans-1,2-Dichloroethene			40.0	41.0		ug/Kg		102	76 - 131	4	18
trans-1,3-Dichloropropene			40.0	45.1		ug/Kg		113	72 - 129	1	20
Trichloroethene			40.0	40.3		ug/Kg		101	83 - 124	1	17
Trichlorofluoromethane			50.1	39.9		ug/Kg		80	47 - 165	0	54
Vinyl chloride			50.0	35.2		ug/Kg		70	67 - 131	2	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 136*
4-Bromofluorobenzene (Surr)	*96*		*70 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 132*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-193860/1-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2-Chlorophenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2-Methylphenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2-Nitroaniline	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
2-Nitrophenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
3-Nitroaniline	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-193860/1-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
4-Chloroaniline	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
4-Nitroaniline	ND		100	20	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
4-Nitrophenol	ND		1000	250	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Acenaphthene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Acenaphthylene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Anthracene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzoic acid	ND		2500	750	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Benzyl alcohol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Butyl benzyl phthalate	53.5	J	200	50	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Carbazole	ND		100	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Chrysene	ND		25	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Dibenzofuran	ND		100	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Diethyl phthalate	ND		200	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Fluoranthene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Fluorene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Hexachlorobutadiene	ND		50	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Hexachloroethane	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Isophorone	ND		100	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Naphthalene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Nitrobenzene	ND		100	34	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Pentachlorophenol	ND		200	20	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Phenanthrene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Phenol	ND		100	15	ug/Kg		07/02/15 09:33	07/09/15 10:39	1
Pyrene	ND		20	5.0	ug/Kg		07/02/15 09:33	07/09/15 10:39	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-193860/1-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193860

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	92		28 - 143	07/02/15 09:33	07/09/15 10:39	1
2-Fluorobiphenyl	93		42 - 140	07/02/15 09:33	07/09/15 10:39	1
2-Fluorophenol	95		36 - 145	07/02/15 09:33	07/09/15 10:39	1
Nitrobenzene-d5	101		38 - 141	07/02/15 09:33	07/09/15 10:39	1
Phenol-d5	105		38 - 149	07/02/15 09:33	07/09/15 10:39	1
Terphenyl-d14	110		42 - 151	07/02/15 09:33	07/09/15 10:39	1

Lab Sample ID: LCS 580-193860/2-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	929		ug/Kg		93	66 - 115
1,2-Dichlorobenzene	1000	834		ug/Kg		83	64 - 112
1,3-Dichlorobenzene	1000	794		ug/Kg		79	64 - 111
1,4-Dichlorobenzene	1000	825		ug/Kg		83	65 - 110
1-Methylnaphthalene	1000	940		ug/Kg		94	62 - 118
2,4,5-Trichlorophenol	1000	913		ug/Kg		91	57 - 133
2,4,6-Trichlorophenol	1000	910		ug/Kg		91	62 - 133
2,4-Dichlorophenol	1000	1040		ug/Kg		104	68 - 125
2,4-Dimethylphenol	1000	796		ug/Kg		80	54 - 139
2,4-Dinitrophenol	2000	1790		ug/Kg		90	20 - 141
2,4-Dinitrotoluene	1000	885		ug/Kg		88	68 - 121
2,6-Dinitrotoluene	1000	928		ug/Kg		93	66 - 123
2-Chloronaphthalene	1000	902		ug/Kg		90	68 - 112
2-Chlorophenol	1000	907		ug/Kg		91	68 - 117
2-Methylnaphthalene	1000	955		ug/Kg		96	64 - 119
2-Methylphenol	1000	912		ug/Kg		91	71 - 116
2-Nitroaniline	1000	979		ug/Kg		98	64 - 112
2-Nitrophenol	1000	955		ug/Kg		95	67 - 127
3 & 4 Methylphenol	1000	955		ug/Kg		96	70 - 116
3,3'-Dichlorobenzidine	2000	1080		ug/Kg		54	20 - 103
3-Nitroaniline	1000	732		ug/Kg		73	27 - 103
4,6-Dinitro-2-methylphenol	2000	1900		ug/Kg		95	48 - 130
4-Bromophenyl phenyl ether	1000	963		ug/Kg		96	68 - 122
4-Chloro-3-methylphenol	1000	929		ug/Kg		93	69 - 121
4-Chloroaniline	1000	547		ug/Kg		55	20 - 103
4-Chlorophenyl phenyl ether	1000	935		ug/Kg		94	75 - 108
4-Nitroaniline	1000	792		ug/Kg		79	58 - 108
4-Nitrophenol	2000	1920		ug/Kg		96	20 - 165
Acenaphthene	1000	905		ug/Kg		91	68 - 116
Acenaphthylene	1000	944		ug/Kg		94	68 - 120
Anthracene	1000	829		ug/Kg		83	73 - 116
Benzo[a]anthracene	1000	1010		ug/Kg		101	76 - 119
Benzo[a]pyrene	1000	827		ug/Kg		83	72 - 117
Benzo[b]fluoranthene	1000	873		ug/Kg		87	63 - 132
Benzo[g,h,i]perylene	1000	802		ug/Kg		80	55 - 139
Benzo[k]fluoranthene	1000	787		ug/Kg		79	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-193860/2-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	1420	J	ug/Kg		71	29 - 158
Benzyl alcohol	1000	871		ug/Kg		87	55 - 123
bis (2-chloroisopropyl) ether	1000	998		ug/Kg		100	41 - 126
Bis(2-chloroethoxy)methane	1000	976		ug/Kg		98	69 - 107
Bis(2-chloroethyl)ether	1000	912		ug/Kg		91	62 - 110
Bis(2-ethylhexyl) phthalate	1000	951		ug/Kg		95	62 - 144
Butyl benzyl phthalate	1000	954		ug/Kg		95	69 - 142
Carbazole	1000	969		ug/Kg		97	76 - 135
Chrysene	1000	855		ug/Kg		85	75 - 114
Dibenz(a,h)anthracene	1000	836		ug/Kg		84	56 - 134
Dibenzofuran	1000	892		ug/Kg		89	72 - 109
Diethyl phthalate	1000	851		ug/Kg		85	73 - 116
Dimethyl phthalate	1000	931		ug/Kg		93	78 - 117
Di-n-butyl phthalate	1000	895		ug/Kg		89	66 - 140
Di-n-octyl phthalate	1000	910		ug/Kg		91	65 - 141
Fluoranthene	1000	891		ug/Kg		89	73 - 125
Fluorene	1000	851		ug/Kg		85	70 - 121
Hexachlorobenzene	1000	912		ug/Kg		91	66 - 117
Hexachlorobutadiene	1000	893		ug/Kg		89	65 - 116
Hexachlorocyclopentadiene	1000	844		ug/Kg		84	46 - 131
Hexachloroethane	1000	898		ug/Kg		90	62 - 120
Indeno[1,2,3-cd]pyrene	1000	925		ug/Kg		92	56 - 127
Isophorone	1000	964		ug/Kg		96	67 - 119
Naphthalene	1000	855		ug/Kg		85	62 - 112
Nitrobenzene	1000	1000		ug/Kg		100	64 - 118
N-Nitrosodi-n-propylamine	1000	942		ug/Kg		94	62 - 116
N-Nitrosodiphenylamine	2010	1690		ug/Kg		84	73 - 115
Pentachlorophenol	2000	1480		ug/Kg		74	45 - 117
Phenanthrene	1000	854		ug/Kg		85	73 - 106
Phenol	1000	879		ug/Kg		88	63 - 111
Pyrene	1000	875		ug/Kg		87	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*99*		*28 - 143*
2-Fluorobiphenyl	*87*		*42 - 140*
2-Fluorophenol	*88*		*36 - 145*
Nitrobenzene-d5	*100*		*38 - 141*
Phenol-d5	*99*		*38 - 149*
Terphenyl-d14	*101*		*42 - 151*

Lab Sample ID: LCSD 580-193860/3-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	866		ug/Kg		87	66 - 115	7	28
1,2-Dichlorobenzene	1000	807		ug/Kg		81	64 - 112	3	30
1,3-Dichlorobenzene	1000	788		ug/Kg		79	64 - 111	1	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-193860/3-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	1000	802		ug/Kg		80	65 - 110	3	30
1-Methylnaphthalene	1000	894		ug/Kg		89	62 - 118	5	30
2,4,5-Trichlorophenol	1000	909		ug/Kg		91	57 - 133	0	30
2,4,6-Trichlorophenol	1000	856		ug/Kg		86	62 - 133	6	30
2,4-Dichlorophenol	1000	998		ug/Kg		100	68 - 125	4	30
2,4-Dimethylphenol	1000	783		ug/Kg		78	54 - 139	2	30
2,4-Dinitrophenol	2000	1650		ug/Kg		83	20 - 141	8	36
2,4-Dinitrotoluene	1000	898		ug/Kg		90	68 - 121	1	30
2,6-Dinitrotoluene	1000	915		ug/Kg		91	66 - 123	1	30
2-Chloronaphthalene	1000	879		ug/Kg		88	68 - 112	3	25
2-Chlorophenol	1000	880		ug/Kg		88	68 - 117	3	27
2-Methylnaphthalene	1000	904		ug/Kg		90	64 - 119	6	27
2-Methylphenol	1000	869		ug/Kg		87	71 - 116	5	25
2-Nitroaniline	1000	937		ug/Kg		94	64 - 112	4	22
2-Nitrophenol	1000	912		ug/Kg		91	67 - 127	5	30
3 & 4 Methylphenol	1000	915		ug/Kg		92	70 - 116	4	27
3,3'-Dichlorobenzidine	2000	973		ug/Kg		49	20 - 103	11	60
3-Nitroaniline	1000	743		ug/Kg		74	27 - 103	2	33
4,6-Dinitro-2-methylphenol	2000	1840		ug/Kg		92	48 - 130	3	22
4-Bromophenyl phenyl ether	1000	928		ug/Kg		93	68 - 122	4	30
4-Chloro-3-methylphenol	1000	877		ug/Kg		88	69 - 121	6	27
4-Chloroaniline	1000	525		ug/Kg		53	20 - 103	4	60
4-Chlorophenyl phenyl ether	1000	891		ug/Kg		89	75 - 108	5	30
4-Nitroaniline	1000	811		ug/Kg		81	58 - 108	2	32
4-Nitrophenol	2000	1890		ug/Kg		94	20 - 165	2	30
Acenaphthene	1000	877		ug/Kg		88	68 - 116	3	27
Acenaphthylene	1000	914		ug/Kg		91	68 - 120	3	28
Anthracene	1000	814		ug/Kg		81	73 - 116	2	27
Benzo[a]anthracene	1000	971		ug/Kg		97	76 - 119	3	27
Benzo[a]pyrene	1000	810		ug/Kg		81	72 - 117	2	30
Benzo[b]fluoranthene	1000	922		ug/Kg		92	63 - 132	5	30
Benzo[g,h,i]perylene	1000	776		ug/Kg		78	55 - 139	3	28
Benzo[k]fluoranthene	1000	728		ug/Kg		73	63 - 119	8	30
Benzoic acid	2010	1250	J	ug/Kg		62	29 - 158	12	28
Benzyl alcohol	1000	848		ug/Kg		85	55 - 123	3	60
bis (2-chloroisopropyl) ether	1000	955		ug/Kg		95	41 - 126	4	57
Bis(2-chloroethoxy)methane	1000	910		ug/Kg		91	69 - 107	7	30
Bis(2-chloroethyl)ether	1000	890		ug/Kg		89	62 - 110	2	22
Bis(2-ethylhexyl) phthalate	1000	934		ug/Kg		93	62 - 144	2	30
Butyl benzyl phthalate	1000	954		ug/Kg		95	69 - 142	0	30
Carbazole	1000	958		ug/Kg		96	76 - 135	1	30
Chrysene	1000	860		ug/Kg		86	75 - 114	1	26
Dibenz(a,h)anthracene	1000	808		ug/Kg		81	56 - 134	3	30
Dibenzofuran	1000	870		ug/Kg		87	72 - 109	2	30
Diethyl phthalate	1000	848		ug/Kg		85	73 - 116	0	26
Dimethyl phthalate	1000	927		ug/Kg		93	78 - 117	0	30
Di-n-butyl phthalate	1000	873		ug/Kg		87	66 - 140	2	30
Di-n-octyl phthalate	1000	908		ug/Kg		91	65 - 141	0	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-193860/3-A
Matrix: Solid
Analysis Batch: 194394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 193860

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	861		ug/Kg		86	73 - 125	3	30
Fluorene			1000	820		ug/Kg		82	70 - 121	4	30
Hexachlorobenzene			1000	894		ug/Kg		89	66 - 117	2	30
Hexachlorobutadiene			1000	867		ug/Kg		87	65 - 116	3	30
Hexachlorocyclopentadiene			1000	805		ug/Kg		80	46 - 131	5	29
Hexachloroethane			1000	869		ug/Kg		87	62 - 120	3	30
Indeno[1,2,3-cd]pyrene			1000	911		ug/Kg		91	56 - 127	2	29
Isophorone			1000	917		ug/Kg		92	67 - 119	5	30
Naphthalene			1000	796		ug/Kg		80	62 - 112	7	26
Nitrobenzene			1000	934		ug/Kg		93	64 - 118	7	30
N-Nitrosodi-n-propylamine			1000	916		ug/Kg		92	62 - 116	3	28
N-Nitrosodiphenylamine			2010	1650		ug/Kg		82	73 - 115	3	30
Pentachlorophenol			2000	1160	*	ug/Kg		58	45 - 117	24	23
Phenanthrene			1000	841		ug/Kg		84	73 - 106	2	28
Phenol			1000	845		ug/Kg		84	63 - 111	4	26
Pyrene			1000	850		ug/Kg		85	70 - 120	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*28 - 143*
2-Fluorobiphenyl	*84*		*42 - 140*
2-Fluorophenol	*85*		*36 - 145*
Nitrobenzene-d5	*96*		*38 - 141*
Phenol-d5	*96*		*38 - 149*
Terphenyl-d14	*99*		*42 - 151*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-194135/1-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194135

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
4,4'-DDE	ND		2.0	0.14	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
4,4'-DDT	ND		2.0	0.15	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Aldrin	ND		1.0	0.22	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
alpha-BHC	ND		1.0	0.28	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
beta-BHC	ND		1.0	0.32	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
delta-BHC	ND		1.0	0.15	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Dieldrin	ND		2.0	0.12	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Endosulfan I	ND		1.0	0.10	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Endosulfan II	ND		2.0	0.17	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Endrin	ND		2.0	0.16	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Endrin ketone	ND		2.0	0.26	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg		07/07/15 10:00	07/21/15 13:19	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-194135/1-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194135

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		1.0	0.13	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Heptachlor	ND		2.0	0.46	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Methoxychlor	ND		10	0.26	ug/Kg		07/07/15 10:00	07/21/15 13:19	1
Toxaphene	ND		100	23	ug/Kg		07/07/15 10:00	07/21/15 13:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*60 - 128*	*07/07/15 10:00*	*07/21/15 13:19*	*1*
Tetrachloro-m-xylene	*52*		*35 - 129*	*07/07/15 10:00*	*07/21/15 13:19*	*1*

Lab Sample ID: LCS 580-194135/24-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194135

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	500	366		ug/Kg		73	48 - 141

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*66*		*60 - 128*
Tetrachloro-m-xylene	*51*		*35 - 129*

Lab Sample ID: LCS 580-194135/2-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194135

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	20.0	12.0		ug/Kg		60	48 - 136
4,4'-DDE	20.0	12.3		ug/Kg		61	50 - 138
4,4'-DDT	20.0	12.8		ug/Kg		64	53 - 132
Aldrin	20.0	12.2		ug/Kg		61	59 - 127
alpha-BHC	20.0	11.1		ug/Kg		55	48 - 132
alpha-Chlordane	20.0	12.3		ug/Kg		61	52 - 137
beta-BHC	20.0	10.6		ug/Kg		53	45 - 122
delta-BHC	20.0	11.6		ug/Kg		58	27 - 124
Dieldrin	20.0	12.5		ug/Kg		63	53 - 145
Endosulfan I	20.0	12.0		ug/Kg		60	57 - 140
Endosulfan II	20.0	12.2		ug/Kg		61	58 - 144
Endosulfan sulfate	20.0	12.5		ug/Kg		63	55 - 125
Endrin	20.0	13.1		ug/Kg		65	51 - 143
Endrin aldehyde	20.0	13.7		ug/Kg		68	45 - 130
Endrin ketone	20.0	12.8		ug/Kg		64	53 - 139
gamma-BHC (Lindane)	20.0	11.1		ug/Kg		55	47 - 127
gamma-Chlordane	20.0	12.6		ug/Kg		63	52 - 137
Heptachlor	20.0	12.1		ug/Kg		61	43 - 141
Heptachlor epoxide	20.0	12.0		ug/Kg		60	47 - 143
Methoxychlor	20.0	14.1		ug/Kg		70	56 - 137

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-194135/2-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	68		60 - 128
Tetrachloro-m-xylene	56		35 - 129

Lab Sample ID: LCSD 580-194135/25-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194135

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene			500	378		ug/Kg		76	48 - 141	3	40

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	70		60 - 128
Tetrachloro-m-xylene	50		35 - 129

Lab Sample ID: LCSD 580-194135/3-A
Matrix: Solid
Analysis Batch: 195465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194135

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			20.0	11.5		ug/Kg		58	48 - 136	4	18
4,4'-DDE			20.0	11.8		ug/Kg		59	50 - 138	4	17
4,4'-DDT			20.0	12.2		ug/Kg		61	53 - 132	5	20
Aldrin			20.0	11.7	*	ug/Kg		58	59 - 127	5	19
alpha-BHC			20.0	10.4		ug/Kg		52	48 - 132	6	17
alpha-Chlordane			20.0	11.8		ug/Kg		59	52 - 137	4	17
beta-BHC			20.0	10.1		ug/Kg		51	45 - 122	4	18
delta-BHC			20.0	10.9		ug/Kg		55	27 - 124	6	19
Dieldrin			20.0	11.8		ug/Kg		59	53 - 145	6	18
Endosulfan I			20.0	11.4		ug/Kg		57	57 - 140	5	19
Endosulfan II			20.0	11.9		ug/Kg		60	58 - 144	2	19
Endosulfan sulfate			20.0	11.5		ug/Kg		58	55 - 125	8	18
Endrin			20.0	12.3		ug/Kg		62	51 - 143	6	18
Endrin aldehyde			20.0	11.6		ug/Kg		58	45 - 130	16	21
Endrin ketone			20.0	12.2		ug/Kg		61	53 - 139	4	17
gamma-BHC (Lindane)			20.0	10.4		ug/Kg		52	47 - 127	7	17
gamma-Chlordane			20.0	12.1		ug/Kg		60	52 - 137	4	17
Heptachlor			20.0	11.4		ug/Kg		57	43 - 141	6	18
Heptachlor epoxide			20.0	11.3		ug/Kg		56	47 - 143	6	17
Methoxychlor			20.0	13.2		ug/Kg		66	56 - 137	7	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	73		60 - 128
Tetrachloro-m-xylene	51		35 - 129

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-2266/1-A
Matrix: Solid
Analysis Batch: 2277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1
PCB-1221	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1
PCB-1232	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1
PCB-1242	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1
PCB-1248	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1
PCB-1254	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1
PCB-1260	ND		10	2.2	ug/Kg		07/06/15 09:13	07/06/15 16:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*112*		*51.9 - 151*	*07/06/15 09:13*	*07/06/15 16:58*	*1*
DCB Decachlorobiphenyl (Surr)	*122*		*73.5 - 164*	*07/06/15 09:13*	*07/06/15 16:58*	*1*

Lab Sample ID: LCS 590-2266/2-A
Matrix: Solid
Analysis Batch: 2277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2266

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			66.7	78.5		ug/Kg		118	58 - 146		
PCB-1260			66.7	69.1		ug/Kg		104	64.2 - 152		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*86*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*113*		*73.5 - 164*

Lab Sample ID: 590-1230-22 MS
Matrix: Solid
Analysis Batch: 2277

Client Sample ID: LFB-1: (30-31)
Prep Type: Total/NA
Prep Batch: 2266

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		69.9	69.5		ug/Kg	☼	99	50.6 - 145		
PCB-1260	ND		69.9	58.7		ug/Kg	☼	84	57.6 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*76*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*94*		*73.5 - 164*

Lab Sample ID: 590-1230-22 MSD
Matrix: Solid
Analysis Batch: 2277

Client Sample ID: LFB-1: (30-31)
Prep Type: Total/NA
Prep Batch: 2266

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		69.3	70.7		ug/Kg	☼	102	50.6 - 145	2	40
PCB-1260	ND		69.3	61.1		ug/Kg	☼	88	57.6 - 120	4	27.4

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*103*		*73.5 - 164*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-284594/1-A
Matrix: Solid
Analysis Batch: 284920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
2,4-D	ND		80	14	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
2,4-DB	ND		80	7.4	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
Dalapon	ND		40	1.4	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
Dicamba	ND		40	1.4	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
Dichlorprop	ND		80	3.2	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
MCPA	ND		8000	2000	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
MCPP	ND		8000	2000	ug/Kg		07/01/15 21:45	07/07/15 00:17	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg		07/01/15 21:45	07/07/15 00:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*62*		*31 - 105*	*07/01/15 21:45*	*07/07/15 00:17*	*1*

Lab Sample ID: LCS 280-284594/2-A
Matrix: Solid
Analysis Batch: 284920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284594

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	100	53.7		ug/Kg		54	53 - 129
2,4-D	100	59.7	J	ug/Kg		60	50 - 136
2,4-DB	100	63.2	J	ug/Kg		63	29 - 134
Dalapon	100	62.5		ug/Kg		63	35 - 105
Dicamba	100	57.5		ug/Kg		57	45 - 120
Dichlorprop	100	56.2	J	ug/Kg		56	50 - 118
MCPA	10000	4260	J	ug/Kg		43	42 - 123
MCPP	10000	8090		ug/Kg		81	40 - 127
Silvex (2,4,5-TP)	100	59.1		ug/Kg		59	52 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*61*		*31 - 105*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2226/1-A
Matrix: Solid
Analysis Batch: 2235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2226

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		07/02/15 14:53	07/03/15 08:50	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		07/02/15 14:53	07/03/15 08:50	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		07/02/15 14:53	07/03/15 08:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*50 - 150*	*07/02/15 14:53*	*07/03/15 08:50*	*1*
n-Triacontane-d62	*77*		*50 - 150*	*07/02/15 14:53*	*07/03/15 08:50*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Lab Sample ID: 590-1230-22 DU
Matrix: Solid
Analysis Batch: 2235

Client Sample ID: LFB-1: (30-31)
Prep Type: Total/NA
Prep Batch: 2226

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND			ND		mg/Kg	☼			NC	25
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	25
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*113*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-194290/18-A
Matrix: Solid
Analysis Batch: 194353

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194290

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.042	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Arsenic	ND		0.50	0.18	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Barium	ND		0.50	0.078	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Beryllium	ND		0.20	0.035	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Cadmium	ND		0.20	0.019	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Chromium	ND		0.50	0.063	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Copper	ND		0.40	0.098	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Iron	ND		40	11	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Lead	ND		0.50	0.048	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Manganese	ND		1.0	0.17	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Nickel	ND		0.50	0.081	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Selenium	ND		1.0	0.20	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Silver	ND		0.20	0.012	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Thallium	ND		0.40	0.13	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Zinc	ND		5.0	1.1	mg/Kg		07/08/15 12:36	07/08/15 16:57	10
Vanadium	ND		2.0	0.47	mg/Kg		07/08/15 12:36	07/08/15 16:57	10

Lab Sample ID: LCS 580-194290/19-A
Matrix: Solid
Analysis Batch: 194353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194290

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			150	149		mg/Kg		100	80 - 120		
Arsenic			200	202		mg/Kg		101	80 - 120		
Barium			200	202		mg/Kg		101	80 - 120		
Beryllium			5.00	4.86		mg/Kg		97	80 - 120		
Cadmium			5.00	5.23		mg/Kg		105	80 - 120		
Chromium			20.0	20.5		mg/Kg		103	80 - 120		
Copper			25.0	26.1		mg/Kg		104	80 - 120		
Iron			1100	1150		mg/Kg		105	80 - 120		

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-194290/19-A
Matrix: Solid
Analysis Batch: 194353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194290

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	50.0	49.9		mg/Kg		100	80 - 120
Manganese	50.0	51.3		mg/Kg		103	80 - 120
Nickel	50.0	51.7		mg/Kg		103	80 - 120
Selenium	200	206		mg/Kg		103	80 - 120
Silver	30.0	31.5		mg/Kg		105	80 - 120
Thallium	200	196		mg/Kg		98	80 - 120
Zinc	200	205		mg/Kg		103	80 - 120
Vanadium	50.0	49.7		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-194290/20-A
Matrix: Solid
Analysis Batch: 194353

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194290

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	147		mg/Kg		98	80 - 120	1	20
Arsenic	200	201		mg/Kg		100	80 - 120	1	20
Barium	200	199		mg/Kg		100	80 - 120	1	20
Beryllium	5.00	5.05		mg/Kg		101	80 - 120	4	20
Cadmium	5.00	5.24		mg/Kg		105	80 - 120	0	20
Chromium	20.0	20.0		mg/Kg		100	80 - 120	2	20
Copper	25.0	25.9		mg/Kg		104	80 - 120	1	20
Iron	1100	1160		mg/Kg		105	80 - 120	0	20
Lead	50.0	49.4		mg/Kg		99	80 - 120	1	20
Manganese	50.0	50.7		mg/Kg		101	80 - 120	1	20
Nickel	50.0	51.3		mg/Kg		103	80 - 120	1	20
Selenium	200	202		mg/Kg		101	80 - 120	2	20
Silver	30.0	31.2		mg/Kg		104	80 - 120	1	20
Thallium	200	196		mg/Kg		98	80 - 120	0	20
Zinc	200	204		mg/Kg		102	80 - 120	1	20
Vanadium	50.0	49.3		mg/Kg		99	80 - 120	1	20

Lab Sample ID: LCSSRM 580-194290/21-A
Matrix: Solid
Analysis Batch: 194353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194290

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.8	156		mg/Kg		176.0	22.0 - 259.0
Arsenic	139	141		mg/Kg		101.6	70.4 - 140.3
Barium	203	204		mg/Kg		100.5	73.4 - 127.1
Beryllium	96.1	93.4		mg/Kg		97.2	74.5 - 125.9
Cadmium	96.0	94.5		mg/Kg		98.5	73.2 - 127.1
Chromium	136	142		mg/Kg		104.6	69.9 - 129.4
Copper	168	171		mg/Kg		101.8	75.6 - 125.0

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSSRM 580-194290/21-A
Matrix: Solid
Analysis Batch: 194353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194290

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	14100	18000		mg/Kg		127.6	35.0 - 165.2
Lead	133	131		mg/Kg		98.6	72.9 - 127.8
Manganese	297	296		mg/Kg		99.6	74.4 - 125.6
Nickel	123	127		mg/Kg		103.3	73.1 - 128.5
Selenium	177	185		mg/Kg		104.5	67.8 - 131.6
Silver	40.2	41.7		mg/Kg		103.7	66.2 - 134.1
Thallium	138	137		mg/Kg		99.6	68.1 - 131.9
Zinc	189	195		mg/Kg		103.2	69.8 - 130.7
Vanadium	107	112		mg/Kg		104.6	66.4 - 133.6

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-2208/9-A
Matrix: Solid
Analysis Batch: 2231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2208

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		07/02/15 09:44	07/02/15 15:53	1

Lab Sample ID: LCS 590-2208/8-A
Matrix: Solid
Analysis Batch: 2231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	191		ug/Kg		96	80 - 120

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-193801/1-A
Matrix: Solid
Analysis Batch: 194047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 193801

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg		07/01/15 18:00	07/06/15 12:06	1

Lab Sample ID: LCS 580-193801/2-A
Matrix: Solid
Analysis Batch: 194047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 193801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	10.0	10.2		mg/Kg		102	80 - 120

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 590-1230-22 MS
Matrix: Solid
Analysis Batch: 194047

Client Sample ID: LFB-1: (30-31)
Prep Type: Total/NA
Prep Batch: 193801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	9.29	6.78	F1	mg/Kg	☼	73	80 - 120

Lab Sample ID: 590-1230-22 MSD
Matrix: Solid
Analysis Batch: 194047

Client Sample ID: LFB-1: (30-31)
Prep Type: Total/NA
Prep Batch: 193801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND	F1	9.99	7.11	F1	mg/Kg	☼	71	80 - 120	5	20

Lab Sample ID: 590-1230-22 DU
Matrix: Solid
Analysis Batch: 194047

Client Sample ID: LFB-1: (30-31)
Prep Type: Total/NA
Prep Batch: 193801

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	ND	F1	ND		mg/Kg	☼	NC	20

Client Sample ID: LFB-1: (30-31)
Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2227	07/02/15 15:02	IAB	TAL SPK

Client Sample ID: LFB-1: (30-31)
Date Collected: 06/26/15 13:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-22
Matrix: Solid
Percent Solids: 94.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.481 g	10 mL	195845	07/23/15 19:04	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.481 g	10 mL	195834	07/23/15 20:28	D1R	TAL SEA
Total/NA	Prep	3550B			10.620 g	10 mL	193860	07/02/15 09:33	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.620 g	10 mL	194394	07/09/15 20:37	AHP	TAL SEA
Total/NA	Prep	3550B			10.077 g	10 mL	194135	07/07/15 10:00	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.077 g	10 mL	195465	07/21/15 14:46	EKK	TAL SEA
Total/NA	Prep	3550C			15.39 g	5 mL	2266	07/06/15 09:13	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.39 g	5 mL	2277	07/06/15 18:23	NMI	TAL SPK
Total/NA	Prep	8151A			51.5 g	10 mL	284594	07/01/15 21:45	EJP	TAL DEN
Total/NA	Analysis	8151A		1	51.5 g	10 mL	284920	07/07/15 09:32	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.42 g	20 mL	2226	07/02/15 14:53	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.42 g	20 mL	2235	07/03/15 09:25	NMI	TAL SPK
Total/NA	Prep	3050B			1.1245 g	50 mL	194290	07/08/15 12:36	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.1245 g	50 mL	194353	07/08/15 19:19	FCW	TAL SEA
Total/NA	Prep	7471B			0.57 g	50 mL	2208	07/02/15 09:44	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.57 g	50 mL	2231	07/02/15 16:04	JSP	TAL SPK
Total/NA	Prep	9012A			4.94 mL	100 mL	193801	07/01/15 18:00	JLS	TAL SEA
Total/NA	Analysis	9012A		1	4.94 mL	100 mL	194047	07/06/15 12:06	SPP	TAL SEA

Client Sample ID: LFB-2: (52-53)
Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2227	07/02/15 15:02	IAB	TAL SPK

Client Sample ID: LFB-2: (52-53)
Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24
Matrix: Solid
Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.04 g	10 mL	195845	07/23/15 19:04	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.04 g	10 mL	195834	07/23/15 20:55	D1R	TAL SEA
Total/NA	Prep	3550B			10.388 g	10 mL	193860	07/02/15 09:33	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.388 g	10 mL	194394	07/09/15 21:02	AHP	TAL SEA
Total/NA	Prep	3550B			10.455 g	10 mL	194135	07/07/15 10:00	DCV	TAL SEA

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Client Sample ID: LFB-2: (52-53)

Date Collected: 06/26/15 09:20
Date Received: 06/29/15 17:20

Lab Sample ID: 590-1230-24

Matrix: Solid
Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081A		1	10.455 g	10 mL	195465	07/21/15 15:03	EKK	TAL SEA
Total/NA	Prep	3550C			15.07 g	5 mL	2266	07/06/15 09:13	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.07 g	5 mL	2277	07/06/15 18:44	NMI	TAL SPK
Total/NA	Prep	8151A			51.9 g	10 mL	284594	07/01/15 21:45	EJP	TAL DEN
Total/NA	Analysis	8151A		1	51.9 g	10 mL	284920	07/07/15 11:54	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.36 g	20 mL	2226	07/02/15 14:53	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.36 g	20 mL	2235	07/03/15 09:42	NMI	TAL SPK
Total/NA	Prep	3050B			1.3742 g	50 mL	194290	07/08/15 12:36	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.3742 g	50 mL	194353	07/08/15 19:26	FCW	TAL SEA
Total/NA	Prep	7471B			1.02 g	50 mL	2208	07/02/15 09:44	JSP	TAL SPK
Total/NA	Analysis	7471B		1	1.02 g	50 mL	2231	07/02/15 16:11	JSP	TAL SPK
Total/NA	Prep	9012A			5.41 mL	100 mL	193801	07/01/15 18:00	JLS	TAL SEA
Total/NA	Analysis	9012A		1	5.41 mL	100 mL	194047	07/06/15 12:06	SPP	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-16
Arizona	State Program	9	AZ0713	12-19-15
Arkansas DEQ	State Program	6	88-0687	06-01-16
California	State Program	9	2513	08-31-16
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-15 *
Georgia	State Program	4	N/A	01-09-15 *
Illinois	NELAP	5	200017	04-30-16
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	09-30-15
Louisiana	NELAP	6	02096	06-30-16
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-15
Nevada	State Program	9	CO0026	07-31-15
New Hampshire	NELAP	1	205310	04-28-16
New Jersey	NELAP	2	CO004	09-30-15
New York	NELAP	2	11964	04-01-16
North Carolina (WW/SW)	State Program	4	358	12-31-15
North Dakota	State Program	8	R-034	01-09-16
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-16
Pennsylvania	NELAP	3	68-00664	07-30-15
South Carolina	State Program	4	72002001	06-30-15 *
Texas	NELAP	6	T104704183-13-8	09-30-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-15
Virginia	NELAP	3	460232	06-14-16
Washington	State Program	10	C583	08-03-15
West Virginia DEP	State Program	3	354	11-30-15
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron

* Certification renewal pending - certification considered valid.

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8081A	3550B	Solid	4,4'-DDD
8081A	3550B	Solid	4,4'-DDE
8081A	3550B	Solid	4,4'-DDT
8081A	3550B	Solid	Aldrin
8081A	3550B	Solid	alpha-BHC
8081A	3550B	Solid	alpha-Chlordane
8081A	3550B	Solid	beta-BHC
8081A	3550B	Solid	delta-BHC
8081A	3550B	Solid	Dieldrin
8081A	3550B	Solid	Endosulfan I
8081A	3550B	Solid	Endosulfan II
8081A	3550B	Solid	Endosulfan sulfate
8081A	3550B	Solid	Endrin
8081A	3550B	Solid	Endrin aldehyde
8081A	3550B	Solid	Endrin ketone
8081A	3550B	Solid	gamma-BHC (Lindane)
8081A	3550B	Solid	gamma-Chlordane
8081A	3550B	Solid	Heptachlor
8081A	3550B	Solid	Heptachlor epoxide
8081A	3550B	Solid	Methoxychlor
8081A	3550B	Solid	Toxaphene
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1230-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8081A	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 [X]
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [ ]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]

7/27/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers, Inc

REPORT TO: jhuey@geoengineers.com

ADDRESS: 523 E. Second Ave
Spokane WA 99202

PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO: John Huey

P.O. NUMBER:

PROJECT NAME: Marshall Landfill

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-14: (9-10)	6-22-2015 1500			S	2		
2 MW-14: (19-20)	1510						
3 MW-14: (29-30)	1520						
4 MW-14: (39-40)	1540						
5 MW-14: (49-50)	1600						
6 MW-14: (59-60)	1620						
7 MW-14: (69-70)	1635						
8 MW-14: (79-80)	6-23-2015 0840						
9 MW-14: (89-90)	0910						
10 MW-14: (99-100)	0930			V	V		

RELEASED BY: Josh Lee — DATE: 6/29/2015
PRINT NAME: Josh Lee — FIRM: GEI — TIME: 1720

RECEIVED BY: Sheila Prato — DATE: 6/29/15
PRINT NAME: Sheila Prato — FIRM: TAOSPOK — TIME: 17:20

RELEASED BY: — DATE:
PRINT NAME — FIRM: — TIME:

RECEIVED BY: — DATE
PRINT NAME: — FIRM: — TIME

ADDITIONAL REMARKS.

TEMP: 4.5°C — PAGE 1 OF 1

590-1230-01 Chain of Custody

TAL-1000 (0714)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 [X]
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [ ]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]

7/27/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers Inc.

REPORT TO: jhoney@geoengineers.com

ADDRESS: 523 E. Second Ave
Spokane, WA 99202

PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO: John Honey

P.O. NUMBER:

PROJECT NAME: Maple Leaf #1

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: [X] STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-14: (109-110)	6-23-2015 1000			S	2		
2 MW-14: (119-120)	1030						
3 MW-14: (129-130)	1100						
4 MW-14: (139-140)	1150						
5 MW-14: (149-150	1320						
6 MW-14: (159-160)	1350						
7 MW-14: (169-170)	1420						
8 MW-14: (179-180)	1500						
9 MW-14: (189-190)	1550						
10 MW-14: (199-200)	1640			V	V		

RELEASED BY: [signature] DATE: 6/24/2015
PRINT NAME: Jeff Lee FIRM: GEI TIME: 1720

RECEIVED BY: [signature] DATE: 6/24/15
PRINT NAME: Sheila Dial FIRM: TA OPK TIME: 17:00

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS.

TEMP: 4.5°C PAGE 2 OF 2

590-1230-02 Chain of Custody

TAL-1000 (0714)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

7/27/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Gee Engineers, Inc
REPORT TO: johnny@geeengineers.com
ADDRESS: 523 E Second Ave, Spokane, WA 99202
PHONE: 509-363-3105 FAX: 509-363-3126

INVOICE TO:
P.O. NUMBER:

PROJECT NAME: Marshall Landfill
PROJECT NUMBER: 0564-104-00
SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: 10 STD | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: HCID	VOCs 8260	SVOCs 8270	TCLP	Metals	Pesticides	Herbicides	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	MW-14 (212-213)	6/24/15 1100										2		
2	LFB-1 (30-31)	6/24/15 1370		X	X	X	X	X	X	X	S	~~25~~ 24	6/29/15	
3	LFB-1 (27-28)	6/26/15 1300										~~25~~		
4	LFB-2 (52-53)	6/26/15 0920		X	X	X	X	X	X	X	S	5		
5														
6														
7														
8														
9														
10														

RELEASED BY: Joel Lee — DATE: 6/29/2015
PRINT NAME: Joel Lee — FIRM: GEE — TIME: 1720
RECEIVED BY: Sandy Arrington — DATE: 6/29/15
PRINT NAME: Sandee Arrington — FIRM: TestAmerica — TIME: 1720

RELEASED BY: — DATE:
PRINT NAME: — FIRM: — TIME:
RECEIVED BY: — DATE
PRINT NAME: — FIRM: — TIME:

ADDITIONAL REMARKS:

TEMP: 4.5°C — PAGE 3 OF

590-1230-03 Chain of Custody

IR001 TAL-1000 (0714)

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1230-1

Login Number: 1230
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1230-1

Login Number: 1230
List Number: 3
Creator: Soto, Mayra A

List Source: TestAmerica Denver
List Creation: 07/01/15 03:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1230-1

Login Number: 1230
List Number: 2
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 07/01/15 01:50 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	Tared voa vials have lab labels affixed to them.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1281-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
7/27/2015 1:57:36 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Job ID: 590-1281-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 7/2/2015 5:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.5º C.

GC/MS VOA Method 8260B:
The following samples was analyzed outside of analytical holding time. LFB-3:(68-69) (590-1281-1), LFB-4 :(92-93) (590-1281-3) and LFB-5:(49-50) (590-1281-4).

Internal standard responses were outside of acceptance limits for the following sample: LFB-5:(49-50) (590-1281-4). The sample showed evidence of matrix interference.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The method blank for preparation batch 580-194254 and analytical batch 580-194603 contained Butyl benzyl phthalate and Diethyl phthalate above the method detection limit. This target analyte concentration was less than half the reporting limit; therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA Method 8151A:
The closing continuing calibration verification (CCV) associated with 8151A batch 280-286098 recovered above the upper control limit for all targets. The laboratory control sample recovered above the upper control limit for Dalapon and MCPP. 590-1281-3 had a detection for Dichlorprop above the method detection limit but estimated below the reporting limit indicated by the J-flag. The opening CCV was in-control, but the closing CCV recovered high at +30%D. The samples and method blank (MB) associated with this CCV were below the limit of quantitation for all analytes; therefore, the data have been reported.

GC Semi VOA Method 8081A:
In analytical batch 580-195727, the continuing calibration verification (CCV) associated with the following samples from preparation batch 580-194438 and 580-194438 recovered above the upper control limit for DCB Decachlorobiphenyl. The samples associated with this CCV were non-detects for the affected target analytes, and all sample DCB surrogate recoveries were not adversely affected by the high bias; therefore, the data have been qualified and reported.

GC Semi VOA Method 8082A:
Surrogate recovery for the following sample was outside control limits: LFB-5:(49-50) (590-1281-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: The following samples foamed after the addition of HCl: LFB-4 :(92-93) (590-1281-3) and LFB-5:(49-50) (590-1281-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1281-1	LFB-3:(68-69)	Solid	06/30/15 09:00	07/02/15 17:00
590-1281-3	LFB-4 :(92-93)	Solid	07/01/15 11:40	07/02/15 17:00
590-1281-4	LFB-5:(49-50)	Solid	07/01/15 17:00	07/02/15 17:00

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Client Sample ID: LFB-3:(68-69)
Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1
Matrix: Solid
Percent Solids: 89.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	0.86	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,1,1-Trichloroethane	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,1,2,2-Tetrachloroethane	ND	H	3.4	0.77	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,1,2-Trichloroethane	ND	H	1.7	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,1-Dichloroethane	ND	H	0.86	0.16	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,1-Dichloroethene	ND	H	4.3	0.43	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,1-Dichloropropene	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2,3-Trichlorobenzene	ND	H	2.6	0.52	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2,3-Trichloropropane	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2,4-Trichlorobenzene	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2,4-Trimethylbenzene	ND	H	1.7	0.14	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2-Dibromo-3-Chloropropane	ND	H	8.6	1.4	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2-Dichlorobenzene	ND	H	1.7	0.27	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2-Dichloroethane	ND	H	0.86	0.13	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,2-Dichloropropane	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,3,5-Trimethylbenzene	ND	H	4.3	0.15	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,3-Dichlorobenzene	ND	H	1.7	0.22	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,3-Dichloropropane	ND	H	1.7	0.20	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
1,4-Dichlorobenzene	ND	H	0.86	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
2,2-Dichloropropane	ND	H	4.3	0.77	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
2-Chlorotoluene	ND	H	1.7	0.15	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
4-Chlorotoluene	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
4-Isopropyltoluene	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Benzene	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Bromobenzene	ND	H	8.6	2.0	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Bromoform	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Bromomethane	ND	H	0.86	0.18	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Carbon tetrachloride	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Chlorobenzene	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Chlorobromomethane	ND	H	1.7	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Chlorodibromomethane	ND	H	1.7	0.23	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Chloroethane	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Chloroform	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Chloromethane	ND	H	0.86	0.12	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
cis-1,2-Dichloroethene	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
cis-1,3-Dichloropropene	ND	H	0.86	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Dibromomethane	ND	H	0.86	0.15	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Dichlorobromomethane	ND	H	0.86	0.15	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Dichlorodifluoromethane	ND	H	1.7	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Ethylbenzene	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Ethylene Dibromide	ND	H	0.86	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Hexachlorobutadiene	ND	H	2.6	0.52	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Isopropylbenzene	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Methyl tert-butyl ether	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Methylene Chloride	**5.6**	**J H**	13	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
m-Xylene & p-Xylene	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Naphthalene	ND	H	8.6	1.5	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
n-Butylbenzene	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
N-Propylbenzene	ND	H	1.7	0.28	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1

Client Sample ID: LFB-3:(68-69)
Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1
Matrix: Solid
Percent Solids: 89.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	H	1.7	0.22	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
sec-Butylbenzene	ND	H	1.7	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Styrene	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
tert-Butylbenzene	ND	H	1.7	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Tetrachloroethene	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Toluene	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
trans-1,2-Dichloroethene	ND	H	1.7	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
trans-1,3-Dichloropropene	ND	H	8.6	1.2	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Trichloroethene	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Trichlorofluoromethane	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1
Vinyl chloride	ND	H	1.7	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*71 - 136*	*07/08/15 12:22*	*07/23/15 23:10*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 120*	*07/08/15 12:22*	*07/23/15 23:10*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 132*	*07/08/15 12:22*	*07/23/15 23:10*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*07/08/15 12:22*	*07/23/15 23:10*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*07/08/15 12:22*	*07/23/15 23:10*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		54	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
1,2-Dichlorobenzene	ND		60	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
1,3-Dichlorobenzene	ND		54	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
1,4-Dichlorobenzene	ND		54	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
1-Methylnaphthalene	ND		33	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,4,5-Trichlorophenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,4,6-Trichlorophenol	ND		160	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,4-Dichlorophenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,4-Dimethylphenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,4-Dinitrophenol	ND		1100	220	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,4-Dinitrotoluene	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2,6-Dinitrotoluene	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2-Chloronaphthalene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2-Chlorophenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2-Methylnaphthalene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2-Methylphenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2-Nitroaniline	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
2-Nitrophenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
3 & 4 Methylphenol	ND		220	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
3,3'-Dichlorobenzidine	ND		220	33	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
3-Nitroaniline	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4-Bromophenyl phenyl ether	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4-Chloro-3-methylphenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4-Chloroaniline	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4-Chlorophenyl phenyl ether	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4-Nitroaniline	ND		110	22	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
4-Nitrophenol	ND	F1	1100	270	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Acenaphthene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1

Client Sample ID: LFB-3:(68-69)
Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1
Matrix: Solid
Percent Solids: 89.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Anthracene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzo[a]anthracene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzo[a]pyrene	ND		33	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzo[b]fluoranthene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzo[g,h,i]perylene	ND		27	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzo[k]fluoranthene	ND		27	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzoic acid	ND		2700	810	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Benzyl alcohol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
bis (2-chloroisopropyl) ether	ND		270	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Bis(2-chloroethoxy)methane	ND		110	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Bis(2-chloroethyl)ether	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Bis(2-ethylhexyl) phthalate	**55**	**J**	650	54	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Butyl benzyl phthalate	**55**	**J B**	220	54	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Carbazole	ND		110	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Chrysene	ND		27	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Dibenz(a,h)anthracene	ND		43	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Dibenzofuran	ND		110	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Diethyl phthalate	**75**	**J B**	220	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Dimethyl phthalate	ND		110	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Di-n-butyl phthalate	ND		540	54	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Di-n-octyl phthalate	ND		540	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Fluoranthene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Fluorene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Hexachlorobenzene	ND		54	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Hexachlorobutadiene	ND		54	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Hexachlorocyclopentadiene	ND		110	11	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Hexachloroethane	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Indeno[1,2,3-cd]pyrene	ND		43	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Isophorone	ND		110	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Naphthalene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Nitrobenzene	ND		110	37	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
N-Nitrosodi-n-propylamine	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
N-Nitrosodiphenylamine	ND		54	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Pentachlorophenol	ND		220	22	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Phenanthrene	ND		22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Phenol	ND		110	16	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1
Pyrene	**7.2**	**J**	22	5.4	ug/Kg	☼	07/08/15 08:53	07/13/15 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*88*		*28 - 143*	*07/08/15 08:53*	*07/13/15 16:50*	*1*
2-Fluorobiphenyl	*78*		*42 - 140*	*07/08/15 08:53*	*07/13/15 16:50*	*1*
2-Fluorophenol	*82*		*36 - 145*	*07/08/15 08:53*	*07/13/15 16:50*	*1*
Nitrobenzene-d5	*87*		*38 - 141*	*07/08/15 08:53*	*07/13/15 16:50*	*1*
Phenol-d5	*90*		*38 - 149*	*07/08/15 08:53*	*07/13/15 16:50*	*1*
Terphenyl-d14	*97*		*42 - 151*	*07/08/15 08:53*	*07/13/15 16:50*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.2	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1

Client Sample ID: LFB-3:(68-69)
Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1
Matrix: Solid
Percent Solids: 89.8

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.2	0.15	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
4,4'-DDT	ND		2.2	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Aldrin	ND		1.1	0.24	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
alpha-BHC	ND		1.1	0.30	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
alpha-Chlordane	ND		1.1	0.14	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
beta-BHC	ND		1.1	0.35	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
delta-BHC	ND		1.1	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Dieldrin	ND		2.2	0.13	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Endosulfan I	ND		1.1	0.11	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Endosulfan II	ND		2.2	0.18	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Endosulfan sulfate	ND		2.2	0.20	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Endrin	ND		2.2	0.18	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Endrin aldehyde	ND		2.2	0.21	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Endrin ketone	ND		2.2	0.28	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
gamma-BHC (Lindane)	ND		1.1	0.32	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
gamma-Chlordane	ND		1.1	0.14	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Heptachlor	ND		2.2	0.50	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Heptachlor epoxide	ND		1.1	0.0032	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Methoxychlor	ND		11	0.28	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1
Toxaphene	ND		110	25	ug/Kg	☼	07/09/15 15:15	07/23/15 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*61*	^	*60 - 128*	*07/09/15 15:15*	*07/23/15 14:17*	*1*
Tetrachloro-m-xylene	*63*		*35 - 129*	*07/09/15 15:15*	*07/23/15 14:17*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1
PCB-1221	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1
PCB-1232	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1
PCB-1242	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1
PCB-1248	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1
PCB-1254	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1
PCB-1260	ND		11	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*51.9 - 151*	*07/08/15 10:56*	*07/13/15 15:42*	*1*
DCB Decachlorobiphenyl (Surr)	*98*		*73.5 - 164*	*07/08/15 10:56*	*07/13/15 15:42*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		22	2.5	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
2,4-D	ND		88	15	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
2,4-DB	ND		88	8.2	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
Dalapon	ND	*	44	1.5	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
Dicamba	ND		44	1.5	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
Dichlorprop	ND		88	3.5	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
MCPA	ND		8800	2200	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
MCPP	ND	*	8800	2200	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1
Silvex (2,4,5-TP)	ND		22	1.5	ug/Kg	☼	07/09/15 21:23	07/15/15 01:57	1

Client Sample ID: LFB-3:(68-69)

Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1

Matrix: Solid
Percent Solids: 89.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	*59*		*31 - 105*	*07/09/15 21:23*	*07/15/15 01:57*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		39	39	mg/Kg	☼	07/08/15 09:44	07/08/15 11:11	1
Diesel Range Organics (DRO) (C10-C25)	ND		98	98	mg/Kg	☼	07/08/15 09:44	07/08/15 11:11	1
Residual Range Organics (RRO) (C25-C36)	ND		98	98	mg/Kg	☼	07/08/15 09:44	07/08/15 11:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*90*		*50 - 150*	*07/08/15 09:44*	*07/08/15 11:11*	*1*
n-Triacontane-d62	*83*		*50 - 150*	*07/08/15 09:44*	*07/08/15 11:11*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.22**		0.22	0.046	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Arsenic	**5.8**		0.55	0.20	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Barium	**69**		0.55	0.086	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Beryllium	**0.31**		0.22	0.038	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Cadmium	**0.36**		0.22	0.021	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Chromium	**7.3**		0.55	0.069	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Copper	**10**		0.44	0.11	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Iron	**24000**		44	12	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Lead	**5.3**		0.55	0.053	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Manganese	**330**		1.1	0.19	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Nickel	**8.0**		0.55	0.089	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Selenium	**0.71**	**J**	1.1	0.22	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Silver	**0.027**	**J**	0.22	0.013	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Thallium	ND		0.44	0.14	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Zinc	**47**		5.5	1.2	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10
Vanadium	**37**		2.2	0.52	mg/Kg	☼	07/15/15 12:31	07/15/15 18:43	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		37	1.5	ug/Kg	☼	07/14/15 08:47	07/14/15 14:12	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	07/07/15 17:00	07/07/15 17:00	1

Client Sample ID: LFB-4 :(92-93)

Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3

Matrix: Solid
Percent Solids: 96.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	1.1	0.25	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,1,1-Trichloroethane	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,1,2,2-Tetrachloroethane	ND	H	4.2	0.95	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,1,2-Trichloroethane	ND	H	2.1	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,1-Dichloroethane	ND	H	1.1	0.20	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Client Sample ID: LFB-4 :(92-93)
Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3
Matrix: Solid
Percent Solids: 96.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND	H	5.3	0.53	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,1-Dichloropropene	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2,3-Trichlorobenzene	ND	H	3.2	0.63	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2,3-Trichloropropane	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2,4-Trichlorobenzene	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2,4-Trimethylbenzene	ND	H	2.1	0.17	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2-Dibromo-3-Chloropropane	ND	H	11	1.7	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2-Dichlorobenzene	ND	H	2.1	0.33	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2-Dichloroethane	ND	H	1.1	0.16	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,2-Dichloropropane	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,3,5-Trimethylbenzene	ND	H	5.3	0.18	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,3-Dichlorobenzene	ND	H	2.1	0.27	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,3-Dichloropropane	ND	H	2.1	0.24	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
1,4-Dichlorobenzene	ND	H	1.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
2,2-Dichloropropane	ND	H	5.3	0.95	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
2-Chlorotoluene	ND	H	2.1	0.18	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
4-Chlorotoluene	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
4-Isopropyltoluene	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Benzene	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Bromobenzene	ND	H	11	2.4	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Bromoform	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Bromomethane	ND	H	1.1	0.22	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Carbon tetrachloride	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Chlorobenzene	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Chlorobromomethane	ND	H	2.1	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Chlorodibromomethane	ND	H	2.1	0.28	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Chloroethane	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Chloroform	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Chloromethane	ND	H	1.1	0.15	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
cis-1,2-Dichloroethene	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
cis-1,3-Dichloropropene	ND	H	1.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Dibromomethane	ND	H	1.1	0.18	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Dichlorobromomethane	ND	H	1.1	0.19	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Dichlorodifluoromethane	ND	H	2.1	0.52	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Ethylbenzene	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Ethylene Dibromide	ND	H	1.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Hexachlorobutadiene	ND	H	3.2	0.63	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Isopropylbenzene	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Methyl tert-butyl ether	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Methylene Chloride	**120**	**H**	16	0.25	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
m-Xylene & p-Xylene	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Naphthalene	ND	H	11	1.9	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
n-Butylbenzene	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
N-Propylbenzene	ND	H	2.1	0.34	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
o-Xylene	ND	H	2.1	0.27	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
sec-Butylbenzene	ND	H	2.1	0.26	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Styrene	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
tert-Butylbenzene	ND	H	2.1	0.21	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Tetrachloroethene	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1

Client Sample ID: LFB-4 :(92-93)
Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3
Matrix: Solid
Percent Solids: 96.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
trans-1,2-Dichloroethene	ND	H	2.1	0.42	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
trans-1,3-Dichloropropene	ND	H	11	1.5	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Trichloroethene	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Trichlorofluoromethane	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1
Vinyl chloride	ND	H	2.1	0.32	ug/Kg	☼	07/08/15 12:22	07/23/15 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*71 - 136*	*07/08/15 12:22*	*07/23/15 23:37*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 120*	*07/08/15 12:22*	*07/23/15 23:37*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 132*	*07/08/15 12:22*	*07/23/15 23:37*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*07/08/15 12:22*	*07/23/15 23:37*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*07/08/15 12:22*	*07/23/15 23:37*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		51	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
1,2-Dichlorobenzene	ND		56	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
1,3-Dichlorobenzene	ND		51	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
1,4-Dichlorobenzene	ND		51	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
1-Methylnaphthalene	ND		30	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2-Chloronaphthalene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2-Methylnaphthalene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2-Methylphenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
3 & 4 Methylphenol	ND		200	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4-Chloroaniline	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4-Nitroaniline	ND		100	20	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
4-Nitrophenol	ND		1000	250	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Acenaphthene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Acenaphthylene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Anthracene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Benzo[a]anthracene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Benzo[a]pyrene	ND		30	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Benzo[b]fluoranthene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Client Sample ID: LFB-4 :(92-93)
Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3
Matrix: Solid
Percent Solids: 96.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		25	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Benzo[k]fluoranthene	ND		25	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Benzoic acid	ND		2500	760	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Benzyl alcohol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Bis(2-chloroethoxy)methane	ND		100	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Bis(2-ethylhexyl) phthalate	ND		610	51	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Butyl benzyl phthalate	**51**	**J B**	200	51	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Carbazole	ND		100	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Chrysene	ND		25	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Dibenz(a,h)anthracene	ND		41	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Dibenzofuran	ND		100	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Diethyl phthalate	**73**	**J B**	200	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Dimethyl phthalate	ND		100	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Di-n-butyl phthalate	ND		510	51	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Di-n-octyl phthalate	ND		510	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Fluoranthene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Fluorene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Hexachlorobenzene	ND		51	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Hexachlorobutadiene	ND		51	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Hexachloroethane	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Indeno[1,2,3-cd]pyrene	ND		41	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Isophorone	ND		100	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Naphthalene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Nitrobenzene	ND		100	35	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
N-Nitrosodiphenylamine	ND		51	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Pentachlorophenol	ND		200	20	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Phenanthrene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Phenol	ND		100	15	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1
Pyrene	ND		20	5.1	ug/Kg	☼	07/08/15 08:53	07/13/15 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*28 - 143*	*07/08/15 08:53*	*07/13/15 18:07*	*1*
2-Fluorobiphenyl	*86*		*42 - 140*	*07/08/15 08:53*	*07/13/15 18:07*	*1*
2-Fluorophenol	*90*		*36 - 145*	*07/08/15 08:53*	*07/13/15 18:07*	*1*
Nitrobenzene-d5	*97*		*38 - 141*	*07/08/15 08:53*	*07/13/15 18:07*	*1*
Phenol-d5	*101*		*38 - 149*	*07/08/15 08:53*	*07/13/15 18:07*	*1*
Terphenyl-d14	*96*		*42 - 151*	*07/08/15 08:53*	*07/13/15 18:07*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
4,4'-DDE	ND		2.0	0.14	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
4,4'-DDT	ND		2.0	0.15	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Aldrin	ND		1.0	0.22	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
alpha-BHC	ND		1.0	0.28	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1

Client Sample ID: LFB-4 :(92-93)
Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3
Matrix: Solid
Percent Solids: 96.9

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	ND		1.0	0.32	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Dieldrin	ND		2.0	0.12	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Endosulfan II	ND		2.0	0.17	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Endosulfan sulfate	ND		2.0	0.18	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Endrin	ND		2.0	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Endrin ketone	ND		2.0	0.26	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
gamma-Chlordane	ND		1.0	0.13	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Heptachlor	ND		2.0	0.46	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Methoxychlor	ND		10	0.26	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1
Toxaphene	ND		100	23	ug/Kg	☼	07/09/15 15:15	07/23/15 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*60 - 128*	*07/09/15 15:15*	*07/23/15 16:19*	*1*
Tetrachloro-m-xylene	*55*		*35 - 129*	*07/09/15 15:15*	*07/23/15 16:19*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1
PCB-1221	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1
PCB-1232	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1
PCB-1242	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1
PCB-1248	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1
PCB-1254	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1
PCB-1260	ND		10	2.2	ug/Kg	☼	07/08/15 10:56	07/13/15 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*51.9 - 151*	*07/08/15 10:56*	*07/13/15 16:03*	*1*
DCB Decachlorobiphenyl (Surr)	*101*		*73.5 - 164*	*07/08/15 10:56*	*07/13/15 16:03*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
2,4-D	ND		81	14	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
2,4-DB	ND		81	7.6	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
Dalapon	ND	*	41	1.4	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
Dicamba	ND		41	1.4	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
Dichlorprop	**6.9**	**J**	81	3.3	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
MCPA	ND		8100	2000	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
MCPP	ND	*	8100	2000	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg	☼	07/09/15 21:23	07/15/15 02:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*67*		*31 - 105*	*07/09/15 21:23*	*07/15/15 02:19*	*1*

Client Sample ID: LFB-4 :(92-93)

Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3

Matrix: Solid
Percent Solids: 96.9

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		37	37	mg/Kg	☼	07/08/15 09:44	07/08/15 11:29	1
Diesel Range Organics (DRO) (C10-C25)	ND		93	93	mg/Kg	☼	07/08/15 09:44	07/08/15 11:29	1
Residual Range Organics (RRO) (C25-C36)	ND		93	93	mg/Kg	☼	07/08/15 09:44	07/08/15 11:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*07/08/15 09:44*	*07/08/15 11:29*	*1*
n-Triacontane-d62	*83*		*50 - 150*	*07/08/15 09:44*	*07/08/15 11:29*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.55**		0.20	0.042	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Arsenic	**9.4**		0.50	0.18	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Barium	**86**		0.50	0.078	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Beryllium	**0.45**		0.20	0.035	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Cadmium	**0.37**		0.20	0.019	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Chromium	**9.0**		0.50	0.063	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Copper	**12**		0.40	0.098	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Iron	**26000**		40	11	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Lead	**7.3**		0.50	0.048	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Manganese	**500**		1.0	0.17	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Nickel	**10**		0.50	0.081	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Selenium	**0.51**	**J**	1.0	0.20	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Silver	**0.036**	**J**	0.20	0.012	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Thallium	ND		0.40	0.13	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Zinc	**49**		5.0	1.1	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10
Vanadium	**38**		2.0	0.47	mg/Kg	☼	07/15/15 12:31	07/15/15 18:47	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**3.9**	**J**	49	2.0	ug/Kg	☼	07/14/15 08:47	07/14/15 14:21	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		1.9	1.9	mg/Kg	☼	07/07/15 17:00	07/07/15 17:00	1

Client Sample ID: LFB-5:(49-50)

Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4

Matrix: Solid
Percent Solids: 87.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	0.66	0.16	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,1,1-Trichloroethane	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,1,2,2-Tetrachloroethane	ND	H *	2.6	0.59	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,1,2-Trichloroethane	ND	H	1.3	0.17	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,1-Dichloroethane	ND	H	0.66	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,1-Dichloroethene	ND	H	3.3	0.33	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,1-Dichloropropene	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2,3-Trichlorobenzene	ND	H *	2.0	0.40	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1

Client Sample ID: LFB-5:(49-50)
Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4
Matrix: Solid
Percent Solids: 87.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND	H *	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2,4-Trichlorobenzene	ND	H *	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2,4-Trimethylbenzene	**0.65**	**J H ***	1.3	0.11	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2-Dibromo-3-Chloropropane	ND	H *	6.6	1.1	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2-Dichlorobenzene	ND	H *	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2-Dichloroethane	ND	H	0.66	0.099	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,2-Dichloropropane	ND	H	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,3,5-Trimethylbenzene	**0.16**	**J H ***	3.3	0.11	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,3-Dichlorobenzene	ND	H *	1.3	0.17	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,3-Dichloropropane	ND	H	1.3	0.15	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
1,4-Dichlorobenzene	ND	H *	0.66	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
2,2-Dichloropropane	ND	H	3.3	0.59	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
2-Chlorotoluene	ND	H *	1.3	0.11	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
4-Chlorotoluene	ND	H *	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
4-Isopropyltoluene	**1.4**	**H ***	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Benzene	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Bromobenzene	ND	H *	6.6	1.5	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Bromoform	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Bromomethane	ND	H	0.66	0.14	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Carbon tetrachloride	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Chlorobenzene	ND	H	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Chlorobromomethane	ND	H	1.3	0.17	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Chlorodibromomethane	ND	H	1.3	0.18	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Chloroethane	ND	H	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Chloroform	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Chloromethane	ND	H	0.66	0.093	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
cis-1,2-Dichloroethene	**0.20**	**J H**	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
cis-1,3-Dichloropropene	ND	H	0.66	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Dibromomethane	ND	H	0.66	0.11	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Dichlorobromomethane	ND	H	0.66	0.12	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Dichlorodifluoromethane	ND	H	1.3	0.32	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Ethylbenzene	**0.30**	**J H**	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Ethylene Dibromide	ND	H	0.66	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Hexachlorobutadiene	ND	H *	2.0	0.40	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Isopropylbenzene	**0.17**	**J H**	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Methyl tert-butyl ether	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Methylene Chloride	**2.6**	**J H**	9.9	0.16	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
m-Xylene & p-Xylene	**0.13**	**J H**	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Naphthalene	**2.3**	**J H ***	6.6	1.2	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
n-Butylbenzene	**0.67**	**J H ***	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
N-Propylbenzene	ND	H *	1.3	0.21	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
o-Xylene	ND	H	1.3	0.17	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
sec-Butylbenzene	ND	H *	1.3	0.17	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Styrene	ND	H	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
tert-Butylbenzene	ND	H *	1.3	0.13	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Tetrachloroethene	ND	H	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Toluene	**0.31**	**J H**	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
trans-1,2-Dichloroethene	ND	H	1.3	0.26	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
trans-1,3-Dichloropropene	ND	H	6.6	0.93	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1

Client Sample ID: LFB-5:(49-50)
Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4
Matrix: Solid
Percent Solids: 87.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Trichlorofluoromethane	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1
Vinyl chloride	ND	H	1.3	0.20	ug/Kg	☼	07/08/15 12:22	07/24/15 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*126*		*71 - 136*	*07/08/15 12:22*	*07/24/15 00:04*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 120*	*07/08/15 12:22*	*07/24/15 00:04*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 132*	*07/08/15 12:22*	*07/24/15 00:04*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*07/08/15 12:22*	*07/24/15 00:04*	*1*
Trifluorotoluene (Surr)	*80*		*65 - 140*	*07/08/15 12:22*	*07/24/15 00:04*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		56	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
1,2-Dichlorobenzene	ND		61	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
1,3-Dichlorobenzene	ND		56	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
1,4-Dichlorobenzene	ND		56	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
1-Methylnaphthalene	ND		33	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,4,5-Trichlorophenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,4,6-Trichlorophenol	ND		170	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,4-Dichlorophenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,4-Dimethylphenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,4-Dinitrophenol	ND		1100	220	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,4-Dinitrotoluene	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2,6-Dinitrotoluene	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2-Chloronaphthalene	ND		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2-Chlorophenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2-Methylnaphthalene	ND		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2-Methylphenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2-Nitroaniline	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
2-Nitrophenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
3 & 4 Methylphenol	ND		220	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
3,3'-Dichlorobenzidine	ND		220	33	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
3-Nitroaniline	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4-Bromophenyl phenyl ether	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4-Chloro-3-methylphenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4-Chloroaniline	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4-Chlorophenyl phenyl ether	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4-Nitroaniline	ND		110	22	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
4-Nitrophenol	ND		1100	280	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Acenaphthene	ND		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Acenaphthylene	ND		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Anthracene	**13**	**J**	22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Benzo[a]anthracene	**19**	**J**	22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Benzo[a]pyrene	**19**	**J**	33	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Benzo[b]fluoranthene	**23**		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Benzo[g,h,i]perylene	**16**	**J**	28	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Benzo[k]fluoranthene	ND		28	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Benzoic acid	ND		2800	840	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1

Client Sample ID: LFB-5:(49-50)
Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4
Matrix: Solid
Percent Solids: 87.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
bis (2-chloroisopropyl) ether	ND		280	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Bis(2-chloroethoxy)methane	ND		110	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Bis(2-chloroethyl)ether	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Bis(2-ethylhexyl) phthalate	**200**	**J**	670	56	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Butyl benzyl phthalate	**58**	**J B**	220	56	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Carbazole	**7.5**	**J**	110	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Chrysene	**20**	**J**	28	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Dibenz(a,h)anthracene	ND		45	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Dibenzofuran	ND		110	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Diethyl phthalate	**79**	**J B**	220	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Dimethyl phthalate	ND		110	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Di-n-butyl phthalate	ND		560	56	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Di-n-octyl phthalate	ND		560	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Fluoranthene	**65**		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Fluorene	**8.7**	**J**	22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Hexachlorobenzene	ND		56	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Hexachlorobutadiene	ND		56	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Hexachlorocyclopentadiene	ND		110	11	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Hexachloroethane	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Indeno[1,2,3-cd]pyrene	ND		45	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Isophorone	ND		110	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Naphthalene	ND		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Nitrobenzene	ND		110	38	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
N-Nitrosodi-n-propylamine	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
N-Nitrosodiphenylamine	ND		56	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Pentachlorophenol	ND		220	22	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Phenanthrene	**43**		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Phenol	ND		110	17	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1
Pyrene	**51**		22	5.6	ug/Kg	☼	07/08/15 08:53	07/13/15 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*28 - 143*	*07/08/15 08:53*	*07/13/15 18:32*	*1*
2-Fluorobiphenyl	*81*		*42 - 140*	*07/08/15 08:53*	*07/13/15 18:32*	*1*
2-Fluorophenol	*87*		*36 - 145*	*07/08/15 08:53*	*07/13/15 18:32*	*1*
Nitrobenzene-d5	*92*		*38 - 141*	*07/08/15 08:53*	*07/13/15 18:32*	*1*
Phenol-d5	*95*		*38 - 149*	*07/08/15 08:53*	*07/13/15 18:32*	*1*
Terphenyl-d14	*92*		*42 - 151*	*07/08/15 08:53*	*07/13/15 18:32*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.2	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
4,4'-DDE	ND		2.2	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
4,4'-DDT	ND		2.2	0.17	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Aldrin	ND		1.1	0.25	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
alpha-BHC	ND		1.1	0.31	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
alpha-Chlordane	ND		1.1	0.15	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
beta-BHC	ND		1.1	0.36	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
delta-BHC	ND		1.1	0.16	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Dieldrin	ND		2.2	0.13	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1

Client Sample ID: LFB-5:(49-50)
Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4
Matrix: Solid
Percent Solids: 87.6

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		1.1	0.11	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Endosulfan II	ND		2.2	0.19	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Endosulfan sulfate	ND		2.2	0.20	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Endrin	ND		2.2	0.18	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Endrin aldehyde	ND		2.2	0.22	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Endrin ketone	ND		2.2	0.29	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
gamma-BHC (Lindane)	ND		1.1	0.33	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
gamma-Chlordane	ND		1.1	0.15	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Heptachlor	ND		2.2	0.51	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Heptachlor epoxide	ND		1.1	0.0033	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Methoxychlor	ND		11	0.29	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1
Toxaphene	ND		110	25	ug/Kg	☼	07/09/15 15:15	07/23/15 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*70*		*60 - 128*	*07/09/15 15:15*	*07/23/15 16:37*	*1*
Tetrachloro-m-xylene	*70*		*35 - 129*	*07/09/15 15:15*	*07/23/15 16:37*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 16:24	1
PCB-1221	ND		10	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 16:24	1
PCB-1232	ND		10	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 16:24	1
PCB-1242	ND		10	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 16:24	1
PCB-1248	ND		10	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 16:24	1
PCB-1254	**190**		10	2.3	ug/Kg	☼	07/08/15 10:56	07/14/15 15:35	1
PCB-1260	ND		10	2.3	ug/Kg	☼	07/08/15 10:56	07/13/15 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*51.9 - 151*	*07/08/15 10:56*	*07/13/15 16:24*	*1*
DCB Decachlorobiphenyl (Surr)	*68*	*X*	*73.5 - 164*	*07/08/15 10:56*	*07/13/15 16:24*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		23	2.6	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
2,4-D	ND		90	16	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
2,4-DB	ND		90	8.4	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
Dalapon	ND	*	45	1.6	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
Dicamba	ND		45	1.6	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
Dichlorprop	ND		90	3.6	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
MCPA	ND		9000	2300	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
MCPP	ND	*	9000	2300	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1
Silvex (2,4,5-TP)	ND		23	1.6	ug/Kg	☼	07/09/15 21:23	07/15/15 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*58*		*31 - 105*	*07/09/15 21:23*	*07/15/15 02:42*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		41	41	mg/Kg	☼	07/08/15 09:44	07/08/15 11:47	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	07/08/15 09:44	07/08/15 11:47	1

Client Sample ID: LFB-5:(49-50)
Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4
Matrix: Solid
Percent Solids: 87.6

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	07/08/15 09:44	07/08/15 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*07/08/15 09:44*	*07/08/15 11:47*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*07/08/15 09:44*	*07/08/15 11:47*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.64**		0.20	0.042	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Arsenic	**11**		0.50	0.18	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Barium	**84**		0.50	0.077	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Beryllium	**0.48**		0.20	0.035	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Cadmium	**0.42**		0.20	0.019	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Chromium	**12**		0.50	0.062	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Copper	**20**		0.40	0.097	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Iron	**28000**		40	11	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Lead	**13**		0.50	0.048	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Manganese	**560**		0.99	0.17	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Nickel	**13**		0.50	0.080	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Selenium	**0.70**	**J**	0.99	0.20	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Silver	**2.2**		0.20	0.012	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Thallium	**0.14**	**J**	0.40	0.13	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Zinc	**68**		5.0	1.1	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10
Vanadium	**40**		2.0	0.47	mg/Kg	☼	07/15/15 12:31	07/15/15 18:51	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**38**	**J**	54	2.2	ug/Kg	☼	07/14/15 08:47	07/14/15 14:24	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.2	2.2	mg/Kg	☼	07/07/15 17:00	07/07/15 17:00	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-195845/1-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Benzene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromobenzene	ND		10	2.3	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromoform	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromomethane	ND		1.0	0.21	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloroethane	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloroform	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloromethane	ND		1.0	0.14	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dibromomethane	ND		1.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Methylene Chloride	ND		15	0.24	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Naphthalene	ND		10	1.8	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-195845/1-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
o-Xylene	ND		2.0	0.26	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Styrene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Toluene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Trichloroethene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*71 - 136*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 132*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Trifluorotoluene (Surr)	*96*		*65 - 140*	*07/23/15 17:52*	*07/23/15 17:11*	*1*

Lab Sample ID: LCS 580-195845/2-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	40.4		ug/Kg		101	72 - 123
1,1,1-Trichloroethane	40.0	42.5		ug/Kg		106	63 - 135
1,1,2,2-Tetrachloroethane	40.0	40.7		ug/Kg		102	73 - 125
1,1,2-Trichloroethane	40.0	44.7		ug/Kg		112	77 - 124
1,1-Dichloroethane	40.0	42.4		ug/Kg		106	70 - 128
1,1-Dichloroethene	40.0	43.6		ug/Kg		109	70 - 133
1,1-Dichloropropene	40.0	41.9		ug/Kg		105	77 - 125
1,2,3-Trichlorobenzene	40.0	39.3		ug/Kg		98	61 - 130
1,2,3-Trichloropropane	40.0	42.1		ug/Kg		105	77 - 123
1,2,4-Trichlorobenzene	40.0	40.3		ug/Kg		101	61 - 130
1,2,4-Trimethylbenzene	40.0	44.5		ug/Kg		111	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	44.8		ug/Kg		112	53 - 132
1,2-Dichlorobenzene	40.0	40.4		ug/Kg		101	79 - 117
1,2-Dichloroethane	40.0	45.4		ug/Kg		113	71 - 128
1,2-Dichloropropane	40.0	43.7		ug/Kg		109	76 - 161
1,3,5-Trimethylbenzene	40.0	43.1		ug/Kg		108	80 - 125
1,3-Dichlorobenzene	40.0	42.6		ug/Kg		107	79 - 119
1,3-Dichloropropane	40.0	44.4		ug/Kg		111	77 - 123
1,4-Dichlorobenzene	40.0	40.1		ug/Kg		100	79 - 117
2,2-Dichloropropane	40.0	44.0		ug/Kg		110	56 - 144
2-Chlorotoluene	40.0	41.1		ug/Kg		103	79 - 122
4-Chlorotoluene	40.0	41.4		ug/Kg		104	80 - 122
4-Isopropyltoluene	40.0	42.4		ug/Kg		106	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-195845/2-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	41.8		ug/Kg		105	70 - 128
Bromobenzene	40.0	42.8		ug/Kg		107	80 - 120
Bromoform	40.0	41.0		ug/Kg		103	50 - 124
Bromomethane	49.9	39.5		ug/Kg		79	57 - 148
Carbon tetrachloride	40.0	42.2		ug/Kg		106	59 - 145
Chlorobenzene	40.0	42.6		ug/Kg		107	75 - 120
Chlorobromomethane	40.0	43.0		ug/Kg		107	78 - 123
Chlorodibromomethane	40.0	43.5		ug/Kg		109	42 - 129
Chloroethane	50.0	39.7		ug/Kg		79	48 - 167
Chloroform	40.0	42.7		ug/Kg		107	78 - 125
Chloromethane	50.1	42.4		ug/Kg		85	55 - 136
cis-1,2-Dichloroethene	40.0	41.3		ug/Kg		103	70 - 130
cis-1,3-Dichloropropene	40.0	43.8		ug/Kg		110	69 - 129
Dibromomethane	40.0	43.3		ug/Kg		108	78 - 126
Dichlorobromomethane	40.0	43.1		ug/Kg		108	58 - 133
Dichlorodifluoromethane	49.9	42.6		ug/Kg		85	38 - 150
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126
Ethylene Dibromide	40.0	43.7		ug/Kg		109	69 - 126
Hexachlorobutadiene	40.0	41.9		ug/Kg		105	68 - 134
Isopropylbenzene	40.0	39.6		ug/Kg		99	79 - 127
Methyl tert-butyl ether	40.0	46.0		ug/Kg		115	65 - 125
Methylene Chloride	40.0	44.3		ug/Kg		111	57 - 146
m-Xylene & p-Xylene	40.0	43.2		ug/Kg		108	78 - 126
Naphthalene	40.0	47.0		ug/Kg		117	14 - 170
n-Butylbenzene	40.0	41.8		ug/Kg		104	78 - 128
N-Propylbenzene	40.0	42.8		ug/Kg		107	81 - 127
o-Xylene	40.0	43.1		ug/Kg		108	77 - 127
sec-Butylbenzene	40.0	46.1		ug/Kg		115	78 - 128
Styrene	40.0	43.2		ug/Kg		108	79 - 127
tert-Butylbenzene	40.0	43.3		ug/Kg		108	71 - 136
Tetrachloroethene	40.0	39.3		ug/Kg		98	56 - 155
Toluene	40.0	43.1		ug/Kg		108	75 - 126
trans-1,2-Dichloroethene	40.0	39.4		ug/Kg		99	76 - 131
trans-1,3-Dichloropropene	40.0	45.7		ug/Kg		114	72 - 129
Trichloroethene	40.0	40.5		ug/Kg		101	83 - 124
Trichlorofluoromethane	50.1	40.1		ug/Kg		80	47 - 165
Vinyl chloride	50.0	35.8		ug/Kg		72	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*71 - 136*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 132*
Toluene-d8 (Surr)	*97*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195845/3-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	41.4		ug/Kg		103	72 - 123	2	20
1,1,1-Trichloroethane	40.0	43.5		ug/Kg		109	63 - 135	2	20
1,1,2,2-Tetrachloroethane	40.0	41.1		ug/Kg		103	73 - 125	1	22
1,1,2-Trichloroethane	40.0	44.0		ug/Kg		110	77 - 124	2	18
1,1-Dichloroethane	40.0	43.3		ug/Kg		108	70 - 128	2	21
1,1-Dichloroethene	40.0	44.6		ug/Kg		111	70 - 133	2	23
1,1-Dichloropropene	40.0	42.3		ug/Kg		106	77 - 125	1	16
1,2,3-Trichlorobenzene	40.0	37.6		ug/Kg		94	61 - 130	5	23
1,2,3-Trichloropropane	40.0	41.7		ug/Kg		104	77 - 123	1	23
1,2,4-Trichlorobenzene	40.0	38.7		ug/Kg		97	61 - 130	4	22
1,2,4-Trimethylbenzene	40.0	45.7		ug/Kg		114	79 - 124	3	18
1,2-Dibromo-3-Chloropropane	40.0	43.3		ug/Kg		108	53 - 132	3	27
1,2-Dichlorobenzene	40.0	40.2		ug/Kg		101	79 - 117	0	17
1,2-Dichloroethane	40.0	44.7		ug/Kg		112	71 - 128	1	18
1,2-Dichloropropane	40.0	43.0		ug/Kg		107	76 - 161	2	15
1,3,5-Trimethylbenzene	40.0	44.7		ug/Kg		112	80 - 125	4	18
1,3-Dichlorobenzene	40.0	42.4		ug/Kg		106	79 - 119	1	17
1,3-Dichloropropane	40.0	43.7		ug/Kg		109	77 - 123	1	19
1,4-Dichlorobenzene	40.0	39.3		ug/Kg		98	79 - 117	2	18
2,2-Dichloropropane	40.0	44.8		ug/Kg		112	56 - 144	2	21
2-Chlorotoluene	40.0	41.6		ug/Kg		104	79 - 122	1	18
4-Chlorotoluene	40.0	42.4		ug/Kg		106	80 - 122	2	18
4-Isopropyltoluene	40.0	43.3		ug/Kg		108	78 - 126	2	18
Benzene	40.0	42.1		ug/Kg		105	70 - 128	1	19
Bromobenzene	40.0	43.0		ug/Kg		107	80 - 120	0	19
Bromoform	40.0	39.9		ug/Kg		100	50 - 124	3	25
Bromomethane	49.9	39.1		ug/Kg		78	57 - 148	1	29
Carbon tetrachloride	40.0	43.3		ug/Kg		108	59 - 145	3	19
Chlorobenzene	40.0	42.7		ug/Kg		107	75 - 120	0	21
Chlorobromomethane	40.0	42.9		ug/Kg		107	78 - 123	0	19
Chlorodibromomethane	40.0	43.1		ug/Kg		108	42 - 129	1	23
Chloroethane	50.0	39.0		ug/Kg		78	48 - 167	2	53
Chloroform	40.0	43.6		ug/Kg		109	78 - 125	2	17
Chloromethane	50.1	41.0		ug/Kg		82	55 - 136	3	26
cis-1,2-Dichloroethene	40.0	41.8		ug/Kg		104	70 - 130	1	19
cis-1,3-Dichloropropene	40.0	43.9		ug/Kg		110	69 - 129	0	19
Dibromomethane	40.0	43.2		ug/Kg		108	78 - 126	0	18
Dichlorobromomethane	40.0	44.1		ug/Kg		110	58 - 133	2	19
Dichlorodifluoromethane	49.9	41.7		ug/Kg		83	38 - 150	2	26
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126	0	23
Ethylene Dibromide	40.0	43.2		ug/Kg		108	69 - 126	1	21
Hexachlorobutadiene	40.0	41.2		ug/Kg		103	68 - 134	1	21
Isopropylbenzene	40.0	40.5		ug/Kg		101	79 - 127	2	20
Methyl tert-butyl ether	40.0	46.1		ug/Kg		115	65 - 125	0	30
Methylene Chloride	40.0	42.6		ug/Kg		106	57 - 146	4	21
m-Xylene & p-Xylene	40.0	43.3		ug/Kg		108	78 - 126	0	23
Naphthalene	40.0	44.3		ug/Kg		111	14 - 170	6	50
n-Butylbenzene	40.0	41.7		ug/Kg		104	78 - 128	0	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195845/3-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195845

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	44.5		ug/Kg		111	81 - 127	4	20
o-Xylene			40.0	43.1		ug/Kg		108	77 - 127	0	22
sec-Butylbenzene			40.0	48.2		ug/Kg		120	78 - 128	5	17
Styrene			40.0	42.3		ug/Kg		106	79 - 127	2	21
tert-Butylbenzene			40.0	44.9		ug/Kg		112	71 - 136	4	27
Tetrachloroethene			40.0	40.2		ug/Kg		101	56 - 155	2	27
Toluene			40.0	43.7		ug/Kg		109	75 - 126	1	19
trans-1,2-Dichloroethene			40.0	41.0		ug/Kg		102	76 - 131	4	18
trans-1,3-Dichloropropene			40.0	45.1		ug/Kg		113	72 - 129	1	20
Trichloroethene			40.0	40.3		ug/Kg		101	83 - 124	1	17
Trichlorofluoromethane			50.1	39.9		ug/Kg		80	47 - 165	0	54
Vinyl chloride			50.0	35.2		ug/Kg		70	67 - 131	2	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 136*
4-Bromofluorobenzene (Surr)	*96*		*70 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 132*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-194254/1-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194254

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2-Chlorophenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2-Methylphenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2-Nitroaniline	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
2-Nitrophenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
3-Nitroaniline	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-194254/1-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194254

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
4-Chloroaniline	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
4-Nitroaniline	ND		100	20	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
4-Nitrophenol	ND		1000	250	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Acenaphthene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Acenaphthylene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Anthracene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzoic acid	ND		2500	750	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Benzyl alcohol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Butyl benzyl phthalate	55.0	J	200	50	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Carbazole	ND		100	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Chrysene	ND		25	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Dibenzofuran	ND		100	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Diethyl phthalate	23.6	J	200	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Fluoranthene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Fluorene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Hexachlorobutadiene	ND		50	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Hexachloroethane	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Isophorone	ND		100	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Naphthalene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Nitrobenzene	ND		100	34	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Pentachlorophenol	ND		200	20	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Phenanthrene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Phenol	ND		100	15	ug/Kg		07/08/15 08:53	07/11/15 16:23	1
Pyrene	ND		20	5.0	ug/Kg		07/08/15 08:53	07/11/15 16:23	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-194254/1-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194254

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	116		28 - 143	07/08/15 08:53	07/11/15 16:23	1
2-Fluorobiphenyl	102		42 - 140	07/08/15 08:53	07/11/15 16:23	1
2-Fluorophenol	107		36 - 145	07/08/15 08:53	07/11/15 16:23	1
Nitrobenzene-d5	115		38 - 141	07/08/15 08:53	07/11/15 16:23	1
Phenol-d5	118		38 - 149	07/08/15 08:53	07/11/15 16:23	1
Terphenyl-d14	118		42 - 151	07/08/15 08:53	07/11/15 16:23	1

Lab Sample ID: LCS 580-194254/2-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	992		ug/Kg		99	66 - 115
1,2-Dichlorobenzene	1000	874		ug/Kg		87	64 - 112
1,3-Dichlorobenzene	1000	850		ug/Kg		85	64 - 111
1,4-Dichlorobenzene	1000	872		ug/Kg		87	65 - 110
1-Methylnaphthalene	1000	1030		ug/Kg		103	62 - 118
2,4,5-Trichlorophenol	1000	1010		ug/Kg		101	57 - 133
2,4,6-Trichlorophenol	1000	1030		ug/Kg		103	62 - 133
2,4-Dichlorophenol	1000	1130		ug/Kg		113	68 - 125
2,4-Dimethylphenol	1000	921		ug/Kg		92	54 - 139
2,4-Dinitrophenol	2000	1270		ug/Kg		64	20 - 141
2,4-Dinitrotoluene	1000	979		ug/Kg		98	68 - 121
2,6-Dinitrotoluene	1000	995		ug/Kg		100	66 - 123
2-Chloronaphthalene	1000	965		ug/Kg		97	68 - 112
2-Chlorophenol	1000	974		ug/Kg		97	68 - 117
2-Methylnaphthalene	1000	982		ug/Kg		98	64 - 119
2-Methylphenol	1000	1020		ug/Kg		102	71 - 116
2-Nitroaniline	1000	1120		ug/Kg		112	64 - 112
2-Nitrophenol	1000	1070		ug/Kg		107	67 - 127
3 & 4 Methylphenol	1000	1030		ug/Kg		103	70 - 116
3,3'-Dichlorobenzidine	2000	1200		ug/Kg		60	20 - 103
3-Nitroaniline	1000	792		ug/Kg		79	27 - 103
4,6-Dinitro-2-methylphenol	2000	1820		ug/Kg		91	48 - 130
4-Bromophenyl phenyl ether	1000	1060		ug/Kg		106	68 - 122
4-Chloro-3-methylphenol	1000	1020		ug/Kg		102	69 - 121
4-Chloroaniline	1000	506		ug/Kg		51	20 - 103
4-Chlorophenyl phenyl ether	1000	981		ug/Kg		98	75 - 108
4-Nitroaniline	1000	887		ug/Kg		89	58 - 108
4-Nitrophenol	2000	2140		ug/Kg		107	20 - 165
Acenaphthene	1000	973		ug/Kg		97	68 - 116
Acenaphthylene	1000	993		ug/Kg		99	68 - 120
Anthracene	1000	915		ug/Kg		91	73 - 116
Benzo[a]anthracene	1000	1080		ug/Kg		108	76 - 119
Benzo[a]pyrene	1000	859		ug/Kg		86	72 - 117
Benzo[b]fluoranthene	1000	964		ug/Kg		96	63 - 132
Benzo[g,h,i]perylene	1000	973		ug/Kg		97	55 - 139
Benzo[k]fluoranthene	1000	771		ug/Kg		77	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-194254/2-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	2030	J	ug/Kg		101	29 - 158
Benzyl alcohol	1000	978		ug/Kg		98	55 - 123
bis (2-chloroisopropyl) ether	1000	1010		ug/Kg		101	41 - 126
Bis(2-chloroethoxy)methane	1000	1010		ug/Kg		101	69 - 107
Bis(2-chloroethyl)ether	1000	937		ug/Kg		94	62 - 110
Bis(2-ethylhexyl) phthalate	1000	1110		ug/Kg		111	62 - 144
Butyl benzyl phthalate	1000	1130		ug/Kg		113	69 - 142
Carbazole	1000	1030		ug/Kg		103	76 - 135
Chrysene	1000	973		ug/Kg		97	75 - 114
Dibenz(a,h)anthracene	1000	1020		ug/Kg		102	56 - 134
Dibenzofuran	1000	946		ug/Kg		95	72 - 109
Diethyl phthalate	1000	913		ug/Kg		91	73 - 116
Dimethyl phthalate	1000	1020		ug/Kg		102	78 - 117
Di-n-butyl phthalate	1000	989		ug/Kg		99	66 - 140
Di-n-octyl phthalate	1000	1080		ug/Kg		108	65 - 141
Fluoranthene	1000	942		ug/Kg		94	73 - 125
Fluorene	1000	902		ug/Kg		90	70 - 121
Hexachlorobenzene	1000	993		ug/Kg		99	66 - 117
Hexachlorobutadiene	1000	963		ug/Kg		96	65 - 116
Hexachlorocyclopentadiene	1000	1040		ug/Kg		104	46 - 131
Hexachloroethane	1000	951		ug/Kg		95	62 - 120
Indeno[1,2,3-cd]pyrene	1000	1080		ug/Kg		108	56 - 127
Isophorone	1000	1080		ug/Kg		108	67 - 119
Naphthalene	1000	902		ug/Kg		90	62 - 112
Nitrobenzene	1000	1060		ug/Kg		106	64 - 118
N-Nitrosodi-n-propylamine	1000	995		ug/Kg		99	62 - 116
N-Nitrosodiphenylamine	2010	1840		ug/Kg		92	73 - 115
Pentachlorophenol	2000	1870		ug/Kg		94	45 - 117
Phenanthrene	1000	917		ug/Kg		92	73 - 106
Phenol	1000	950		ug/Kg		95	63 - 111
Pyrene	1000	912		ug/Kg		91	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*121*		*28 - 143*
2-Fluorobiphenyl	*97*		*42 - 140*
2-Fluorophenol	*99*		*36 - 145*
Nitrobenzene-d5	*112*		*38 - 141*
Phenol-d5	*112*		*38 - 149*
Terphenyl-d14	*110*		*42 - 151*

Lab Sample ID: LCSD 580-194254/3-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	936		ug/Kg		94	66 - 115	6	28
1,2-Dichlorobenzene	1000	835		ug/Kg		84	64 - 112	5	30
1,3-Dichlorobenzene	1000	834		ug/Kg		83	64 - 111	2	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-194254/3-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			1000	828		ug/Kg		83	65 - 110	5	30
1-Methylnaphthalene			1000	985		ug/Kg		99	62 - 118	4	30
2,4,5-Trichlorophenol			1000	993		ug/Kg		99	57 - 133	2	30
2,4,6-Trichlorophenol			1000	997		ug/Kg		100	62 - 133	3	30
2,4-Dichlorophenol			1000	1090		ug/Kg		109	68 - 125	3	30
2,4-Dimethylphenol			1000	865		ug/Kg		87	54 - 139	6	30
2,4-Dinitrophenol			2000	1020		ug/Kg		51	20 - 141	22	36
2,4-Dinitrotoluene			1000	954		ug/Kg		95	68 - 121	3	30
2,6-Dinitrotoluene			1000	967		ug/Kg		97	66 - 123	3	30
2-Chloronaphthalene			1000	954		ug/Kg		95	68 - 112	1	25
2-Chlorophenol			1000	945		ug/Kg		95	68 - 117	3	27
2-Methylnaphthalene			1000	938		ug/Kg		94	64 - 119	5	27
2-Methylphenol			1000	941		ug/Kg		94	71 - 116	8	25
2-Nitroaniline			1000	1030		ug/Kg		103	64 - 112	9	22
2-Nitrophenol			1000	1010		ug/Kg		101	67 - 127	5	30
3 & 4 Methylphenol			1000	950		ug/Kg		95	70 - 116	8	27
3,3'-Dichlorobenzidine			2000	1160		ug/Kg		58	20 - 103	3	60
3-Nitroaniline			1000	770		ug/Kg		77	27 - 103	3	33
4,6-Dinitro-2-methylphenol			2000	1610		ug/Kg		81	48 - 130	12	22
4-Bromophenyl phenyl ether			1000	993		ug/Kg		99	68 - 122	6	30
4-Chloro-3-methylphenol			1000	937		ug/Kg		94	69 - 121	9	27
4-Chloroaniline			1000	493		ug/Kg		49	20 - 103	3	60
4-Chlorophenyl phenyl ether			1000	933		ug/Kg		93	75 - 108	5	30
4-Nitroaniline			1000	879		ug/Kg		88	58 - 108	1	32
4-Nitrophenol			2000	2000		ug/Kg		100	20 - 165	7	30
Acenaphthene			1000	926		ug/Kg		93	68 - 116	5	27
Acenaphthylene			1000	937		ug/Kg		94	68 - 120	6	28
Anthracene			1000	865		ug/Kg		86	73 - 116	6	27
Benzo[a]anthracene			1000	1040		ug/Kg		104	76 - 119	4	27
Benzo[a]pyrene			1000	833		ug/Kg		83	72 - 117	3	30
Benzo[b]fluoranthene			1000	931		ug/Kg		93	63 - 132	3	30
Benzo[g,h,i]perylene			1000	930		ug/Kg		93	55 - 139	5	28
Benzo[k]fluoranthene			1000	736		ug/Kg		74	63 - 119	5	30
Benzoic acid			2010	1890	J	ug/Kg		94	29 - 158	7	28
Benzyl alcohol			1000	910		ug/Kg		91	55 - 123	7	60
bis (2-chloroisopropyl) ether			1000	982		ug/Kg		98	41 - 126	3	57
Bis(2-chloroethoxy)methane			1000	968		ug/Kg		97	69 - 107	5	30
Bis(2-chloroethyl)ether			1000	902		ug/Kg		90	62 - 110	4	22
Bis(2-ethylhexyl) phthalate			1000	1050		ug/Kg		105	62 - 144	5	30
Butyl benzyl phthalate			1000	1050		ug/Kg		105	69 - 142	7	30
Carbazole			1000	1010		ug/Kg		101	76 - 135	2	30
Chrysene			1000	948		ug/Kg		95	75 - 114	3	26
Dibenz(a,h)anthracene			1000	972		ug/Kg		97	56 - 134	5	30
Dibenzofuran			1000	901		ug/Kg		90	72 - 109	5	30
Diethyl phthalate			1000	875		ug/Kg		88	73 - 116	4	26
Dimethyl phthalate			1000	949		ug/Kg		95	78 - 117	7	30
Di-n-butyl phthalate			1000	942		ug/Kg		94	66 - 140	5	30
Di-n-octyl phthalate			1000	1020		ug/Kg		102	65 - 141	6	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-194254/3-A
Matrix: Solid
Analysis Batch: 194603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	897		ug/Kg		90	73 - 125	5	30
Fluorene			1000	875		ug/Kg		88	70 - 121	3	30
Hexachlorobenzene			1000	961		ug/Kg		96	66 - 117	3	30
Hexachlorobutadiene			1000	913		ug/Kg		91	65 - 116	5	30
Hexachlorocyclopentadiene			1000	992		ug/Kg		99	46 - 131	5	29
Hexachloroethane			1000	912		ug/Kg		91	62 - 120	4	30
Indeno[1,2,3-cd]pyrene			1000	1010		ug/Kg		101	56 - 127	7	29
Isophorone			1000	1010		ug/Kg		101	67 - 119	7	30
Naphthalene			1000	857		ug/Kg		86	62 - 112	5	26
Nitrobenzene			1000	1000		ug/Kg		100	64 - 118	6	30
N-Nitrosodi-n-propylamine			1000	957		ug/Kg		96	62 - 116	4	28
N-Nitrosodiphenylamine			2010	1770		ug/Kg		88	73 - 115	4	30
Pentachlorophenol			2000	1850		ug/Kg		93	45 - 117	1	23
Phenanthrene			1000	856		ug/Kg		86	73 - 106	7	28
Phenol			1000	879		ug/Kg		88	63 - 111	8	26
Pyrene			1000	879		ug/Kg		88	70 - 120	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*119*		*28 - 143*
2-Fluorobiphenyl	*95*		*42 - 140*
2-Fluorophenol	*99*		*36 - 145*
Nitrobenzene-d5	*106*		*38 - 141*
Phenol-d5	*110*		*38 - 149*
Terphenyl-d14	*109*		*42 - 151*

Lab Sample ID: 590-1281-1 MS
Matrix: Solid
Analysis Batch: 194630

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		1060	984		ug/Kg	☼	93	66 - 115
1,2-Dichlorobenzene	ND		1060	873		ug/Kg	☼	83	64 - 112
1,3-Dichlorobenzene	ND		1060	865		ug/Kg	☼	82	64 - 111
1,4-Dichlorobenzene	ND		1060	868		ug/Kg	☼	82	65 - 110
1-Methylnaphthalene	ND		1060	1040		ug/Kg	☼	99	62 - 118
2,4,5-Trichlorophenol	ND		1060	1010		ug/Kg	☼	96	57 - 133
2,4,6-Trichlorophenol	ND		1060	1030		ug/Kg	☼	98	62 - 133
2,4-Dichlorophenol	ND		1060	1150		ug/Kg	☼	108	68 - 125
2,4-Dimethylphenol	ND		1060	914		ug/Kg	☼	86	54 - 139
2,4-Dinitrophenol	ND		2110	1060	J	ug/Kg	☼	50	20 - 141
2,4-Dinitrotoluene	ND		1060	1000		ug/Kg	☼	95	68 - 121
2,6-Dinitrotoluene	ND		1060	1030		ug/Kg	☼	97	66 - 123
2-Chloronaphthalene	ND		1060	985		ug/Kg	☼	93	68 - 112
2-Chlorophenol	ND		1060	994		ug/Kg	☼	94	68 - 117
2-Methylnaphthalene	ND		1060	979		ug/Kg	☼	93	64 - 119
2-Methylphenol	ND		1060	1010		ug/Kg	☼	96	71 - 116
2-Nitroaniline	ND		1060	1100		ug/Kg	☼	104	64 - 112
2-Nitrophenol	ND		1060	1060		ug/Kg	☼	100	67 - 127

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1281-1 MS | **Client Sample ID: LFB-3:(68-69)**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 194630 | **Prep Batch: 194254**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	ND		1060	1050		ug/Kg	☼	99	70 - 116
3,3'-Dichlorobenzidine	ND		2110	1490		ug/Kg	☼	71	20 - 103
3-Nitroaniline	ND		1060	835		ug/Kg	☼	79	27 - 103
4,6-Dinitro-2-methylphenol	ND		2110	1460		ug/Kg	☼	69	48 - 130
4-Bromophenyl phenyl ether	ND		1060	1080		ug/Kg	☼	102	68 - 122
4-Chloro-3-methylphenol	ND		1060	974		ug/Kg	☼	92	69 - 121
4-Chloroaniline	ND		1060	580		ug/Kg	☼	55	20 - 103
4-Chlorophenyl phenyl ether	ND		1060	1010		ug/Kg	☼	96	75 - 108
4-Nitroaniline	ND		1060	852		ug/Kg	☼	81	58 - 108
4-Nitrophenol	ND	F1	2110	4080	F1	ug/Kg	☼	193	20 - 165
Acenaphthene	ND		1060	969		ug/Kg	☼	92	68 - 116
Acenaphthylene	ND		1060	1010		ug/Kg	☼	95	68 - 120
Anthracene	ND		1060	933		ug/Kg	☼	88	73 - 116
Benzo[a]anthracene	ND		1060	1110		ug/Kg	☼	105	76 - 119
Benzo[a]pyrene	ND		1060	903		ug/Kg	☼	85	72 - 117
Benzo[b]fluoranthene	ND		1060	1010		ug/Kg	☼	96	63 - 132
Benzo[g,h,i]perylene	ND		1060	968		ug/Kg	☼	92	55 - 139
Benzo[k]fluoranthene	ND		1060	791		ug/Kg	☼	75	63 - 119
Benzoic acid	ND		2120	1860	J	ug/Kg	☼	88	29 - 158
Benzyl alcohol	ND		1060	1020		ug/Kg	☼	96	55 - 123
bis (2-chloroisopropyl) ether	ND		1060	1050		ug/Kg	☼	99	41 - 126
Bis(2-chloroethoxy)methane	ND		1060	1040		ug/Kg	☼	99	69 - 107
Bis(2-chloroethyl)ether	ND		1060	953		ug/Kg	☼	90	62 - 110
Bis(2-ethylhexyl) phthalate	55	J	1060	1210		ug/Kg	☼	109	62 - 144
Butyl benzyl phthalate	55	J B	1060	1200		ug/Kg	☼	109	69 - 142
Carbazole	ND		1060	1080		ug/Kg	☼	103	76 - 135
Chrysene	ND		1060	1070		ug/Kg	☼	101	75 - 114
Dibenz(a,h)anthracene	ND		1060	1010		ug/Kg	☼	96	56 - 134
Dibenzofuran	ND		1060	954		ug/Kg	☼	90	72 - 109
Diethyl phthalate	75	J B	1060	1160		ug/Kg	☼	102	73 - 116
Dimethyl phthalate	ND		1060	1020		ug/Kg	☼	97	78 - 117
Di-n-butyl phthalate	ND		1060	1030		ug/Kg	☼	97	66 - 140
Di-n-octyl phthalate	ND		1060	1090		ug/Kg	☼	103	65 - 141
Fluoranthene	ND		1060	970		ug/Kg	☼	92	73 - 125
Fluorene	ND		1060	931		ug/Kg	☼	88	70 - 121
Hexachlorobenzene	ND		1060	1040		ug/Kg	☼	98	66 - 117
Hexachlorobutadiene	ND		1060	979		ug/Kg	☼	93	65 - 116
Hexachlorocyclopentadiene	ND		1060	870		ug/Kg	☼	82	46 - 131
Hexachloroethane	ND		1060	970		ug/Kg	☼	92	62 - 120
Indeno[1,2,3-cd]pyrene	ND		1060	1080		ug/Kg	☼	102	56 - 127
Isophorone	ND		1060	1060		ug/Kg	☼	100	67 - 119
Naphthalene	ND		1060	910		ug/Kg	☼	86	62 - 112
Nitrobenzene	ND		1060	1020		ug/Kg	☼	96	64 - 118
N-Nitrosodi-n-propylamine	ND		1060	1040		ug/Kg	☼	98	62 - 116
N-Nitrosodiphenylamine	ND		2120	1950		ug/Kg	☼	92	73 - 115
Pentachlorophenol	ND		2110	1870		ug/Kg	☼	88	45 - 117
Phenanthrene	ND		1060	937		ug/Kg	☼	89	73 - 106
Phenol	ND		1060	940		ug/Kg	☼	89	63 - 111

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1281-1 MS
Matrix: Solid
Analysis Batch: 194630

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	7.2	J	1060	932		ug/Kg	☼	88	70 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*107*		*28 - 143*
2-Fluorobiphenyl	*87*		*42 - 140*
2-Fluorophenol	*91*		*36 - 145*
Nitrobenzene-d5	*99*		*38 - 141*
Phenol-d5	*102*		*38 - 149*
Terphenyl-d14	*102*		*42 - 151*

Lab Sample ID: 590-1281-1 MSD
Matrix: Solid
Analysis Batch: 194630

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		1080	1070		ug/Kg	☼	99	66 - 115	8	28
1,2-Dichlorobenzene	ND		1080	963		ug/Kg	☼	89	64 - 112	10	60
1,3-Dichlorobenzene	ND		1080	936		ug/Kg	☼	87	64 - 111	8	60
1,4-Dichlorobenzene	ND		1080	962		ug/Kg	☼	89	65 - 110	10	32
1-Methylnaphthalene	ND		1080	1130		ug/Kg	☼	105	62 - 118	8	30
2,4,5-Trichlorophenol	ND		1080	1120		ug/Kg	☼	104	57 - 133	11	60
2,4,6-Trichlorophenol	ND		1080	1160		ug/Kg	☼	108	62 - 133	12	60
2,4-Dichlorophenol	ND		1080	1230		ug/Kg	☼	114	68 - 125	8	60
2,4-Dimethylphenol	ND		1080	976		ug/Kg	☼	90	54 - 139	7	60
2,4-Dinitrophenol	ND		2160	1170		ug/Kg	☼	54	20 - 141	10	60
2,4-Dinitrotoluene	ND		1080	1110		ug/Kg	☼	103	68 - 121	11	31
2,6-Dinitrotoluene	ND		1080	1130		ug/Kg	☼	104	66 - 123	9	60
2-Chloronaphthalene	ND		1080	1070		ug/Kg	☼	99	68 - 112	8	25
2-Chlorophenol	ND		1080	1070		ug/Kg	☼	99	68 - 117	7	27
2-Methylnaphthalene	ND		1080	1060		ug/Kg	☼	98	64 - 119	8	27
2-Methylphenol	ND		1080	1080		ug/Kg	☼	100	71 - 116	7	25
2-Nitroaniline	ND		1080	1190		ug/Kg	☼	111	64 - 112	8	60
2-Nitrophenol	ND		1080	1150		ug/Kg	☼	107	67 - 127	9	60
3 & 4 Methylphenol	ND		1080	1120		ug/Kg	☼	104	70 - 116	7	27
3,3'-Dichlorobenzidine	ND		2160	1720		ug/Kg	☼	80	20 - 103	14	60
3-Nitroaniline	ND		1080	908		ug/Kg	☼	84	27 - 103	8	60
4,6-Dinitro-2-methylphenol	ND		2160	1590		ug/Kg	☼	74	48 - 130	9	60
4-Bromophenyl phenyl ether	ND		1080	1200		ug/Kg	☼	111	68 - 122	11	60
4-Chloro-3-methylphenol	ND		1080	1070		ug/Kg	☼	99	69 - 121	9	27
4-Chloroaniline	ND		1080	643		ug/Kg	☼	60	20 - 103	10	60
4-Chlorophenyl phenyl ether	ND		1080	1080		ug/Kg	☼	100	75 - 108	7	60
4-Nitroaniline	ND		1080	1020		ug/Kg	☼	95	58 - 108	18	60
4-Nitrophenol	ND	F1	2160	4440	F1	ug/Kg	☼	205	20 - 165	8	33
Acenaphthene	ND		1080	1060		ug/Kg	☼	98	68 - 116	9	27
Acenaphthylene	ND		1080	1070		ug/Kg	☼	99	68 - 120	6	28
Anthracene	ND		1080	1030		ug/Kg	☼	96	73 - 116	10	27
Benzo[a]anthracene	ND		1080	1230		ug/Kg	☼	114	76 - 119	10	27
Benzo[a]pyrene	ND		1080	1010		ug/Kg	☼	93	72 - 117	11	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1281-1 MSD
Matrix: Solid
Analysis Batch: 194630

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194254

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	ND		1080	1050		ug/Kg	☼	97	63 - 132	3	31
Benzo[g,h,i]perylene	ND		1080	1080		ug/Kg	☼	100	55 - 139	11	28
Benzo[k]fluoranthene	ND		1080	942		ug/Kg	☼	87	63 - 119	17	31
Benzoic acid	ND		2170	2180	J	ug/Kg	☼	101	29 - 158	16	60
Benzyl alcohol	ND		1080	1090		ug/Kg	☼	101	55 - 123	7	60
bis (2-chloroisopropyl) ether	ND		1080	1120		ug/Kg	☼	104	41 - 126	7	60
Bis(2-chloroethoxy)methane	ND		1080	1120		ug/Kg	☼	104	69 - 107	7	60
Bis(2-chloroethyl)ether	ND		1080	1060		ug/Kg	☼	98	62 - 110	10	60
Bis(2-ethylhexyl) phthalate	55	J	1080	1320		ug/Kg	☼	118	62 - 144	9	60
Butyl benzyl phthalate	55	J B	1080	1290		ug/Kg	☼	115	69 - 142	7	60
Carbazole	ND		1080	1170		ug/Kg	☼	108	76 - 135	8	60
Chrysene	ND		1080	1110		ug/Kg	☼	103	75 - 114	4	26
Dibenz(a,h)anthracene	ND		1080	1140		ug/Kg	☼	105	56 - 134	12	30
Dibenzofuran	ND		1080	1030		ug/Kg	☼	95	72 - 109	7	60
Diethyl phthalate	75	J B	1080	1220		ug/Kg	☼	106	73 - 116	6	26
Dimethyl phthalate	ND		1080	1110		ug/Kg	☼	103	78 - 117	8	60
Di-n-butyl phthalate	ND		1080	1130		ug/Kg	☼	105	66 - 140	10	60
Di-n-octyl phthalate	ND		1080	1230		ug/Kg	☼	114	65 - 141	12	31
Fluoranthene	ND		1080	1050		ug/Kg	☼	98	73 - 125	8	36
Fluorene	ND		1080	1000		ug/Kg	☼	93	70 - 121	7	31
Hexachlorobenzene	ND		1080	1130		ug/Kg	☼	105	66 - 117	9	60
Hexachlorobutadiene	ND		1080	1070		ug/Kg	☼	99	65 - 116	9	60
Hexachlorocyclopentadiene	ND		1080	984		ug/Kg	☼	91	46 - 131	12	60
Hexachloroethane	ND		1080	1050		ug/Kg	☼	97	62 - 120	8	60
Indeno[1,2,3-cd]pyrene	ND		1080	1150		ug/Kg	☼	107	56 - 127	6	29
Isophorone	ND		1080	1140		ug/Kg	☼	106	67 - 119	7	60
Naphthalene	ND		1080	976		ug/Kg	☼	90	62 - 112	7	26
Nitrobenzene	ND		1080	1170		ug/Kg	☼	108	64 - 118	14	60
N-Nitrosodi-n-propylamine	ND		1080	1150		ug/Kg	☼	106	62 - 116	10	28
N-Nitrosodiphenylamine	ND		2170	2080		ug/Kg	☼	96	73 - 115	6	60
Pentachlorophenol	ND		2160	2100		ug/Kg	☼	97	45 - 117	12	68
Phenanthrene	ND		1080	1030		ug/Kg	☼	95	73 - 106	9	28
Phenol	ND		1080	981		ug/Kg	☼	91	63 - 111	4	26
Pyrene	7.2	J	1080	1030		ug/Kg	☼	95	70 - 120	10	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*124*		*28 - 143*
2-Fluorobiphenyl	*102*		*42 - 140*
2-Fluorophenol	*106*		*36 - 145*
Nitrobenzene-d5	*118*		*38 - 141*
Phenol-d5	*116*		*38 - 149*
Terphenyl-d14	*115*		*42 - 151*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-194438/1-A
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
4,4'-DDE	ND		2.0	0.14	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
4,4'-DDT	ND		2.0	0.15	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Aldrin	ND		1.0	0.22	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
alpha-BHC	ND		1.0	0.28	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
beta-BHC	ND		1.0	0.32	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
delta-BHC	ND		1.0	0.15	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Dieldrin	ND		2.0	0.12	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Endosulfan I	ND		1.0	0.10	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Endosulfan II	ND		2.0	0.17	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Endrin	ND		2.0	0.16	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Endrin ketone	ND		2.0	0.26	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
gamma-Chlordane	ND		1.0	0.13	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Heptachlor	ND		2.0	0.46	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Methoxychlor	ND		10	0.26	ug/Kg		07/09/15 12:55	07/23/15 12:33	1
Toxaphene	ND		100	23	ug/Kg		07/09/15 12:55	07/23/15 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*	^	*60 - 128*	*07/09/15 12:55*	*07/23/15 12:33*	*1*
Tetrachloro-m-xylene	*55*		*35 - 129*	*07/09/15 12:55*	*07/23/15 12:33*	*1*

Lab Sample ID: LCS 580-194438/16-A
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	20.0	13.2		ug/Kg		66	48 - 136
4,4'-DDE	20.0	12.7		ug/Kg		63	50 - 138
4,4'-DDT	20.0	12.4		ug/Kg		62	53 - 132
Aldrin	20.0	13.0		ug/Kg		65	59 - 127
alpha-BHC	20.0	11.8		ug/Kg		59	48 - 132
alpha-Chlordane	20.0	13.4		ug/Kg		67	52 - 137
beta-BHC	20.0	10.7		ug/Kg		53	45 - 122
delta-BHC	20.0	12.0		ug/Kg		60	27 - 124
Dieldrin	20.0	13.5		ug/Kg		67	53 - 145
Endosulfan I	20.0	13.1		ug/Kg		65	57 - 140
Endosulfan II	20.0	12.2		ug/Kg		61	58 - 144
Endosulfan sulfate	20.0	13.3		ug/Kg		67	55 - 125
Endrin	20.0	12.8		ug/Kg		64	51 - 143
Endrin aldehyde	20.0	9.45		ug/Kg		47	45 - 130
Endrin ketone	20.0	13.4		ug/Kg		67	53 - 139
gamma-BHC (Lindane)	20.0	12.1		ug/Kg		60	47 - 127
gamma-Chlordane	20.0	13.7		ug/Kg		69	52 - 137

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-194438/16-A
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194438

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Heptachlor			20.0	12.9		ug/Kg		65	43 - 141		
Heptachlor epoxide			20.0	12.9		ug/Kg		64	47 - 143		
Methoxychlor			20.0	13.5		ug/Kg		67	56 - 137		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*75*	^	*60 - 128*
Tetrachloro-m-xylene	*59*		*35 - 129*

Lab Sample ID: LCSD 580-194438/17-A
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194438

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			20.0	13.5		ug/Kg		68	48 - 136	3	18
4,4'-DDE			20.0	12.9		ug/Kg		65	50 - 138	2	17
4,4'-DDT			20.0	12.5		ug/Kg		63	53 - 132	1	20
Aldrin			20.0	13.0		ug/Kg		65	59 - 127	0	19
alpha-BHC			20.0	11.5		ug/Kg		58	48 - 132	3	17
alpha-Chlordane			20.0	13.6		ug/Kg		68	52 - 137	2	17
beta-BHC			20.0	10.8		ug/Kg		54	45 - 122	1	18
delta-BHC			20.0	11.9		ug/Kg		60	27 - 124	1	19
Dieldrin			20.0	13.7		ug/Kg		69	53 - 145	2	18
Endosulfan I			20.0	13.1		ug/Kg		65	57 - 140	0	19
Endosulfan II			20.0	12.3		ug/Kg		61	58 - 144	1	19
Endosulfan sulfate			20.0	13.4		ug/Kg		67	55 - 125	1	18
Endrin			20.0	13.0		ug/Kg		65	51 - 143	1	18
Endrin aldehyde			20.0	9.53		ug/Kg		48	45 - 130	1	21
Endrin ketone			20.0	13.3		ug/Kg		67	53 - 139	1	17
gamma-BHC (Lindane)			20.0	11.8		ug/Kg		59	47 - 127	2	17
gamma-Chlordane			20.0	13.7		ug/Kg		68	52 - 137	0	17
Heptachlor			20.0	12.9		ug/Kg		65	43 - 141	0	18
Heptachlor epoxide			20.0	13.1		ug/Kg		66	47 - 143	2	17
Methoxychlor			20.0	13.4		ug/Kg		67	56 - 137	1	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*78*	^	*60 - 128*
Tetrachloro-m-xylene	*57*		*35 - 129*

Lab Sample ID: 590-1281-1 MS
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		21.1	13.7		ug/Kg	☼	65	48 - 136		
4,4'-DDE	ND		21.1	13.5		ug/Kg	☼	64	50 - 138		
4,4'-DDT	ND		21.1	13.5		ug/Kg	☼	64	53 - 132		
Aldrin	ND		21.1	14.2		ug/Kg	☼	67	59 - 127		
alpha-BHC	ND		21.1	13.4		ug/Kg	☼	64	48 - 132		

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 590-1281-1 MS
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	ND		21.1	13.5		ug/Kg	☼	64	52 - 137
beta-BHC	ND		21.1	11.3		ug/Kg	☼	54	45 - 122
delta-BHC	ND		21.1	13.0		ug/Kg	☼	62	27 - 124
Dieldrin	ND		21.1	14.2		ug/Kg	☼	67	53 - 145
Endosulfan I	ND		21.1	13.5		ug/Kg	☼	64	57 - 140
Endosulfan II	ND		21.1	12.8		ug/Kg	☼	61	58 - 144
Endosulfan sulfate	ND		21.1	13.9		ug/Kg	☼	66	55 - 125
Endrin	ND		21.1	14.3		ug/Kg	☼	68	51 - 143
Endrin aldehyde	ND		21.1	14.5		ug/Kg	☼	69	45 - 130
Endrin ketone	ND		21.1	13.7		ug/Kg	☼	65	53 - 139
gamma-BHC (Lindane)	ND		21.1	13.6		ug/Kg	☼	64	47 - 127
gamma-Chlordane	ND		21.1	14.9		ug/Kg	☼	71	52 - 137
Heptachlor	ND		21.1	14.5		ug/Kg	☼	69	43 - 141
Heptachlor epoxide	ND		21.1	13.7		ug/Kg	☼	65	47 - 143
Methoxychlor	ND		21.1	14.9		ug/Kg	☼	71	56 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*60*	^	*60 - 128*
Tetrachloro-m-xylene	*62*		*35 - 129*

Lab Sample ID: 590-1281-1 MSD
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		22.0	15.0		ug/Kg	☼	68	48 - 136	9	18
4,4'-DDE	ND		22.0	14.5		ug/Kg	☼	66	50 - 138	8	17
4,4'-DDT	ND		22.0	14.5		ug/Kg	☼	66	53 - 132	7	20
Aldrin	ND		22.0	15.2		ug/Kg	☼	69	59 - 127	7	19
alpha-BHC	ND		22.0	14.7		ug/Kg	☼	67	48 - 132	9	17
alpha-Chlordane	ND		22.0	14.6		ug/Kg	☼	66	52 - 137	8	17
beta-BHC	ND		22.0	12.8		ug/Kg	☼	58	45 - 122	12	18
delta-BHC	ND		22.0	14.3		ug/Kg	☼	65	27 - 124	10	19
Dieldrin	ND		22.0	15.3		ug/Kg	☼	70	53 - 145	8	18
Endosulfan I	ND		22.0	14.6		ug/Kg	☼	66	57 - 140	7	19
Endosulfan II	ND		22.0	13.8		ug/Kg	☼	63	58 - 144	8	19
Endosulfan sulfate	ND		22.0	15.2		ug/Kg	☼	69	55 - 125	9	18
Endrin	ND		22.0	15.5		ug/Kg	☼	71	51 - 143	8	18
Endrin aldehyde	ND		22.0	15.2		ug/Kg	☼	69	45 - 130	5	21
Endrin ketone	ND		22.0	15.2		ug/Kg	☼	69	53 - 139	10	17
gamma-BHC (Lindane)	ND		22.0	14.8		ug/Kg	☼	67	47 - 127	8	17
gamma-Chlordane	ND		22.0	14.7		ug/Kg	☼	67	52 - 137	1	17
Heptachlor	ND		22.0	15.6		ug/Kg	☼	71	43 - 141	7	18
Heptachlor epoxide	ND		22.0	14.7		ug/Kg	☼	67	47 - 143	7	17
Methoxychlor	ND		22.0	16.3		ug/Kg	☼	74	56 - 137	8	17

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 590-1281-1 MSD
Matrix: Solid
Analysis Batch: 195727

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194438

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*62*	^	*60 - 128*
Tetrachloro-m-xylene	*63*		*35 - 129*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-2323/1-A
Matrix: Solid
Analysis Batch: 2417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1
PCB-1221	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1
PCB-1232	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1
PCB-1242	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1
PCB-1248	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1
PCB-1254	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1
PCB-1260	ND		10	2.2	ug/Kg		07/08/15 10:56	07/13/15 14:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*51.9 - 151*	*07/08/15 10:56*	*07/13/15 14:18*	*1*
DCB Decachlorobiphenyl (Surr)	*105*		*73.5 - 164*	*07/08/15 10:56*	*07/13/15 14:18*	*1*

Lab Sample ID: LCS 590-2323/2-A
Matrix: Solid
Analysis Batch: 2417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2323

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			66.7	71.3		ug/Kg		107	58 - 146		
PCB-1260			66.7	72.7		ug/Kg		109	64.2 - 152		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*87*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*118*		*73.5 - 164*

Lab Sample ID: 590-1281-3 MS
Matrix: Solid
Analysis Batch: 2417

Client Sample ID: LFB-4 :(92-93)
Prep Type: Total/NA
Prep Batch: 2323

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		65.1	71.7		ug/Kg	☼	110	50.6 - 145		
PCB-1260	ND		65.1	62.1		ug/Kg	☼	95	57.6 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*108*		*73.5 - 164*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 590-1281-3 MSD
Matrix: Solid
Analysis Batch: 2417

Client Sample ID: LFB-4 :(92-93)
Prep Type: Total/NA
Prep Batch: 2323

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		65.4	55.3		ug/Kg	☼	84	50.6 - 145	26	40
PCB-1260	ND		65.4	62.2		ug/Kg	☼	95	57.6 - 120	0	27.4

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*83*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*111*		*73.5 - 164*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-285504/1-A
Matrix: Solid
Analysis Batch: 286098

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 285504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
2,4-D	ND		80	14	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
2,4-DB	ND		80	7.4	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
Dalapon	ND		40	1.4	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
Dicamba	ND		40	1.4	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
Dichlorprop	ND		80	3.2	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
MCPA	ND		8000	2000	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
MCPP	ND		8000	2000	ug/Kg		07/09/15 21:23	07/15/15 05:19	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg		07/09/15 21:23	07/15/15 05:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*73*		*31 - 105*	*07/09/15 21:23*	*07/15/15 05:19*	*1*

Lab Sample ID: LCS 280-285504/2-A
Matrix: Solid
Analysis Batch: 286098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 285504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	99.0	113		ug/Kg		114	53 - 129
2,4-D	99.0	133		ug/Kg		134	50 - 136
2,4-DB	99.0	125		ug/Kg		126	29 - 134
Dalapon	99.0	122	*	ug/Kg		123	35 - 105
Dicamba	99.0	111		ug/Kg		112	45 - 120
Dichlorprop	99.0	112		ug/Kg		113	50 - 118
MCPA	9900	9740		ug/Kg		98	42 - 123
MCPP	9900	14000	*	ug/Kg		141	40 - 127
Silvex (2,4,5-TP)	99.0	118		ug/Kg		119	52 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*59*		*31 - 105*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2317/1-A
Matrix: Solid
Analysis Batch: 2311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2317

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		07/08/15 09:44	07/08/15 10:35	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		07/08/15 09:44	07/08/15 10:35	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		07/08/15 09:44	07/08/15 10:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*50 - 150*	*07/08/15 09:44*	*07/08/15 10:35*	*1*
n-Triacontane-d62	*87*		*50 - 150*	*07/08/15 09:44*	*07/08/15 10:35*	*1*

Lab Sample ID: 590-1281-1 DU
Matrix: Solid
Analysis Batch: 2311

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 2317

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		ND		mg/Kg	☼	NC	25
Diesel Range Organics (DRO) (C10-C25)	ND		ND		mg/Kg	☼	NC	25
Residual Range Organics (RRO) (C25-C36)	ND		ND		mg/Kg	☼	NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*97*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-194936/16-A
Matrix: Solid
Analysis Batch: 195001

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194936

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.042	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Arsenic	ND		0.50	0.18	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Barium	ND		0.50	0.078	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Beryllium	ND		0.20	0.035	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Cadmium	ND		0.20	0.019	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Chromium	ND		0.50	0.063	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Copper	ND		0.40	0.098	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Iron	ND		40	11	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Lead	ND		0.50	0.048	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Manganese	ND		1.0	0.17	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Nickel	ND		0.50	0.081	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Selenium	ND		1.0	0.20	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Silver	ND		0.20	0.012	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Thallium	ND		0.40	0.13	mg/Kg		07/15/15 12:31	07/15/15 17:41	10
Zinc	ND		5.0	1.1	mg/Kg		07/15/15 12:31	07/15/15 17:41	10

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-194936/16-A
Matrix: Solid
Analysis Batch: 195001

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194936

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	ND		2.0	0.47	mg/Kg		07/15/15 12:31	07/15/15 17:41	10

Lab Sample ID: LCS 580-194936/17-A
Matrix: Solid
Analysis Batch: 195001

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194936

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	150	149		mg/Kg		99	80 - 120
Arsenic	200	197		mg/Kg		99	80 - 120
Barium	200	201		mg/Kg		101	80 - 120
Beryllium	5.00	5.24		mg/Kg		105	80 - 120
Cadmium	5.00	5.04		mg/Kg		101	80 - 120
Chromium	20.0	20.4		mg/Kg		102	80 - 120
Copper	25.0	25.7		mg/Kg		103	80 - 120
Iron	1100	1110		mg/Kg		101	80 - 120
Lead	50.0	48.9		mg/Kg		98	80 - 120
Manganese	50.0	49.3		mg/Kg		99	80 - 120
Nickel	50.0	49.6		mg/Kg		99	80 - 120
Selenium	200	197		mg/Kg		99	80 - 120
Silver	30.0	30.6		mg/Kg		102	80 - 120
Thallium	200	184		mg/Kg		92	80 - 120
Zinc	200	198		mg/Kg		99	80 - 120
Vanadium	50.0	49.3		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-194936/18-A
Matrix: Solid
Analysis Batch: 195001

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194936

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	149		mg/Kg		99	80 - 120	0	20
Arsenic	200	198		mg/Kg		99	80 - 120	0	20
Barium	200	199		mg/Kg		100	80 - 120	1	20
Beryllium	5.00	5.15		mg/Kg		103	80 - 120	2	20
Cadmium	5.00	5.01		mg/Kg		100	80 - 120	1	20
Chromium	20.0	20.5		mg/Kg		103	80 - 120	1	20
Copper	25.0	25.2		mg/Kg		101	80 - 120	2	20
Iron	1100	1120		mg/Kg		101	80 - 120	1	20
Lead	50.0	48.4		mg/Kg		97	80 - 120	1	20
Manganese	50.0	49.1		mg/Kg		98	80 - 120	0	20
Nickel	50.0	50.1		mg/Kg		100	80 - 120	1	20
Selenium	200	197		mg/Kg		98	80 - 120	0	20
Silver	30.0	30.7		mg/Kg		102	80 - 120	0	20
Thallium	200	183		mg/Kg		92	80 - 120	0	20
Zinc	200	200		mg/Kg		100	80 - 120	1	20
Vanadium	50.0	49.0		mg/Kg		98	80 - 120	1	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSSRM 580-194936/19-A
Matrix: Solid
Analysis Batch: 195001

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194936

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.8	156		mg/Kg		175.3	22.0 - 259.0
Arsenic	139	139		mg/Kg		99.8	70.4 - 140.3
Barium	203	203		mg/Kg		100.2	73.4 - 127.1
Beryllium	96.1	92.8		mg/Kg		96.5	74.5 - 125.9
Cadmium	96.0	92.4		mg/Kg		96.2	73.2 - 127.1
Chromium	136	141		mg/Kg		103.8	69.9 - 129.4
Copper	168	167		mg/Kg		99.6	75.6 - 125.0
Iron	14100	18200		mg/Kg		129.2	35.0 - 165.2
Lead	133	132		mg/Kg		99.1	72.9 - 127.8
Manganese	297	299		mg/Kg		100.6	74.4 - 125.6
Nickel	123	125		mg/Kg		101.3	73.1 - 128.5
Selenium	177	177		mg/Kg		100.3	67.8 - 131.6
Silver	40.2	41.4		mg/Kg		102.9	66.2 - 134.1
Thallium	138	131		mg/Kg		94.9	68.1 - 131.9
Zinc	189	194		mg/Kg		102.7	69.8 - 130.7
Vanadium	107	113		mg/Kg		105.4	66.4 - 133.6

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-2437/9-A
Matrix: Solid
Analysis Batch: 2456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2437

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		07/14/15 08:47	07/14/15 14:08	1

Lab Sample ID: LCS 590-2437/8-A
Matrix: Solid
Analysis Batch: 2456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	193		ug/Kg		97	80 - 120

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 590-1281-1 MS
Matrix: Solid
Analysis Batch: 2456

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 2437

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	ND		180	178		ug/Kg	☼	99	80 - 120		

Lab Sample ID: 590-1281-1 MSD
Matrix: Solid
Analysis Batch: 2456

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 2437

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		169	170		ug/Kg	☼	100	80 - 120	5	20

Lab Sample ID: 590-1281-1 DU
Matrix: Solid
Analysis Batch: 2456

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 2437

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hg	ND		ND		ug/Kg	☼	NC	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-194204/1-A
Matrix: Solid
Analysis Batch: 194325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194204

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg		07/07/15 17:00	07/07/15 17:00	1

Lab Sample ID: LCS 580-194204/2-A
Matrix: Solid
Analysis Batch: 194325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194204

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			10.0	9.07		mg/Kg		91	80 - 120		

Lab Sample ID: 590-1281-1 MS
Matrix: Solid
Analysis Batch: 194325

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		10.9	10.0		mg/Kg	☼	92	80 - 120		

Lab Sample ID: 590-1281-1 MSD
Matrix: Solid
Analysis Batch: 194325

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194204

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		10.6	9.72		mg/Kg	☼	91	80 - 120	3	20

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 590-1281-1 DU
Matrix: Solid
Analysis Batch: 194325

Client Sample ID: LFB-3:(68-69)
Prep Type: Total/NA
Prep Batch: 194204

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/Kg	☼			NC	20

Client Sample ID: LFB-3:(68-69)
Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2318	07/08/15 09:46	IAB	TAL SPK

Client Sample ID: LFB-3:(68-69)
Date Collected: 06/30/15 09:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-1
Matrix: Solid
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.472 g	10 mL	195845	07/08/15 12:22	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.472 g	10 mL	195834	07/23/15 23:10	D1R	TAL SEA
Total/NA	Prep	3550B			10.256 g	10 mL	194254	07/08/15 08:53	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.256 g	10 mL	194630	07/13/15 16:50	AHP	TAL SEA
Total/NA	Prep	3550B			10.346 g	10 mL	194438	07/09/15 15:15	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.346 g	10 mL	195727	07/23/15 14:17	EKK	TAL SEA
Total/NA	Prep	3550C			15.67 g	5 mL	2323	07/08/15 10:56	NMI	TAL SPK
Total/NA	Analysis	8082A		1	15.67 g	5 mL	2417	07/13/15 15:42	NMI	TAL SPK
Total/NA	Prep	8151A			50.4 g	10 mL	285504	07/09/15 21:23	EJP	TAL DEN
Total/NA	Analysis	8151A		1	50.4 g	10 mL	286098	07/15/15 01:57	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			11.34 g	20 mL	2317	07/08/15 09:44	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.34 g	20 mL	2311	07/08/15 11:11	NMI	TAL SPK
Total/NA	Prep	3050B			1.0136 g	50 mL	194936	07/15/15 12:31	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.0136 g	50 mL	195001	07/15/15 18:43	FCW	TAL SEA
Total/NA	Prep	7471B			0.75 g	50 mL	2437	07/14/15 08:47	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.75 g	50 mL	2456	07/14/15 14:12	JSP	TAL SPK
Total/NA	Analysis	9012A		1	5.67 g	100 mL	194325	07/07/15 17:00	JLS	TAL SEA
Total/NA	Prep	9012A			5.67 g	100 mL	194204	07/07/15 17:00	JLS	TAL SEA

Client Sample ID: LFB-4 :(92-93)
Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2318	07/08/15 09:46	IAB	TAL SPK

Client Sample ID: LFB-4 :(92-93)
Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3
Matrix: Solid
Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.903 g	10 mL	195845	07/08/15 12:22	IWH	TAL SEA
Total/NA	Analysis	8260B		1	4.903 g	10 mL	195834	07/23/15 23:37	D1R	TAL SEA
Total/NA	Prep	3550B			10.165 g	10 mL	194254	07/08/15 08:53	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.165 g	10 mL	194630	07/13/15 18:07	AHP	TAL SEA
Total/NA	Prep	3550B			10.362 g	10 mL	194438	07/09/15 15:15	DCV	TAL SEA

Client Sample ID: LFB-4 :(92-93)

Date Collected: 07/01/15 11:40
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-3

Matrix: Solid
Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081A		1	10.362 g	10 mL	195727	07/23/15 16:19	EKK	TAL SEA
Total/NA	Prep	3550C			15.27 g	5 mL	2323	07/08/15 10:56	NMI	TAL SPK
Total/NA	Analysis	8082A		1	15.27 g	5 mL	2417	07/13/15 16:03	NMI	TAL SPK
Total/NA	Prep	8151A			50.7 g	10 mL	285504	07/09/15 21:23	EJP	TAL DEN
Total/NA	Analysis	8151A		1	50.7 g	10 mL	286098	07/15/15 02:19	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			11.12 g	20 mL	2317	07/08/15 09:44	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.12 g	20 mL	2311	07/08/15 11:29	NMI	TAL SPK
Total/NA	Prep	3050B			1.0346 g	50 mL	194936	07/15/15 12:31	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.0346 g	50 mL	195001	07/15/15 18:47	FCW	TAL SEA
Total/NA	Prep	7471B			0.53 g	50 mL	2437	07/14/15 08:47	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.53 g	50 mL	2456	07/14/15 14:21	JSP	TAL SPK
Total/NA	Analysis	9012A		1	5.54 g	100 mL	194325	07/07/15 17:00	JLS	TAL SEA
Total/NA	Prep	9012A			5.54 g	100 mL	194204	07/07/15 17:00	JLS	TAL SEA

Client Sample ID: LFB-5:(49-50)

Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2318	07/08/15 09:46	IAB	TAL SPK

Client Sample ID: LFB-5:(49-50)

Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4

Matrix: Solid
Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8.632 g	10 mL	195845	07/08/15 12:22	IWH	TAL SEA
Total/NA	Analysis	8260B		1	8.632 g	10 mL	195834	07/24/15 00:04	D1R	TAL SEA
Total/NA	Prep	3550B			10.246 g	10 mL	194254	07/08/15 08:53	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.246 g	10 mL	194630	07/13/15 18:32	AHP	TAL SEA
Total/NA	Prep	3550B			10.329 g	10 mL	194438	07/09/15 15:15	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.329 g	10 mL	195727	07/23/15 16:37	EKK	TAL SEA
Total/NA	Prep	3550C			16.36 g	5 mL	2323	07/08/15 10:56	NMI	TAL SPK
Total/NA	Analysis	8082A		1	16.36 g	5 mL	2417	07/13/15 16:24	NMI	TAL SPK
Total/NA	Prep	3550C			16.36 g	5 mL	2323	07/08/15 10:56	NMI	TAL SPK
Total/NA	Analysis	8082A		1	16.36 g	5 mL	2455	07/14/15 15:35	NMI	TAL SPK
Total/NA	Prep	8151A			50.5 g	10 mL	285504	07/09/15 21:23	EJP	TAL DEN
Total/NA	Analysis	8151A		1	50.5 g	10 mL	286098	07/15/15 02:42	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			11.25 g	20 mL	2317	07/08/15 09:44	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.25 g	20 mL	2311	07/08/15 11:47	NMI	TAL SPK
Total/NA	Prep	3050B			1.1525 g	50 mL	194936	07/15/15 12:31	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.1525 g	50 mL	195001	07/15/15 18:51	FCW	TAL SEA
Total/NA	Prep	7471B			0.62 g	50 mL	2437	07/14/15 08:47	JSP	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Client Sample ID: LFB-5:(49-50)
Date Collected: 07/01/15 17:00
Date Received: 07/02/15 17:00

Lab Sample ID: 590-1281-4
Matrix: Solid
Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7471B		1	0.62 g	50 mL	2456	07/14/15 14:24	JSP	TAL SPK
Total/NA	Analysis	9012A		1	5.26 g	100 mL	194325	07/07/15 17:00	JLS	TAL SEA
Total/NA	Prep	9012A			5.26 g	100 mL	194204	07/07/15 17:00	JLS	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-16
Arizona	State Program	9	AZ0713	12-19-15
Arkansas DEQ	State Program	6	88-0687	06-01-16
California	State Program	9	2513	08-31-16
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-15 *
Georgia	State Program	4	N/A	01-09-15 *
Illinois	NELAP	5	200017	04-30-16
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	09-30-15
Louisiana	NELAP	6	02096	06-30-16
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-15
Nevada	State Program	9	CO0026	07-31-15
New Hampshire	NELAP	1	205310	04-28-16
New Jersey	NELAP	2	CO004	09-30-15
New York	NELAP	2	11964	04-01-16
North Carolina (WW/SW)	State Program	4	358	12-31-15
North Dakota	State Program	8	R-034	01-09-16
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-16
Pennsylvania	NELAP	3	68-00664	07-30-15
South Carolina	State Program	4	72002001	06-30-15 *
Texas	NELAP	6	T104704183-13-8	09-30-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-15
Virginia	NELAP	3	460232	06-14-16
Washington	State Program	10	C583	08-03-15
West Virginia DEP	State Program	3	354	11-30-15
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron

* Certification renewal pending - certification considered valid.

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8081A	3550B	Solid	4,4'-DDD
8081A	3550B	Solid	4,4'-DDE
8081A	3550B	Solid	4,4'-DDT
8081A	3550B	Solid	Aldrin
8081A	3550B	Solid	alpha-BHC
8081A	3550B	Solid	alpha-Chlordane
8081A	3550B	Solid	beta-BHC
8081A	3550B	Solid	delta-BHC
8081A	3550B	Solid	Dieldrin
8081A	3550B	Solid	Endosulfan I
8081A	3550B	Solid	Endosulfan II
8081A	3550B	Solid	Endosulfan sulfate
8081A	3550B	Solid	Endrin
8081A	3550B	Solid	Endrin aldehyde
8081A	3550B	Solid	Endrin ketone
8081A	3550B	Solid	gamma-BHC (Lindane)
8081A	3550B	Solid	gamma-Chlordane
8081A	3550B	Solid	Heptachlor
8081A	3550B	Solid	Heptachlor epoxide
8081A	3550B	Solid	Methoxychlor
8081A	3550B	Solid	Toxaphene
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1281-1

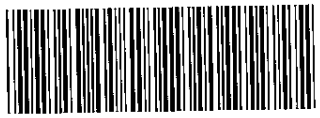
Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8081A	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200


590-1281 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

7/27/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers
REPORT TO: jhoney@geoengineers.com
ADDRESS: 523 E. Second Ave Spokane, WA 99202
PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO: GEI
P.O. NUMBER:

PROJECT NAME: Marshall Landfill
PROJECT NUMBER: 0504-104-00
SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: [10] STD. [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [5] STD. [4] [3] [2] [1] [<1]
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	HCID	VOCs 8260	sVOCs 8270	PCBs	Pesticides	Herbicides	Metals*	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 LFB-3:(68-69)	6/30/2015 0900		X	X	X	X	X	X	X	S	5		
2 LFB-4:(81-82)	7/1/2015 1130		X							↓	↓		
3 LFB-4:(92-93)	↓ 1140		X	X	X	X	X	X	X				
4 LFB-5:(49-50)	↓ 1760		X	X	X	X	X	X	X	↓	↓		
5													
6													
7													
8													
9													
10													

RELEASED BY: [signature] PRINT NAME: Josh Lee FIRM: GEI DATE: 7/2/2015 TIME: 1700
RECEIVED BY: [signature] PRINT NAME: Sheila Kratz FIRM: TA Spok DATE: 7/2/15 TIME: 1700

RELEASED BY PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME

ADDITIONAL REMARKS: Hold samples not marked for testing. * Metals = Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Fe, Mn, Ni, Se, Ag, Tl, V, Zn, Cu, Hg

TEMP: 11.5C PAGE 1 OF 1

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1281-1

Login Number: 1281
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1281-1

Login Number: 1281
List Number: 2
Creator: Soto, Mayra A

List Source: TestAmerica Denver
List Creation: 07/07/15 09:47 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1281-1

Login Number: 1281
List Number: 3
Creator: Presley, Kim A

List Source: TestAmerica Seattle
List Creation: 07/07/15 03:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



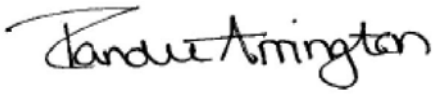
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1429-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney



Authorized for release by:
8/17/2015 3:19:30 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-1429-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 7/16/2015 5:02 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270D:
The continuing calibration verification (CCV) associated with batch 580-195628 recovered above the upper control limit for 4-Nitrophenol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: MW-16 (69-70) (590-1429-1), LFB-8 (17-18) (590-1429-3), LFB-9 (11-12) (590-1429-4), LFB-10 (45-46) (590-1429-5), (CCVIS 580-195628/3), (LCS 580-195470/2-A), (LCSD 580-195470/3-A), (MB 580-195470/1-A), (590-1429-B-3-C MS) and (590-1429-B-3-D MSD).

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-195470 and analytical batch 580-195628 recovered outside control limits for the following analyte: 4-Nitrophenol. The analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. Affected samples: MW-16 (69-70) (590-1429-1), LFB-8 (17-18) (590-1429-3), LFB-9 (11-12) (590-1429-4), LFB-10 (45-46) (590-1429-5), (LCS 580-195470/2-A), (LCSD 580-195470/3-A), (590-1429-B-3-C MS) and (590-1429-B-3-D MSD)

The method blank for preparation batch 580-195470 and analytical batch 580-195628 contained Diethyl phthalate and Butyl benzyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA Method 8141A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-287000 for the following compounds: Naled and Dichlorvos. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15 %D. The associated samples were ND for the affected analytes. A calibration level 1 standard was run following the CCVs and all target analytes were detected.

GC Semi VOA Method 8151A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-290062 for the following compounds: MCPA and MCPP. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15 %D. The associated samples are ND for the affected compounds.

The laboratory control sample (LCS) in preparation batch 280-287783 and analytical batch 280-290062 recovered below the lower control limit on one column for MCPA and Dichlorprop. The associated samples are ND on both columns and are reported from the column which is in control in the LCS.

GC Semi VOA Method 8081A:
In analytical batch 580-195872, the following samples from preparation batch 580-195564 and 580-195564 required a Florisil clean-up, via EPA Method 3620C, to reduce matrix interferences: LFB-8 (17-18) (590-1429-3), LFB-9 (11-12) (590-1429-4), LFB-10 (45-46) (590-1429-5), (LCS 580-195564/2-A), (LCSD 580-195564/3-A), (MB 580-195564/1-A), (580-51670-B-7-E), (580-51670-B-7-F MS) and (580-51670-B-7-G MSD). The Florisil ID was: 1298295.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 590-1429-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1429-1	MW-16 (69-70)	Solid	07/14/15 15:30	07/17/15 17:02
590-1429-3	LFB-8 (17-18)	Solid	07/16/15 10:00	07/17/15 17:02
590-1429-4	LFB-9 (11-12)	Solid	07/16/15 11:20	07/17/15 17:02
590-1429-5	LFB-10 (45-46)	Solid	07/16/15 14:00	07/17/15 17:02

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: MW-16 (69-70)
Date Collected: 07/14/15 15:30
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-1
Matrix: Solid
Percent Solids: 90.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.84	0.20	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,1,1-Trichloroethane	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,1,2,2-Tetrachloroethane	ND		3.4	0.76	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,1,2-Trichloroethane	ND		1.7	0.21	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,1-Dichloroethane	ND		0.84	0.16	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,1-Dichloroethene	ND		4.2	0.42	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,1-Dichloropropene	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2,3-Trichlorobenzene	ND		2.5	0.51	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2,3-Trichloropropane	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2,4-Trichlorobenzene	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2,4-Trimethylbenzene	ND		1.7	0.13	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2-Dibromo-3-Chloropropane	ND		8.4	1.3	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2-Dichlorobenzene	ND		1.7	0.26	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2-Dichloroethane	ND		0.84	0.13	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,2-Dichloropropane	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,3,5-Trimethylbenzene	ND		4.2	0.14	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,3-Dichlorobenzene	ND		1.7	0.22	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,3-Dichloropropane	ND		1.7	0.19	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
1,4-Dichlorobenzene	ND		0.84	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
2,2-Dichloropropane	ND		4.2	0.76	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
2-Chlorotoluene	ND		1.7	0.14	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
4-Chlorotoluene	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
4-Isopropyltoluene	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Benzene	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Bromobenzene	ND		8.4	1.9	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Bromoform	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Bromomethane	ND		0.84	0.18	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Carbon tetrachloride	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Chlorobenzene	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Chlorobromomethane	ND		1.7	0.21	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Chlorodibromomethane	ND		1.7	0.23	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Chloroethane	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Chloroform	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Chloromethane	ND		0.84	0.12	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
cis-1,2-Dichloroethene	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
cis-1,3-Dichloropropene	ND		0.84	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Dibromomethane	ND		0.84	0.14	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Dichlorobromomethane	ND		0.84	0.15	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Dichlorodifluoromethane	ND		1.7	0.41	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Ethylbenzene	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Ethylene Dibromide	ND		0.84	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Hexachlorobutadiene	ND		2.5	0.51	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Isopropylbenzene	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Methyl tert-butyl ether	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Methylene Chloride	3.2	J	13	0.20	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
m-Xylene & p-Xylene	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Naphthalene	ND		8.4	1.5	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
n-Butylbenzene	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
N-Propylbenzene	ND		1.7	0.27	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1

Client Sample ID: MW-16 (69-70)
Date Collected: 07/14/15 15:30
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-1
Matrix: Solid
Percent Solids: 90.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.7	0.22	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
sec-Butylbenzene	ND		1.7	0.21	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Styrene	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
tert-Butylbenzene	ND		1.7	0.17	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Tetrachloroethene	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Toluene	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
trans-1,2-Dichloroethene	ND		1.7	0.34	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
trans-1,3-Dichloropropene	ND		8.4	1.2	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Trichloroethene	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Trichlorofluoromethane	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1
Vinyl chloride	ND		1.7	0.25	ug/Kg	☼	07/18/15 19:04	07/23/15 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*71 - 136*	*07/18/15 19:04*	*07/23/15 21:22*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 120*	*07/18/15 19:04*	*07/23/15 21:22*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 132*	*07/18/15 19:04*	*07/23/15 21:22*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*07/18/15 19:04*	*07/23/15 21:22*	*1*
Trifluorotoluene (Surr)	*92*		*65 - 140*	*07/18/15 19:04*	*07/23/15 21:22*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		53	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
1,2-Dichlorobenzene	ND		58	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
1,3-Dichlorobenzene	ND		53	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
1,4-Dichlorobenzene	ND		53	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
1-Methylnaphthalene	ND		32	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,4,5-Trichlorophenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,4,6-Trichlorophenol	ND		160	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,4-Dichlorophenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,4-Dimethylphenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,4-Dinitrophenol	ND		1100	210	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,4-Dinitrotoluene	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2,6-Dinitrotoluene	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2-Chloronaphthalene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2-Chlorophenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2-Methylnaphthalene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2-Methylphenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2-Nitroaniline	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
2-Nitrophenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
3 & 4 Methylphenol	ND		210	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
3,3'-Dichlorobenzidine	ND		210	32	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
3-Nitroaniline	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4-Bromophenyl phenyl ether	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4-Chloro-3-methylphenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4-Chloroaniline	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4-Chlorophenyl phenyl ether	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4-Nitroaniline	ND		110	21	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
4-Nitrophenol	ND	* ^	1100	260	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Acenaphthene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1

Client Sample ID: MW-16 (69-70)
Date Collected: 07/14/15 15:30
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-1
Matrix: Solid
Percent Solids: 90.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Anthracene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzo[a]anthracene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzo[a]pyrene	ND		32	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzo[b]fluoranthene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzo[g,h,i]perylene	ND		26	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzo[k]fluoranthene	ND		26	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzoic acid	ND		2600	790	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Benzyl alcohol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
bis (2-chloroisopropyl) ether	ND		260	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Bis(2-chloroethoxy)methane	ND		110	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Bis(2-chloroethyl)ether	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Bis(2-ethylhexyl) phthalate	ND		630	53	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Butyl benzyl phthalate	ND		210	53	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Carbazole	ND		110	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Chrysene	ND		26	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Dibenz(a,h)anthracene	ND		42	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Dibenzofuran	ND		110	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Diethyl phthalate	**16**	**J B**	210	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Dimethyl phthalate	ND		110	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Di-n-butyl phthalate	ND		530	53	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Di-n-octyl phthalate	ND		530	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Fluoranthene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Fluorene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Hexachlorobenzene	ND		53	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Hexachlorobutadiene	ND		53	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Hexachlorocyclopentadiene	ND		110	11	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Hexachloroethane	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Indeno[1,2,3-cd]pyrene	ND		42	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Isophorone	ND		110	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Naphthalene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Nitrobenzene	ND		110	36	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
N-Nitrosodi-n-propylamine	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
N-Nitrosodiphenylamine	ND		53	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Phenanthrene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Phenol	ND		110	16	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1
Pyrene	ND		21	5.3	ug/Kg	☼	07/21/15 08:47	07/22/15 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*63*		*28 - 143*	*07/21/15 08:47*	*07/22/15 20:36*	*1*
2-Fluorobiphenyl	*57*		*42 - 140*	*07/21/15 08:47*	*07/22/15 20:36*	*1*
2-Fluorophenol	*53*		*36 - 145*	*07/21/15 08:47*	*07/22/15 20:36*	*1*
Nitrobenzene-d5	*60*		*38 - 141*	*07/21/15 08:47*	*07/22/15 20:36*	*1*
Phenol-d5	*62*		*38 - 149*	*07/21/15 08:47*	*07/22/15 20:36*	*1*
Terphenyl-d14	*72*		*42 - 151*	*07/21/15 08:47*	*07/22/15 20:36*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1

Client Sample ID: MW-16 (69-70)
Date Collected: 07/14/15 15:30
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-1
Matrix: Solid
Percent Solids: 90.9

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1
PCB-1232	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1
PCB-1242	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1
PCB-1248	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1
PCB-1254	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1
PCB-1260	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*51.9 - 151*	*07/20/15 11:12*	*07/20/15 16:01*	*1*
DCB Decachlorobiphenyl (Surr)	*100*		*73.5 - 164*	*07/20/15 11:12*	*07/20/15 16:01*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		39	39	mg/Kg	☼	07/17/15 12:00	07/21/15 11:11	1
Diesel Range Organics (DRO) (C10-C25)	ND		98	98	mg/Kg	☼	07/17/15 12:00	07/21/15 11:11	1
Residual Range Organics (RRO) (C25-C36)	ND		98	98	mg/Kg	☼	07/17/15 12:00	07/21/15 11:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*07/17/15 12:00*	*07/21/15 11:11*	*1*
n-Triacontane-d62	*85*		*50 - 150*	*07/17/15 12:00*	*07/21/15 11:11*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.47**		0.22	0.046	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Arsenic	**10**		0.54	0.20	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Barium	**69**		0.54	0.085	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Beryllium	**0.43**		0.22	0.038	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Cadmium	**0.14**	**J**	0.22	0.021	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Chromium	**10**		0.54	0.068	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Copper	**19**		0.43	0.11	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Iron	**23000**		43	12	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Lead	**10**		0.54	0.052	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Manganese	**530**		1.1	0.18	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Nickel	**15**		0.54	0.088	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Selenium	**0.93**	**J**	1.1	0.22	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Silver	**0.044**	**J**	0.22	0.013	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Thallium	ND		0.43	0.14	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Zinc	**51**		5.4	1.2	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10
Vanadium	**37**		2.2	0.51	mg/Kg	☼	07/22/15 13:29	07/23/15 15:42	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**6.3**	**J**	36	1.5	ug/Kg	☼	07/21/15 09:15	07/21/15 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	07/20/15 10:50	07/21/15 11:04	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid
Percent Solids: 95.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.74	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,1,1-Trichloroethane	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.67	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,1,2-Trichloroethane	ND		1.5	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,1-Dichloroethane	ND		0.74	0.14	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,1-Dichloroethene	ND		3.7	0.37	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,1-Dichloropropene	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2,3-Trichlorobenzene	ND		2.2	0.45	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2,3-Trichloropropane	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2,4-Trichlorobenzene	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2,4-Trimethylbenzene	ND		1.5	0.12	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2-Dibromo-3-Chloropropane	ND		7.4	1.2	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2-Dichlorobenzene	ND		1.5	0.23	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2-Dichloroethane	ND		0.74	0.11	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,2-Dichloropropane	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,3,5-Trimethylbenzene	ND		3.7	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,3-Dichlorobenzene	ND		1.5	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,3-Dichloropropane	ND		1.5	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
1,4-Dichlorobenzene	ND		0.74	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
2,2-Dichloropropane	ND		3.7	0.67	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
2-Chlorotoluene	ND		1.5	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
4-Chlorotoluene	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
4-Isopropyltoluene	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Benzene	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Bromobenzene	ND		7.4	1.7	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Bromoform	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Bromomethane	ND		0.74	0.16	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Carbon tetrachloride	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Chlorobenzene	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Chlorobromomethane	ND		1.5	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Chlorodibromomethane	ND		1.5	0.20	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Chloroethane	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Chloroform	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Chloromethane	ND		0.74	0.10	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
cis-1,2-Dichloroethene	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
cis-1,3-Dichloropropene	ND		0.74	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Dibromomethane	ND		0.74	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Dichlorobromomethane	ND		0.74	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Dichlorodifluoromethane	ND		1.5	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Ethylbenzene	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Ethylene Dibromide	ND		0.74	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Hexachlorobutadiene	ND		2.2	0.45	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Isopropylbenzene	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Methyl tert-butyl ether	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Methylene Chloride	**2.9**	**J**	11	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
m-Xylene & p-Xylene	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Naphthalene	ND		7.4	1.3	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
n-Butylbenzene	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
N-Propylbenzene	ND		1.5	0.24	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid
Percent Solids: 95.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.5	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
sec-Butylbenzene	ND		1.5	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Styrene	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
tert-Butylbenzene	ND		1.5	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Tetrachloroethene	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Toluene	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
trans-1,2-Dichloroethene	ND		1.5	0.30	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
trans-1,3-Dichloropropene	ND		7.4	1.0	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Trichloroethene	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Trichlorofluoromethane	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1
Vinyl chloride	ND		1.5	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*71 - 136*	*07/18/15 17:00*	*07/23/15 21:50*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*	*07/18/15 17:00*	*07/23/15 21:50*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 132*	*07/18/15 17:00*	*07/23/15 21:50*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*07/18/15 17:00*	*07/23/15 21:50*	*1*
Trifluorotoluene (Surr)	*93*		*65 - 140*	*07/18/15 17:00*	*07/23/15 21:50*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		52	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
1,2-Dichlorobenzene	ND		57	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
1,3-Dichlorobenzene	ND		52	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
1,4-Dichlorobenzene	ND		52	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
1-Methylnaphthalene	ND		31	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,4-Dinitrophenol	ND	F1	1000	210	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2-Chloronaphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2-Methylnaphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2-Methylphenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
3 & 4 Methylphenol	ND		210	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
3,3'-Dichlorobenzidine	ND		210	31	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4,6-Dinitro-2-methylphenol	ND	F1	1000	100	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4-Chloroaniline	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4-Nitroaniline	ND		100	21	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
4-Nitrophenol	ND	* F1 ^	1000	260	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Acenaphthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid
Percent Solids: 95.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Anthracene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzo[a]anthracene	**6.1**	**J**	21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzo[a]pyrene	ND		31	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzo[b]fluoranthene	**11**	**J**	21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzo[g,h,i]perylene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzo[k]fluoranthene	**10**	**J**	26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzoic acid	ND	F1	2600	770	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Benzyl alcohol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
bis (2-chloroisopropyl) ether	ND		260	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Bis(2-chloroethoxy)methane	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Bis(2-ethylhexyl) phthalate	ND		620	52	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Butyl benzyl phthalate	**72**	**J B**	210	52	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Carbazole	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Chrysene	**6.1**	**J**	26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Dibenz(a,h)anthracene	ND		41	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Dibenzofuran	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Diethyl phthalate	ND		210	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Dimethyl phthalate	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Di-n-butyl phthalate	ND		520	52	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Di-n-octyl phthalate	ND		520	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Fluoranthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Fluorene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Hexachlorobenzene	ND		52	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Hexachlorobutadiene	ND		52	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Hexachlorocyclopentadiene	ND	F1	100	10	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Hexachloroethane	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Indeno[1,2,3-cd]pyrene	ND		41	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Isophorone	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Naphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Nitrobenzene	ND		100	35	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
N-Nitrosodiphenylamine	ND		52	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Pentachlorophenol	ND	F1	210	21	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Phenanthrene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Phenol	ND		100	15	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1
Pyrene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*100*		*28 - 143*	*07/21/15 08:47*	*07/22/15 21:02*	*1*
2-Fluorobiphenyl	*81*		*42 - 140*	*07/21/15 08:47*	*07/22/15 21:02*	*1*
2-Fluorophenol	*73*		*36 - 145*	*07/21/15 08:47*	*07/22/15 21:02*	*1*
Nitrobenzene-d5	*85*		*38 - 141*	*07/21/15 08:47*	*07/22/15 21:02*	*1*
Phenol-d5	*87*		*38 - 149*	*07/21/15 08:47*	*07/22/15 21:02*	*1*
Terphenyl-d14	*99*		*42 - 151*	*07/21/15 08:47*	*07/22/15 21:02*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid
Percent Solids: 95.8

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.1	0.14	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
alpha-BHC	ND		1.0	0.28	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
beta-BHC	ND		1.0	0.33	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Endrin	ND		2.1	0.17	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Endrin aldehyde	ND		2.1	0.20	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Endrin ketone	ND		2.1	0.26	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Heptachlor	ND		2.1	0.48	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Methoxychlor	ND		10	0.26	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1
Toxaphene	ND		100	23	ug/Kg	☼	07/21/15 16:25	07/24/15 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*		*60 - 128*	*07/21/15 16:25*	*07/24/15 19:30*	*1*
Tetrachloro-m-xylene	*57*		*35 - 129*	*07/21/15 16:25*	*07/24/15 19:30*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1
PCB-1221	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1
PCB-1232	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1
PCB-1242	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1
PCB-1248	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1
PCB-1254	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1
PCB-1260	ND		10	2.2	ug/Kg	☼	07/20/15 11:12	07/20/15 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*51.9 - 151*	*07/20/15 11:12*	*07/20/15 16:22*	*1*
DCB Decachlorobiphenyl (Surr)	*100*		*73.5 - 164*	*07/20/15 11:12*	*07/20/15 16:22*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		68	12	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Bolstar	ND		13	4.3	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Chlorpyrifos	ND		20	6.6	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Coumaphos	ND		13	2.9	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Demeton, Total	ND		40	7.7	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Diazinon	ND		22	7.4	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Dichlorvos	ND		23	7.6	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Dimethoate	ND		22	7.2	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Disulfoton	ND		49	7.9	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid
Percent Solids: 95.8

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		13	3.8	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Famphur	ND		13	3.3	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Fensulfothion	ND		26	8.3	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Mevinphos	ND		15	4.7	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Methyl parathion	ND		20	6.5	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Merphos	ND		31	5.2	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Malathion	ND		15	4.7	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Fenthion	ND		34	8.9	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Ethyl Parathion	ND		18	5.4	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Phorate	ND		20	5.8	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Ronnel	ND		47	16	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Simazine	ND		68	23	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Sulfotepp	ND		20	6.4	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Thionazin	ND		18	5.7	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Tokuthion	ND		20	4.0	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Trichloronate	ND		20	6.4	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Ethoprop	ND		15	5.0	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Propazine	ND		68	8.8	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1
Azinphos-methyl	ND		13	3.6	ug/Kg	☼	07/19/15 15:37	07/21/15 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*69*		*42 - 132*	*07/19/15 15:37*	*07/21/15 16:40*	*1*
Triphenylphosphate	*83*		*47 - 161*	*07/19/15 15:37*	*07/21/15 16:40*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
2,4-D	ND		81	14	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
2,4-DB	**12**	**J B**	81	7.5	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
Dalapon	ND		40	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
Dicamba	ND		40	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
Dichlorprop	ND		81	3.2	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
MCPA	ND		8100	2000	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
MCPP	ND		8100	2000	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*65*		*31 - 105*	*07/27/15 10:22*	*08/12/15 02:48*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		38	38	mg/Kg	☼	07/17/15 12:00	07/21/15 11:29	1
Diesel Range Organics (DRO) (C10-C25)	ND		95	95	mg/Kg	☼	07/17/15 12:00	07/21/15 11:29	1
Residual Range Organics (RRO) (C25-C36)	ND		95	95	mg/Kg	☼	07/17/15 12:00	07/21/15 11:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*07/17/15 12:00*	*07/21/15 11:29*	*1*
n-Triacontane-d62	*87*		*50 - 150*	*07/17/15 12:00*	*07/21/15 11:29*	*1*

Client Sample ID: LFB-8 (17-18)

Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3

Matrix: Solid
Percent Solids: 95.8

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.21		0.20	0.043	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Arsenic	2.8		0.51	0.18	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Barium	100		0.51	0.079	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Beryllium	0.33		0.20	0.036	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Cadmium	0.21		0.20	0.019	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Chromium	4.4		0.51	0.064	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Copper	21		0.41	0.10	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Iron	45000		41	11	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Lead	5.8		0.51	0.049	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Manganese	700		1.0	0.17	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Nickel	12		0.51	0.083	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Selenium	2.0		1.0	0.21	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Silver	0.024	J	0.20	0.012	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Thallium	ND		0.41	0.13	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Zinc	85		5.1	1.1	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10
Vanadium	85		2.0	0.48	mg/Kg	☼	07/22/15 13:29	07/23/15 15:46	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	3.6	J	40	1.6	ug/Kg	☼	07/21/15 09:15	07/21/15 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	07/20/15 10:50	07/21/15 11:04	1

Client Sample ID: LFB-9 (11-12)

Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4

Matrix: Solid
Percent Solids: 92.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.89	0.21	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,1,1-Trichloroethane	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,1,2,2-Tetrachloroethane	ND		3.6	0.80	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,1,2-Trichloroethane	ND		1.8	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,1-Dichloroethane	ND		0.89	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,1-Dichloroethene	ND		4.4	0.44	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,1-Dichloropropene	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2,3-Trichlorobenzene	ND		2.7	0.53	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2,3-Trichloropropane	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2,4-Trichlorobenzene	ND		1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2,4-Trimethylbenzene	ND		1.8	0.14	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2-Dibromo-3-Chloropropane	ND		8.9	1.4	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2-Dichlorobenzene	ND		1.8	0.28	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2-Dichloroethane	ND		0.89	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,2-Dichloropropane	ND		1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,3,5-Trimethylbenzene	ND		4.4	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,3-Dichlorobenzene	ND		1.8	0.23	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,3-Dichloropropane	ND		1.8	0.20	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
1,4-Dichlorobenzene	ND		0.89	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: LFB-9 (11-12)
Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4
Matrix: Solid
Percent Solids: 92.3

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		4.4	0.80	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
2-Chlorotoluene	ND		1.8	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
4-Chlorotoluene	ND		1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
4-Isopropyltoluene	**5.2**		1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Benzene	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Bromobenzene	ND		8.9	2.0	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Bromoform	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Bromomethane	ND		0.89	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Carbon tetrachloride	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Chlorobenzene	ND		1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Chlorobromomethane	ND		1.8	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Chlorodibromomethane	ND		1.8	0.24	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Chloroethane	ND		1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Chloroform	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Chloromethane	ND		0.89	0.12	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
cis-1,2-Dichloroethene	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
cis-1,3-Dichloropropene	ND		0.89	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Dibromomethane	ND		0.89	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Dichlorobromomethane	ND		0.89	0.16	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Dichlorodifluoromethane	ND		1.8	0.44	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Ethylbenzene	ND		1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Ethylene Dibromide	ND		0.89	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Hexachlorobutadiene	ND		2.7	0.53	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Isopropylbenzene	ND		1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Methyl tert-butyl ether	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Methylene Chloride	**4.9**	**J**	13	0.21	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
m-Xylene & p-Xylene	**0.27**	**J**	1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Naphthalene	ND		8.9	1.6	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
n-Butylbenzene	ND		1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
N-Propylbenzene	ND		1.8	0.28	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
o-Xylene	ND		1.8	0.23	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
sec-Butylbenzene	ND		1.8	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Styrene	ND		1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
tert-Butylbenzene	ND		1.8	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Tetrachloroethene	**0.47**	**J**	1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Toluene	**0.57**	**J**	1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
trans-1,2-Dichloroethene	ND		1.8	0.36	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
trans-1,3-Dichloropropene	ND		8.9	1.2	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Trichloroethene	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Trichlorofluoromethane	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1
Vinyl chloride	ND		1.8	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*71 - 136*	*07/18/15 17:00*	*07/23/15 22:16*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*	*07/18/15 17:00*	*07/23/15 22:16*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 132*	*07/18/15 17:00*	*07/23/15 22:16*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*07/18/15 17:00*	*07/23/15 22:16*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*07/18/15 17:00*	*07/23/15 22:16*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: LFB-9 (11-12)
Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4
Matrix: Solid
Percent Solids: 92.3

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
1,2-Dichlorobenzene	ND		58	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
1,3-Dichlorobenzene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
1,4-Dichlorobenzene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
1-Methylnaphthalene	ND		31	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,4,5-Trichlorophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,4,6-Trichlorophenol	ND		160	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,4-Dichlorophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,4-Dimethylphenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,4-Dinitrophenol	ND		1000	210	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,4-Dinitrotoluene	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2,6-Dinitrotoluene	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2-Chloronaphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2-Chlorophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2-Methylnaphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2-Methylphenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2-Nitroaniline	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
2-Nitrophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
3 & 4 Methylphenol	ND		210	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
3,3'-Dichlorobenzidine	ND		210	31	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
3-Nitroaniline	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4-Bromophenyl phenyl ether	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4-Chloro-3-methylphenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4-Chloroaniline	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4-Chlorophenyl phenyl ether	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4-Nitroaniline	ND		100	21	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
4-Nitrophenol	ND	* ^	1000	260	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Acenaphthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Acenaphthylene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Anthracene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzo[a]anthracene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzo[a]pyrene	ND		31	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzo[b]fluoranthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzo[g,h,i]perylene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzo[k]fluoranthene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzoic acid	ND		2600	790	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Benzyl alcohol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
bis (2-chloroisopropyl) ether	ND		260	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Bis(2-chloroethoxy)methane	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Bis(2-chloroethyl)ether	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Bis(2-ethylhexyl) phthalate	ND		630	52	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Butyl benzyl phthalate	ND		210	52	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Carbazole	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Chrysene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Dibenz(a,h)anthracene	ND		42	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Dibenzofuran	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Diethyl phthalate	ND		210	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Dimethyl phthalate	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: LFB-9 (11-12)
Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4
Matrix: Solid
Percent Solids: 92.3

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		520	52	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Di-n-octyl phthalate	ND		520	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Fluoranthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Fluorene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Hexachlorobenzene	ND		52	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Hexachlorobutadiene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Hexachloroethane	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Indeno[1,2,3-cd]pyrene	ND		42	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Isophorone	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Naphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Nitrobenzene	ND		100	36	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
N-Nitrosodi-n-propylamine	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
N-Nitrosodiphenylamine	ND		52	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Phenanthrene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Phenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1
Pyrene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*84*		*28 - 143*	*07/21/15 08:47*	*07/22/15 22:20*	*1*
2-Fluorobiphenyl	*76*		*42 - 140*	*07/21/15 08:47*	*07/22/15 22:20*	*1*
2-Fluorophenol	*73*		*36 - 145*	*07/21/15 08:47*	*07/22/15 22:20*	*1*
Nitrobenzene-d5	*83*		*38 - 141*	*07/21/15 08:47*	*07/22/15 22:20*	*1*
Phenol-d5	*82*		*38 - 149*	*07/21/15 08:47*	*07/22/15 22:20*	*1*
Terphenyl-d14	*93*		*42 - 151*	*07/21/15 08:47*	*07/22/15 22:20*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
4,4'-DDE	ND		2.1	0.15	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
alpha-BHC	ND		1.0	0.29	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
beta-BHC	ND		1.0	0.34	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Endosulfan I	ND		1.0	0.11	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Endrin	ND		2.1	0.17	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Endrin aldehyde	ND		2.1	0.21	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Endrin ketone	ND		2.1	0.27	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Heptachlor	ND		2.1	0.49	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Methoxychlor	ND		10	0.27	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1
Toxaphene	ND		100	24	ug/Kg	☼	07/21/15 16:26	07/24/15 20:56	1

Client Sample ID: LFB-9 (11-12)
Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4
Matrix: Solid
Percent Solids: 92.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83		60 - 128	07/21/15 16:26	07/24/15 20:56	1
Tetrachloro-m-xylene	59		35 - 129	07/21/15 16:26	07/24/15 20:56	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1
PCB-1221	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1
PCB-1232	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1
PCB-1242	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1
PCB-1248	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1
PCB-1254	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1
PCB-1260	ND		11	2.4	ug/Kg	☼	07/20/15 11:12	07/20/15 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		51.9 - 151	07/20/15 11:12	07/20/15 16:43	1
DCB Decachlorobiphenyl (Surr)	109		73.5 - 164	07/20/15 11:12	07/20/15 16:43	1

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		69	13	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Bolstar	ND		13	4.4	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Chlorpyrifos	ND		21	6.7	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Coumaphos	ND		13	2.9	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Demeton, Total	ND		40	7.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Diazinon	ND		23	7.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Dichlorvos	ND		24	7.7	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Dimethoate	ND		23	7.3	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Disulfoton	ND		50	8.0	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
EPN	ND		13	3.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Famphur	ND		13	3.3	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Fensulfothion	ND		26	8.4	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Mevinphos	ND		16	4.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Methyl parathion	ND		21	6.6	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Merphos	ND		31	5.3	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Malathion	ND		16	4.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Fenthion	ND		34	9.0	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Ethyl Parathion	ND		19	5.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Phorate	ND		21	5.9	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Ronnel	ND		48	16	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Simazine	ND		69	23	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Sulfotepp	ND		21	6.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Thionazin	ND		19	5.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Tokuthion	ND		21	4.0	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Trichloronate	ND		21	6.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Ethoprop	ND		16	5.1	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Propazine	ND		69	8.9	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1
Azinphos-methyl	ND		13	3.6	ug/Kg	☼	07/19/15 15:37	07/21/15 23:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	69		42 - 132	07/19/15 15:37	07/21/15 23:00	1
Triphenylphosphate	82		47 - 161	07/19/15 15:37	07/21/15 23:00	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
2,4-D	ND		83	14	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
2,4-DB	ND		83	7.7	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
Dalapon	ND		41	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
Dicamba	ND		41	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
Dichlorprop	ND		83	3.3	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
MCPA	ND		8300	2100	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
MCPP	ND		8300	2100	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1
Silvex (2,4,5-TP)	ND		21	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*70*		*31 - 105*	*07/27/15 10:22*	*08/12/15 03:12*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		41	41	mg/Kg	☼	07/17/15 12:00	07/21/15 11:47	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	07/17/15 12:00	07/21/15 11:47	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	07/17/15 12:00	07/21/15 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*07/17/15 12:00*	*07/21/15 11:47*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*07/17/15 12:00*	*07/21/15 11:47*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.33**		0.21	0.044	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Arsenic	**4.9**		0.53	0.19	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Barium	**170**		0.53	0.082	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Beryllium	**0.51**		0.21	0.037	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Cadmium	**0.16**	**J**	0.21	0.020	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Chromium	**10**		0.53	0.066	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Copper	**86**		0.42	0.10	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Iron	**31000**		42	11	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Lead	**7.8**		0.53	0.051	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Manganese	**400**		1.1	0.18	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Nickel	**11**		0.53	0.085	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Selenium	**1.5**		1.1	0.21	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Silver	**0.051**	**J**	0.21	0.013	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Thallium	ND		0.42	0.14	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Zinc	**68**		5.3	1.2	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10
Vanadium	**57**		2.1	0.50	mg/Kg	☼	07/22/15 13:29	07/23/15 15:28	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**4.9**	**J**	41	1.7	ug/Kg	☼	07/21/15 09:15	07/21/15 13:45	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	07/20/15 10:50	07/21/15 11:04	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: LFB-10 (45-46)
Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5
Matrix: Solid
Percent Solids: 95.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.84	0.20	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,1,1-Trichloroethane	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,1,2,2-Tetrachloroethane	ND		3.3	0.75	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,1,2-Trichloroethane	ND		1.7	0.21	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,1-Dichloroethane	ND		0.84	0.16	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,1-Dichloroethene	ND		4.2	0.42	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,1-Dichloropropene	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2,3-Trichlorobenzene	ND		2.5	0.50	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2,3-Trichloropropane	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2,4-Trichlorobenzene	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2,4-Trimethylbenzene	ND		1.7	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2-Dibromo-3-Chloropropane	ND		8.4	1.3	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2-Dichlorobenzene	ND		1.7	0.26	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2-Dichloroethane	ND		0.84	0.13	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,2-Dichloropropane	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,3,5-Trimethylbenzene	ND		4.2	0.14	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,3-Dichlorobenzene	ND		1.7	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,3-Dichloropropane	ND		1.7	0.19	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
1,4-Dichlorobenzene	ND		0.84	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
2,2-Dichloropropane	ND		4.2	0.75	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
2-Chlorotoluene	ND		1.7	0.14	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
4-Chlorotoluene	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
4-Isopropyltoluene	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Benzene	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Bromobenzene	ND		8.4	1.9	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Bromoform	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Bromomethane	ND		0.84	0.18	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Carbon tetrachloride	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Chlorobenzene	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Chlorobromomethane	ND		1.7	0.21	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Chlorodibromomethane	ND		1.7	0.23	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Chloroethane	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Chloroform	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Chloromethane	ND		0.84	0.12	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
cis-1,2-Dichloroethene	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
cis-1,3-Dichloropropene	ND		0.84	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Dibromomethane	ND		0.84	0.14	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Dichlorobromomethane	ND		0.84	0.15	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Dichlorodifluoromethane	ND		1.7	0.41	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Ethylbenzene	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Ethylene Dibromide	ND		0.84	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Hexachlorobutadiene	ND		2.5	0.50	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Isopropylbenzene	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Methyl tert-butyl ether	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Methylene Chloride	**3.3**	**J**	13	0.20	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
m-Xylene & p-Xylene	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Naphthalene	ND		8.4	1.5	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
n-Butylbenzene	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
N-Propylbenzene	ND		1.7	0.27	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1

Client Sample ID: LFB-10 (45-46)
Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5
Matrix: Solid
Percent Solids: 95.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.7	0.22	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
sec-Butylbenzene	ND		1.7	0.21	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Styrene	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
tert-Butylbenzene	ND		1.7	0.17	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Tetrachloroethene	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Toluene	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
trans-1,2-Dichloroethene	ND		1.7	0.33	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
trans-1,3-Dichloropropene	ND		8.4	1.2	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Trichloroethene	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Trichlorofluoromethane	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1
Vinyl chloride	ND		1.7	0.25	ug/Kg	☼	07/18/15 17:00	07/23/15 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*71 - 136*	*07/18/15 17:00*	*07/23/15 22:43*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*	*07/18/15 17:00*	*07/23/15 22:43*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 132*	*07/18/15 17:00*	*07/23/15 22:43*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*07/18/15 17:00*	*07/23/15 22:43*	*1*
Trifluorotoluene (Surr)	*97*		*65 - 140*	*07/18/15 17:00*	*07/23/15 22:43*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
1,2-Dichlorobenzene	ND		57	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
1,3-Dichlorobenzene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
1,4-Dichlorobenzene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
1-Methylnaphthalene	ND		31	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,4,5-Trichlorophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,4,6-Trichlorophenol	ND		160	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,4-Dichlorophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,4-Dimethylphenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,4-Dinitrophenol	ND		1000	210	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,4-Dinitrotoluene	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2,6-Dinitrotoluene	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2-Chloronaphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2-Chlorophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2-Methylnaphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2-Methylphenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2-Nitroaniline	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
2-Nitrophenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
3 & 4 Methylphenol	ND		210	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
3,3'-Dichlorobenzidine	ND		210	31	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
3-Nitroaniline	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4-Bromophenyl phenyl ether	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4-Chloro-3-methylphenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4-Chloroaniline	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4-Chlorophenyl phenyl ether	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4-Nitroaniline	ND		100	21	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
4-Nitrophenol	ND	* ^	1000	260	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Acenaphthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1

Client Sample ID: LFB-10 (45-46)
Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5
Matrix: Solid
Percent Solids: 95.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Anthracene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzo[a]anthracene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzo[a]pyrene	**14**	**J**	31	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzo[b]fluoranthene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzo[g,h,i]perylene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzo[k]fluoranthene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzoic acid	ND		2600	780	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Benzyl alcohol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
bis (2-chloroisopropyl) ether	ND		260	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Bis(2-chloroethoxy)methane	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Bis(2-chloroethyl)ether	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Bis(2-ethylhexyl) phthalate	ND		630	52	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Butyl benzyl phthalate	ND		210	52	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Carbazole	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Chrysene	ND		26	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Dibenz(a,h)anthracene	ND		42	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Dibenzofuran	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Diethyl phthalate	**23**	**J B**	210	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Dimethyl phthalate	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Di-n-butyl phthalate	ND		520	52	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Di-n-octyl phthalate	ND		520	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Fluoranthene	**9.8**	**J**	21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Fluorene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Hexachlorobenzene	ND		52	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Hexachlorobutadiene	ND		52	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Hexachloroethane	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Indeno[1,2,3-cd]pyrene	ND		42	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Isophorone	ND		100	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Naphthalene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Nitrobenzene	ND		100	36	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
N-Nitrosodi-n-propylamine	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
N-Nitrosodiphenylamine	ND		52	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Phenanthrene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Phenol	ND		100	16	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1
Pyrene	ND		21	5.2	ug/Kg	☼	07/21/15 08:47	07/22/15 22:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*76*		*28 - 143*	*07/21/15 08:47*	*07/22/15 22:46*	*1*
2-Fluorobiphenyl	*69*		*42 - 140*	*07/21/15 08:47*	*07/22/15 22:46*	*1*
2-Fluorophenol	*62*		*36 - 145*	*07/21/15 08:47*	*07/22/15 22:46*	*1*
Nitrobenzene-d5	*71*		*38 - 141*	*07/21/15 08:47*	*07/22/15 22:46*	*1*
Phenol-d5	*72*		*38 - 149*	*07/21/15 08:47*	*07/22/15 22:46*	*1*
Terphenyl-d14	*86*		*42 - 151*	*07/21/15 08:47*	*07/22/15 22:46*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1

Client Sample ID: LFB-10 (45-46)
Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5
Matrix: Solid
Percent Solids: 95.6

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.0	0.14	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
4,4'-DDT	ND		2.0	0.15	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Aldrin	ND		1.0	0.22	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
alpha-BHC	ND		1.0	0.28	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
beta-BHC	ND		1.0	0.33	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Dieldrin	ND		2.0	0.12	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Endosulfan II	ND		2.0	0.17	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Endrin	ND		2.0	0.16	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Endrin aldehyde	**14**		2.0	0.20	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Endrin ketone	ND		2.0	0.26	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Heptachlor	ND		2.0	0.47	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Methoxychlor	ND		10	0.26	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1
Toxaphene	ND		100	23	ug/Kg	☼	07/21/15 16:26	07/24/15 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*77*		*60 - 128*	*07/21/15 16:26*	*07/24/15 21:14*	*1*
Tetrachloro-m-xylene	*56*		*35 - 129*	*07/21/15 16:26*	*07/24/15 21:14*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1
PCB-1221	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1
PCB-1232	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1
PCB-1242	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1
PCB-1248	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1
PCB-1254	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1
PCB-1260	ND		10	2.3	ug/Kg	☼	07/20/15 11:12	07/20/15 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*51.9 - 151*	*07/20/15 11:12*	*07/20/15 17:04*	*1*
DCB Decachlorobiphenyl (Surr)	*88*		*73.5 - 164*	*07/20/15 11:12*	*07/20/15 17:04*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		69	12	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Bolstar	ND		13	4.4	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Chlorpyrifos	ND		21	6.7	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Coumaphos	ND		13	2.9	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Demeton, Total	ND		40	7.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Diazinon	ND		23	7.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Dichlorvos	ND		24	7.6	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Dimethoate	ND		23	7.3	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Disulfoton	ND		50	8.0	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1

Client Sample ID: LFB-10 (45-46)
Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5
Matrix: Solid
Percent Solids: 95.6

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		13	3.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Famphur	ND		13	3.3	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Fensulfothion	ND		26	8.4	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Mevinphos	ND		15	4.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Methyl parathion	ND		21	6.6	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Merphos	ND		31	5.3	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Malathion	ND		15	4.8	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Fenthion	ND		34	9.0	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Ethyl Parathion	ND		19	5.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Phorate	ND		21	5.9	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Ronnel	ND		47	16	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Simazine	ND		69	23	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Sulfotepp	ND		21	6.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Thionazin	ND		19	5.7	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Tokuthion	ND		21	4.0	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Trichloronate	ND		21	6.5	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Ethoprop	ND		15	5.1	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Propazine	ND		69	8.9	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1
Azinphos-methyl	ND		13	3.6	ug/Kg	☼	07/19/15 15:37	07/21/15 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*66*		*42 - 132*	*07/19/15 15:37*	*07/21/15 23:32*	*1*
Triphenylphosphate	*80*		*47 - 161*	*07/19/15 15:37*	*07/21/15 23:32*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
2,4-D	ND		83	15	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
2,4-DB	ND		83	7.7	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
Dalapon	ND		42	1.5	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
Dicamba	ND		42	1.5	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
Dichlorprop	ND		83	3.3	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
MCPA	ND		8300	2100	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
MCPP	ND		8300	2100	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1
Silvex (2,4,5-TP)	ND		21	1.5	ug/Kg	☼	07/27/15 10:22	08/12/15 03:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*82*		*31 - 105*	*07/27/15 10:22*	*08/12/15 03:35*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		39	39	mg/Kg	☼	07/17/15 12:00	07/21/15 10:35	1
Diesel Range Organics (DRO) (C10-C25)	ND		97	97	mg/Kg	☼	07/17/15 12:00	07/21/15 10:35	1
Residual Range Organics (RRO) (C25-C36)	ND		97	97	mg/Kg	☼	07/17/15 12:00	07/21/15 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*07/17/15 12:00*	*07/21/15 10:35*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*07/17/15 12:00*	*07/21/15 10:35*	*1*

Client Sample ID: LFB-10 (45-46)

Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5

Matrix: Solid
Percent Solids: 95.6

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.30		0.15	0.032	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Arsenic	8.0		0.39	0.14	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Barium	81		0.39	0.060	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Beryllium	0.34		0.15	0.027	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Cadmium	0.097	J	0.15	0.015	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Chromium	6.3		0.39	0.049	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Copper	13		0.31	0.076	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Iron	20000		31	8.3	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Lead	6.0		0.39	0.037	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Manganese	470		0.77	0.13	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Nickel	8.7		0.39	0.063	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Selenium	0.76	J	0.77	0.16	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Silver	0.024	J	0.15	0.0093	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Thallium	ND		0.31	0.10	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Zinc	39		3.9	0.87	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10
Vanadium	25		1.5	0.37	mg/Kg	☼	07/22/15 13:29	07/23/15 16:09	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	27	J	37	1.5	ug/Kg	☼	07/21/15 09:15	07/21/15 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	07/20/15 10:50	07/21/15 11:04	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-195845/1-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Benzene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromobenzene	ND		10	2.3	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromoform	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Bromomethane	ND		1.0	0.21	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloroethane	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloroform	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Chloromethane	ND		1.0	0.14	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dibromomethane	ND		1.0	0.17	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Methylene Chloride	ND		15	0.24	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Naphthalene	ND		10	1.8	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-195845/1-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195845

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
o-Xylene	ND		2.0	0.26	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Styrene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Toluene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Trichloroethene	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		07/23/15 17:52	07/23/15 17:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*71 - 136*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 132*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*07/23/15 17:52*	*07/23/15 17:11*	*1*
Trifluorotoluene (Surr)	*96*		*65 - 140*	*07/23/15 17:52*	*07/23/15 17:11*	*1*

Lab Sample ID: LCS 580-195845/2-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	40.4		ug/Kg		101	72 - 123
1,1,1-Trichloroethane	40.0	42.5		ug/Kg		106	63 - 135
1,1,2,2-Tetrachloroethane	40.0	40.7		ug/Kg		102	73 - 125
1,1,2-Trichloroethane	40.0	44.7		ug/Kg		112	77 - 124
1,1-Dichloroethane	40.0	42.4		ug/Kg		106	70 - 128
1,1-Dichloroethene	40.0	43.6		ug/Kg		109	70 - 133
1,1-Dichloropropene	40.0	41.9		ug/Kg		105	77 - 125
1,2,3-Trichlorobenzene	40.0	39.3		ug/Kg		98	61 - 130
1,2,3-Trichloropropane	40.0	42.1		ug/Kg		105	77 - 123
1,2,4-Trichlorobenzene	40.0	40.3		ug/Kg		101	61 - 130
1,2,4-Trimethylbenzene	40.0	44.5		ug/Kg		111	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	44.8		ug/Kg		112	53 - 132
1,2-Dichlorobenzene	40.0	40.4		ug/Kg		101	79 - 117
1,2-Dichloroethane	40.0	45.4		ug/Kg		113	71 - 128
1,2-Dichloropropane	40.0	43.7		ug/Kg		109	76 - 161
1,3,5-Trimethylbenzene	40.0	43.1		ug/Kg		108	80 - 125
1,3-Dichlorobenzene	40.0	42.6		ug/Kg		107	79 - 119
1,3-Dichloropropane	40.0	44.4		ug/Kg		111	77 - 123
1,4-Dichlorobenzene	40.0	40.1		ug/Kg		100	79 - 117
2,2-Dichloropropane	40.0	44.0		ug/Kg		110	56 - 144
2-Chlorotoluene	40.0	41.1		ug/Kg		103	79 - 122
4-Chlorotoluene	40.0	41.4		ug/Kg		104	80 - 122
4-Isopropyltoluene	40.0	42.4		ug/Kg		106	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-195845/2-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	41.8		ug/Kg		105	70 - 128
Bromobenzene	40.0	42.8		ug/Kg		107	80 - 120
Bromoform	40.0	41.0		ug/Kg		103	50 - 124
Bromomethane	49.9	39.5		ug/Kg		79	57 - 148
Carbon tetrachloride	40.0	42.2		ug/Kg		106	59 - 145
Chlorobenzene	40.0	42.6		ug/Kg		107	75 - 120
Chlorobromomethane	40.0	43.0		ug/Kg		107	78 - 123
Chlorodibromomethane	40.0	43.5		ug/Kg		109	42 - 129
Chloroethane	50.0	39.7		ug/Kg		79	48 - 167
Chloroform	40.0	42.7		ug/Kg		107	78 - 125
Chloromethane	50.1	42.4		ug/Kg		85	55 - 136
cis-1,2-Dichloroethene	40.0	41.3		ug/Kg		103	70 - 130
cis-1,3-Dichloropropene	40.0	43.8		ug/Kg		110	69 - 129
Dibromomethane	40.0	43.3		ug/Kg		108	78 - 126
Dichlorobromomethane	40.0	43.1		ug/Kg		108	58 - 133
Dichlorodifluoromethane	49.9	42.6		ug/Kg		85	38 - 150
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126
Ethylene Dibromide	40.0	43.7		ug/Kg		109	69 - 126
Hexachlorobutadiene	40.0	41.9		ug/Kg		105	68 - 134
Isopropylbenzene	40.0	39.6		ug/Kg		99	79 - 127
Methyl tert-butyl ether	40.0	46.0		ug/Kg		115	65 - 125
Methylene Chloride	40.0	44.3		ug/Kg		111	57 - 146
m-Xylene & p-Xylene	40.0	43.2		ug/Kg		108	78 - 126
Naphthalene	40.0	47.0		ug/Kg		117	14 - 170
n-Butylbenzene	40.0	41.8		ug/Kg		104	78 - 128
N-Propylbenzene	40.0	42.8		ug/Kg		107	81 - 127
o-Xylene	40.0	43.1		ug/Kg		108	77 - 127
sec-Butylbenzene	40.0	46.1		ug/Kg		115	78 - 128
Styrene	40.0	43.2		ug/Kg		108	79 - 127
tert-Butylbenzene	40.0	43.3		ug/Kg		108	71 - 136
Tetrachloroethene	40.0	39.3		ug/Kg		98	56 - 155
Toluene	40.0	43.1		ug/Kg		108	75 - 126
trans-1,2-Dichloroethene	40.0	39.4		ug/Kg		99	76 - 131
trans-1,3-Dichloropropene	40.0	45.7		ug/Kg		114	72 - 129
Trichloroethene	40.0	40.5		ug/Kg		101	83 - 124
Trichlorofluoromethane	50.1	40.1		ug/Kg		80	47 - 165
Vinyl chloride	50.0	35.8		ug/Kg		72	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*71 - 136*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 132*
Toluene-d8 (Surr)	*97*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195845/3-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195845

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	41.4		ug/Kg		103	72 - 123	2	20
1,1,1-Trichloroethane	40.0	43.5		ug/Kg		109	63 - 135	2	20
1,1,2,2-Tetrachloroethane	40.0	41.1		ug/Kg		103	73 - 125	1	22
1,1,2-Trichloroethane	40.0	44.0		ug/Kg		110	77 - 124	2	18
1,1-Dichloroethane	40.0	43.3		ug/Kg		108	70 - 128	2	21
1,1-Dichloroethene	40.0	44.6		ug/Kg		111	70 - 133	2	23
1,1-Dichloropropene	40.0	42.3		ug/Kg		106	77 - 125	1	16
1,2,3-Trichlorobenzene	40.0	37.6		ug/Kg		94	61 - 130	5	23
1,2,3-Trichloropropane	40.0	41.7		ug/Kg		104	77 - 123	1	23
1,2,4-Trichlorobenzene	40.0	38.7		ug/Kg		97	61 - 130	4	22
1,2,4-Trimethylbenzene	40.0	45.7		ug/Kg		114	79 - 124	3	18
1,2-Dibromo-3-Chloropropane	40.0	43.3		ug/Kg		108	53 - 132	3	27
1,2-Dichlorobenzene	40.0	40.2		ug/Kg		101	79 - 117	0	17
1,2-Dichloroethane	40.0	44.7		ug/Kg		112	71 - 128	1	18
1,2-Dichloropropane	40.0	43.0		ug/Kg		107	76 - 161	2	15
1,3,5-Trimethylbenzene	40.0	44.7		ug/Kg		112	80 - 125	4	18
1,3-Dichlorobenzene	40.0	42.4		ug/Kg		106	79 - 119	1	17
1,3-Dichloropropane	40.0	43.7		ug/Kg		109	77 - 123	1	19
1,4-Dichlorobenzene	40.0	39.3		ug/Kg		98	79 - 117	2	18
2,2-Dichloropropane	40.0	44.8		ug/Kg		112	56 - 144	2	21
2-Chlorotoluene	40.0	41.6		ug/Kg		104	79 - 122	1	18
4-Chlorotoluene	40.0	42.4		ug/Kg		106	80 - 122	2	18
4-Isopropyltoluene	40.0	43.3		ug/Kg		108	78 - 126	2	18
Benzene	40.0	42.1		ug/Kg		105	70 - 128	1	19
Bromobenzene	40.0	43.0		ug/Kg		107	80 - 120	0	19
Bromoform	40.0	39.9		ug/Kg		100	50 - 124	3	25
Bromomethane	49.9	39.1		ug/Kg		78	57 - 148	1	29
Carbon tetrachloride	40.0	43.3		ug/Kg		108	59 - 145	3	19
Chlorobenzene	40.0	42.7		ug/Kg		107	75 - 120	0	21
Chlorobromomethane	40.0	42.9		ug/Kg		107	78 - 123	0	19
Chlorodibromomethane	40.0	43.1		ug/Kg		108	42 - 129	1	23
Chloroethane	50.0	39.0		ug/Kg		78	48 - 167	2	53
Chloroform	40.0	43.6		ug/Kg		109	78 - 125	2	17
Chloromethane	50.1	41.0		ug/Kg		82	55 - 136	3	26
cis-1,2-Dichloroethene	40.0	41.8		ug/Kg		104	70 - 130	1	19
cis-1,3-Dichloropropene	40.0	43.9		ug/Kg		110	69 - 129	0	19
Dibromomethane	40.0	43.2		ug/Kg		108	78 - 126	0	18
Dichlorobromomethane	40.0	44.1		ug/Kg		110	58 - 133	2	19
Dichlorodifluoromethane	49.9	41.7		ug/Kg		83	38 - 150	2	26
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126	0	23
Ethylene Dibromide	40.0	43.2		ug/Kg		108	69 - 126	1	21
Hexachlorobutadiene	40.0	41.2		ug/Kg		103	68 - 134	1	21
Isopropylbenzene	40.0	40.5		ug/Kg		101	79 - 127	2	20
Methyl tert-butyl ether	40.0	46.1		ug/Kg		115	65 - 125	0	30
Methylene Chloride	40.0	42.6		ug/Kg		106	57 - 146	4	21
m-Xylene & p-Xylene	40.0	43.3		ug/Kg		108	78 - 126	0	23
Naphthalene	40.0	44.3		ug/Kg		111	14 - 170	6	50
n-Butylbenzene	40.0	41.7		ug/Kg		104	78 - 128	0	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195845/3-A
Matrix: Solid
Analysis Batch: 195834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195845

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	44.5		ug/Kg		111	81 - 127	4	20
o-Xylene			40.0	43.1		ug/Kg		108	77 - 127	0	22
sec-Butylbenzene			40.0	48.2		ug/Kg		120	78 - 128	5	17
Styrene			40.0	42.3		ug/Kg		106	79 - 127	2	21
tert-Butylbenzene			40.0	44.9		ug/Kg		112	71 - 136	4	27
Tetrachloroethene			40.0	40.2		ug/Kg		101	56 - 155	2	27
Toluene			40.0	43.7		ug/Kg		109	75 - 126	1	19
trans-1,2-Dichloroethene			40.0	41.0		ug/Kg		102	76 - 131	4	18
trans-1,3-Dichloropropene			40.0	45.1		ug/Kg		113	72 - 129	1	20
Trichloroethene			40.0	40.3		ug/Kg		101	83 - 124	1	17
Trichlorofluoromethane			50.1	39.9		ug/Kg		80	47 - 165	0	54
Vinyl chloride			50.0	35.2		ug/Kg		70	67 - 131	2	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 136*
4-Bromofluorobenzene (Surr)	*96*		*70 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 132*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-195470/1-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2-Chlorophenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2-Methylphenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2-Nitroaniline	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
2-Nitrophenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
3-Nitroaniline	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-195470/1-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
4-Chloroaniline	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
4-Nitroaniline	ND		100	20	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
4-Nitrophenol	ND	^	1000	250	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Acenaphthene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Acenaphthylene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Anthracene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzoic acid	ND		2500	750	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Benzyl alcohol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Butyl benzyl phthalate	51.3	J	200	50	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Carbazole	ND		100	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Chrysene	ND		25	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Dibenzofuran	ND		100	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Diethyl phthalate	35.5	J	200	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Fluoranthene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Fluorene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Hexachlorobutadiene	ND		50	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Hexachloroethane	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Isophorone	ND		100	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Naphthalene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Nitrobenzene	ND		100	34	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Pentachlorophenol	ND		200	20	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Phenanthrene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Phenol	ND		100	15	ug/Kg		07/21/15 08:47	07/22/15 13:36	1
Pyrene	ND		20	5.0	ug/Kg		07/21/15 08:47	07/22/15 13:36	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-195470/1-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195470

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	101		28 - 143	07/21/15 08:47	07/22/15 13:36	1
2-Fluorobiphenyl	85		42 - 140	07/21/15 08:47	07/22/15 13:36	1
2-Fluorophenol	81		36 - 145	07/21/15 08:47	07/22/15 13:36	1
Nitrobenzene-d5	97		38 - 141	07/21/15 08:47	07/22/15 13:36	1
Phenol-d5	92		38 - 149	07/21/15 08:47	07/22/15 13:36	1
Terphenyl-d14	102		42 - 151	07/21/15 08:47	07/22/15 13:36	1

Lab Sample ID: LCS 580-195470/2-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	853		ug/Kg		85	66 - 115
1,2-Dichlorobenzene	1000	748		ug/Kg		75	64 - 112
1,3-Dichlorobenzene	1000	714		ug/Kg		71	64 - 111
1,4-Dichlorobenzene	1000	713		ug/Kg		71	65 - 110
1-Methylnaphthalene	1000	910		ug/Kg		91	62 - 118
2,4,5-Trichlorophenol	1000	937		ug/Kg		94	57 - 133
2,4,6-Trichlorophenol	1000	949		ug/Kg		95	62 - 133
2,4-Dichlorophenol	1000	995		ug/Kg		99	68 - 125
2,4-Dimethylphenol	1000	914		ug/Kg		91	54 - 139
2,4-Dinitrophenol	2000	1970		ug/Kg		99	20 - 141
2,4-Dinitrotoluene	1000	949		ug/Kg		95	68 - 121
2,6-Dinitrotoluene	1000	872		ug/Kg		87	66 - 123
2-Chloronaphthalene	1000	901		ug/Kg		90	68 - 112
2-Chlorophenol	1000	859		ug/Kg		86	68 - 117
2-Methylnaphthalene	1000	927		ug/Kg		93	64 - 119
2-Methylphenol	1000	896		ug/Kg		90	71 - 116
2-Nitroaniline	1000	1010		ug/Kg		101	64 - 112
2-Nitrophenol	1000	917		ug/Kg		92	67 - 127
3 & 4 Methylphenol	1000	931		ug/Kg		93	70 - 116
3,3'-Dichlorobenzidine	2000	1910		ug/Kg		95	20 - 103
3-Nitroaniline	1000	837		ug/Kg		84	27 - 103
4,6-Dinitro-2-methylphenol	2000	2020		ug/Kg		101	48 - 130
4-Bromophenyl phenyl ether	1000	945		ug/Kg		94	68 - 122
4-Chloro-3-methylphenol	1000	824		ug/Kg		82	69 - 121
4-Chloroaniline	1000	801		ug/Kg		80	20 - 103
4-Chlorophenyl phenyl ether	1000	895		ug/Kg		90	75 - 108
4-Nitroaniline	1000	858		ug/Kg		86	58 - 108
4-Nitrophenol	2000	3770	^ *	ug/Kg		189	20 - 165
Acenaphthene	1000	894		ug/Kg		89	68 - 116
Acenaphthylene	1000	918		ug/Kg		92	68 - 120
Anthracene	1000	850		ug/Kg		85	73 - 116
Benzo[a]anthracene	1000	986		ug/Kg		99	76 - 119
Benzo[a]pyrene	1000	794		ug/Kg		79	72 - 117
Benzo[b]fluoranthene	1000	848		ug/Kg		85	63 - 132
Benzo[g,h,i]perylene	1000	901		ug/Kg		90	55 - 139
Benzo[k]fluoranthene	1000	775		ug/Kg		77	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-195470/2-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	1590	J	ug/Kg		79	29 - 158
Benzyl alcohol	1000	720		ug/Kg		72	55 - 123
bis (2-chloroisopropyl) ether	1000	928		ug/Kg		93	41 - 126
Bis(2-chloroethoxy)methane	1000	921		ug/Kg		92	69 - 107
Bis(2-chloroethyl)ether	1000	867		ug/Kg		87	62 - 110
Bis(2-ethylhexyl) phthalate	1000	983		ug/Kg		98	62 - 144
Butyl benzyl phthalate	1000	956		ug/Kg		96	69 - 142
Carbazole	1000	968		ug/Kg		97	76 - 135
Chrysene	1000	885		ug/Kg		89	75 - 114
Dibenz(a,h)anthracene	1000	943		ug/Kg		94	56 - 134
Dibenzofuran	1000	886		ug/Kg		89	72 - 109
Diethyl phthalate	1000	921		ug/Kg		92	73 - 116
Dimethyl phthalate	1000	921		ug/Kg		92	78 - 117
Di-n-butyl phthalate	1000	910		ug/Kg		91	66 - 140
Di-n-octyl phthalate	1000	915		ug/Kg		91	65 - 141
Fluoranthene	1000	860		ug/Kg		86	73 - 125
Fluorene	1000	834		ug/Kg		83	70 - 121
Hexachlorobenzene	1000	924		ug/Kg		92	66 - 117
Hexachlorobutadiene	1000	844		ug/Kg		84	65 - 116
Hexachlorocyclopentadiene	1000	907		ug/Kg		91	46 - 131
Hexachloroethane	1000	783		ug/Kg		78	62 - 120
Indeno[1,2,3-cd]pyrene	1000	1020		ug/Kg		102	56 - 127
Isophorone	1000	941		ug/Kg		94	67 - 119
Naphthalene	1000	793		ug/Kg		79	62 - 112
Nitrobenzene	1000	944		ug/Kg		94	64 - 118
N-Nitrosodi-n-propylamine	1000	954		ug/Kg		95	62 - 116
N-Nitrosodiphenylamine	2010	1710		ug/Kg		85	73 - 115
Pentachlorophenol	2000	1810		ug/Kg		90	45 - 117
Phenanthrene	1000	847		ug/Kg		85	73 - 106
Phenol	1000	791		ug/Kg		79	63 - 111
Pyrene	1000	858		ug/Kg		86	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*102*		*28 - 143*
2-Fluorobiphenyl	*68*		*42 - 140*
2-Fluorophenol	*62*		*36 - 145*
Nitrobenzene-d5	*75*		*38 - 141*
Phenol-d5	*75*		*38 - 149*
Terphenyl-d14	*95*		*42 - 151*

Lab Sample ID: LCSD 580-195470/3-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	808		ug/Kg		81	66 - 115	5	28
1,2-Dichlorobenzene	1000	725		ug/Kg		72	64 - 112	3	30
1,3-Dichlorobenzene	1000	677		ug/Kg		68	64 - 111	5	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195470/3-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	1000	674		ug/Kg		67	65 - 110	6	30
1-Methylnaphthalene	1000	828		ug/Kg		83	62 - 118	9	30
2,4,5-Trichlorophenol	1000	863		ug/Kg		86	57 - 133	8	30
2,4,6-Trichlorophenol	1000	867		ug/Kg		87	62 - 133	9	30
2,4-Dichlorophenol	1000	966		ug/Kg		97	68 - 125	3	30
2,4-Dimethylphenol	1000	863		ug/Kg		86	54 - 139	6	30
2,4-Dinitrophenol	2000	1850		ug/Kg		92	20 - 141	7	36
2,4-Dinitrotoluene	1000	890		ug/Kg		89	68 - 121	6	30
2,6-Dinitrotoluene	1000	863		ug/Kg		86	66 - 123	1	30
2-Chloronaphthalene	1000	817		ug/Kg		82	68 - 112	10	25
2-Chlorophenol	1000	807		ug/Kg		81	68 - 117	6	27
2-Methylnaphthalene	1000	849		ug/Kg		85	64 - 119	9	27
2-Methylphenol	1000	813		ug/Kg		81	71 - 116	10	25
2-Nitroaniline	1000	914		ug/Kg		91	64 - 112	10	22
2-Nitrophenol	1000	877		ug/Kg		88	67 - 127	4	30
3 & 4 Methylphenol	1000	838		ug/Kg		84	70 - 116	11	27
3,3'-Dichlorobenzidine	2000	1690		ug/Kg		85	20 - 103	12	60
3-Nitroaniline	1000	818		ug/Kg		82	27 - 103	2	33
4,6-Dinitro-2-methylphenol	2000	1810		ug/Kg		91	48 - 130	11	22
4-Bromophenyl phenyl ether	1000	878		ug/Kg		88	68 - 122	7	30
4-Chloro-3-methylphenol	1000	850		ug/Kg		85	69 - 121	3	27
4-Chloroaniline	1000	730		ug/Kg		73	20 - 103	9	60
4-Chlorophenyl phenyl ether	1000	824		ug/Kg		82	75 - 108	8	30
4-Nitroaniline	1000	774		ug/Kg		77	58 - 108	10	32
4-Nitrophenol	2000	3450	* ^	ug/Kg		173	20 - 165	9	30
Acenaphthene	1000	810		ug/Kg		81	68 - 116	10	27
Acenaphthylene	1000	849		ug/Kg		85	68 - 120	8	28
Anthracene	1000	786		ug/Kg		79	73 - 116	8	27
Benzo[a]anthracene	1000	911		ug/Kg		91	76 - 119	8	27
Benzo[a]pyrene	1000	729		ug/Kg		73	72 - 117	9	30
Benzo[b]fluoranthene	1000	769		ug/Kg		77	63 - 132	10	30
Benzo[g,h,i]perylene	1000	829		ug/Kg		83	55 - 139	8	28
Benzo[k]fluoranthene	1000	706		ug/Kg		71	63 - 119	9	30
Benzoic acid	2010	1370	J	ug/Kg		68	29 - 158	15	28
Benzyl alcohol	1000	654		ug/Kg		65	55 - 123	10	60
bis (2-chloroisopropyl) ether	1000	858		ug/Kg		86	41 - 126	8	57
Bis(2-chloroethoxy)methane	1000	847		ug/Kg		85	69 - 107	8	30
Bis(2-chloroethyl)ether	1000	780		ug/Kg		78	62 - 110	11	22
Bis(2-ethylhexyl) phthalate	1000	916		ug/Kg		92	62 - 144	7	30
Butyl benzyl phthalate	1000	899		ug/Kg		90	69 - 142	6	30
Carbazole	1000	892		ug/Kg		89	76 - 135	8	30
Chrysene	1000	806		ug/Kg		81	75 - 114	9	26
Dibenz(a,h)anthracene	1000	859		ug/Kg		86	56 - 134	9	30
Dibenzofuran	1000	790		ug/Kg		79	72 - 109	12	30
Diethyl phthalate	1000	867		ug/Kg		87	73 - 116	6	26
Dimethyl phthalate	1000	882		ug/Kg		88	78 - 117	4	30
Di-n-butyl phthalate	1000	828		ug/Kg		83	66 - 140	10	30
Di-n-octyl phthalate	1000	840		ug/Kg		84	65 - 141	8	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-195470/3-A
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195470

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	799		ug/Kg		80	73 - 125	7	30
Fluorene			1000	754		ug/Kg		75	70 - 121	10	30
Hexachlorobenzene			1000	867		ug/Kg		87	66 - 117	6	30
Hexachlorobutadiene			1000	822		ug/Kg		82	65 - 116	3	30
Hexachlorocyclopentadiene			1000	872		ug/Kg		87	46 - 131	4	29
Hexachloroethane			1000	759		ug/Kg		76	62 - 120	3	30
Indeno[1,2,3-cd]pyrene			1000	898		ug/Kg		90	56 - 127	12	29
Isophorone			1000	859		ug/Kg		86	67 - 119	9	30
Naphthalene			1000	741		ug/Kg		74	62 - 112	7	26
Nitrobenzene			1000	893		ug/Kg		89	64 - 118	6	30
N-Nitrosodi-n-propylamine			1000	881		ug/Kg		88	62 - 116	8	28
N-Nitrosodiphenylamine			2010	1540		ug/Kg		77	73 - 115	10	30
Pentachlorophenol			2000	1660		ug/Kg		83	45 - 117	8	23
Phenanthrene			1000	781		ug/Kg		78	73 - 106	8	28
Phenol			1000	730		ug/Kg		73	63 - 111	8	26
Pyrene			1000	807		ug/Kg		81	70 - 120	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*28 - 143*
2-Fluorobiphenyl	*77*		*42 - 140*
2-Fluorophenol	*73*		*36 - 145*
Nitrobenzene-d5	*89*		*38 - 141*
Phenol-d5	*86*		*38 - 149*
Terphenyl-d14	*91*		*42 - 151*

Lab Sample ID: 590-1429-3 MS
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		1040	839		ug/Kg	☼	81	66 - 115
1,2-Dichlorobenzene	ND		1040	749		ug/Kg	☼	72	64 - 112
1,3-Dichlorobenzene	ND		1040	716		ug/Kg	☼	69	64 - 111
1,4-Dichlorobenzene	ND		1040	725		ug/Kg	☼	70	65 - 110
1-Methylnaphthalene	ND		1040	868		ug/Kg	☼	84	62 - 118
2,4,5-Trichlorophenol	ND		1040	904		ug/Kg	☼	87	57 - 133
2,4,6-Trichlorophenol	ND		1040	899		ug/Kg	☼	87	62 - 133
2,4-Dichlorophenol	ND		1040	948		ug/Kg	☼	92	68 - 125
2,4-Dimethylphenol	ND		1040	824		ug/Kg	☼	80	54 - 139
2,4-Dinitrophenol	ND	F1	2070	520	J	ug/Kg	☼	25	20 - 141
2,4-Dinitrotoluene	ND		1040	855		ug/Kg	☼	82	68 - 121
2,6-Dinitrotoluene	ND		1040	857		ug/Kg	☼	83	66 - 123
2-Chloronaphthalene	ND		1040	872		ug/Kg	☼	84	68 - 112
2-Chlorophenol	ND		1040	824		ug/Kg	☼	79	68 - 117
2-Methylnaphthalene	ND		1040	892		ug/Kg	☼	86	64 - 119
2-Methylphenol	ND		1040	841		ug/Kg	☼	81	71 - 116
2-Nitroaniline	ND		1040	964		ug/Kg	☼	93	64 - 112
2-Nitrophenol	ND		1040	888		ug/Kg	☼	86	67 - 127

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1429-3 MS
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	ND		1040	880		ug/Kg	☼	85	70 - 116
3,3'-Dichlorobenzidine	ND		2070	1750		ug/Kg	☼	84	20 - 103
3-Nitroaniline	ND		1040	807		ug/Kg	☼	78	27 - 103
4,6-Dinitro-2-methylphenol	ND	F1	2070	905	J F1	ug/Kg	☼	44	48 - 130
4-Bromophenyl phenyl ether	ND		1040	973		ug/Kg	☼	94	68 - 122
4-Chloro-3-methylphenol	ND		1040	831		ug/Kg	☼	80	69 - 121
4-Chloroaniline	ND		1040	727		ug/Kg	☼	70	20 - 103
4-Chlorophenyl phenyl ether	ND		1040	876		ug/Kg	☼	85	75 - 108
4-Nitroaniline	ND		1040	821		ug/Kg	☼	79	58 - 108
4-Nitrophenol	ND	* F1 ^	2070	3590	F1 ^	ug/Kg	☼	173	20 - 165
Acenaphthene	ND		1040	868		ug/Kg	☼	84	68 - 116
Acenaphthylene	ND		1040	905		ug/Kg	☼	87	68 - 120
Anthracene	ND		1040	803		ug/Kg	☼	78	73 - 116
Benzo[a]anthracene	6.1	J	1040	969		ug/Kg	☼	93	76 - 119
Benzo[a]pyrene	ND		1040	772		ug/Kg	☼	74	72 - 117
Benzo[b]fluoranthene	11	J	1040	823		ug/Kg	☼	78	63 - 132
Benzo[g,h,i]perylene	ND		1040	609		ug/Kg	☼	59	55 - 139
Benzo[k]fluoranthene	10	J	1040	767		ug/Kg	☼	73	63 - 119
Benzoic acid	ND	F1	2080	ND	F1	ug/Kg	☼	0	29 - 158
Benzyl alcohol	ND		1040	789		ug/Kg	☼	76	55 - 123
bis (2-chloroisopropyl) ether	ND		1040	904		ug/Kg	☼	87	41 - 126
Bis(2-chloroethoxy)methane	ND		1040	877		ug/Kg	☼	85	69 - 107
Bis(2-chloroethyl)ether	ND		1040	833		ug/Kg	☼	80	62 - 110
Bis(2-ethylhexyl) phthalate	ND		1040	961		ug/Kg	☼	93	62 - 144
Butyl benzyl phthalate	72	J B	1040	933		ug/Kg	☼	83	69 - 142
Carbazole	ND		1040	941		ug/Kg	☼	91	76 - 135
Chrysene	6.1	J	1040	835		ug/Kg	☼	80	75 - 114
Dibenz(a,h)anthracene	ND		1040	644		ug/Kg	☼	62	56 - 134
Dibenzofuran	ND		1040	859		ug/Kg	☼	83	72 - 109
Diethyl phthalate	ND		1040	901		ug/Kg	☼	87	73 - 116
Dimethyl phthalate	ND		1040	923		ug/Kg	☼	89	78 - 117
Di-n-butyl phthalate	ND		1040	897		ug/Kg	☼	87	66 - 140
Di-n-octyl phthalate	ND		1040	895		ug/Kg	☼	86	65 - 141
Fluoranthene	ND		1040	874		ug/Kg	☼	84	73 - 125
Fluorene	ND		1040	812		ug/Kg	☼	78	70 - 121
Hexachlorobenzene	ND		1040	915		ug/Kg	☼	88	66 - 117
Hexachlorobutadiene	ND		1040	847		ug/Kg	☼	82	65 - 116
Hexachlorocyclopentadiene	ND	F1	1040	415	F1	ug/Kg	☼	40	46 - 131
Hexachloroethane	ND		1040	781		ug/Kg	☼	75	62 - 120
Indeno[1,2,3-cd]pyrene	ND		1040	753		ug/Kg	☼	73	56 - 127
Isophorone	ND		1040	902		ug/Kg	☼	87	67 - 119
Naphthalene	ND		1040	775		ug/Kg	☼	75	62 - 112
Nitrobenzene	ND		1040	937		ug/Kg	☼	90	64 - 118
N-Nitrosodi-n-propylamine	ND		1040	916		ug/Kg	☼	88	62 - 116
N-Nitrosodiphenylamine	ND		2080	1710		ug/Kg	☼	82	73 - 115
Pentachlorophenol	ND	F1	2070	1240		ug/Kg	☼	60	45 - 117
Phenanthrene	ND		1040	825		ug/Kg	☼	80	73 - 106
Phenol	ND		1040	773		ug/Kg	☼	75	63 - 111

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1429-3 MS
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	ND		1040	860		ug/Kg	☼	83	70 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*95*		*28 - 143*
2-Fluorobiphenyl	*78*		*42 - 140*
2-Fluorophenol	*72*		*36 - 145*
Nitrobenzene-d5	*85*		*38 - 141*
Phenol-d5	*85*		*38 - 149*
Terphenyl-d14	*91*		*42 - 151*

Lab Sample ID: 590-1429-3 MSD
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		1030	874		ug/Kg	☼	85	66 - 115	4	28
1,2-Dichlorobenzene	ND		1030	803		ug/Kg	☼	78	64 - 112	7	60
1,3-Dichlorobenzene	ND		1030	762		ug/Kg	☼	74	64 - 111	6	60
1,4-Dichlorobenzene	ND		1030	776		ug/Kg	☼	76	65 - 110	7	32
1-Methylnaphthalene	ND		1030	917		ug/Kg	☼	89	62 - 118	5	30
2,4,5-Trichlorophenol	ND		1030	944		ug/Kg	☼	92	57 - 133	4	60
2,4,6-Trichlorophenol	ND		1030	912		ug/Kg	☼	89	62 - 133	1	60
2,4-Dichlorophenol	ND		1030	987		ug/Kg	☼	96	68 - 125	4	60
2,4-Dimethylphenol	ND		1030	908		ug/Kg	☼	88	54 - 139	10	60
2,4-Dinitrophenol	ND	F1	2060	351	J F1	ug/Kg	☼	17	20 - 141	39	60
2,4-Dinitrotoluene	ND		1030	913		ug/Kg	☼	89	68 - 121	7	31
2,6-Dinitrotoluene	ND		1030	937		ug/Kg	☼	91	66 - 123	9	60
2-Chloronaphthalene	ND		1030	940		ug/Kg	☼	91	68 - 112	7	25
2-Chlorophenol	ND		1030	901		ug/Kg	☼	88	68 - 117	9	27
2-Methylnaphthalene	ND		1030	936		ug/Kg	☼	91	64 - 119	5	27
2-Methylphenol	ND		1030	894		ug/Kg	☼	87	71 - 116	6	25
2-Nitroaniline	ND		1030	1040		ug/Kg	☼	102	64 - 112	8	60
2-Nitrophenol	ND		1030	903		ug/Kg	☼	88	67 - 127	2	60
3 & 4 Methylphenol	ND		1030	932		ug/Kg	☼	91	70 - 116	6	27
3,3'-Dichlorobenzidine	ND		2060	1870		ug/Kg	☼	91	20 - 103	7	60
3-Nitroaniline	ND		1030	881		ug/Kg	☼	86	27 - 103	9	60
4,6-Dinitro-2-methylphenol	ND	F1	2060	583	J F1	ug/Kg	☼	28	48 - 130	43	60
4-Bromophenyl phenyl ether	ND		1030	985		ug/Kg	☼	96	68 - 122	1	60
4-Chloro-3-methylphenol	ND		1030	850		ug/Kg	☼	83	69 - 121	2	27
4-Chloroaniline	ND		1030	768		ug/Kg	☼	75	20 - 103	5	60
4-Chlorophenyl phenyl ether	ND		1030	941		ug/Kg	☼	92	75 - 108	7	60
4-Nitroaniline	ND		1030	880		ug/Kg	☼	86	58 - 108	7	60
4-Nitrophenol	ND	* F1 ^	2060	3710	F1 ^	ug/Kg	☼	180	20 - 165	3	33
Acenaphthene	ND		1030	921		ug/Kg	☼	90	68 - 116	6	27
Acenaphthylene	ND		1030	957		ug/Kg	☼	93	68 - 120	6	28
Anthracene	ND		1030	854		ug/Kg	☼	83	73 - 116	6	27
Benzo[a]anthracene	6.1	J	1030	1010		ug/Kg	☼	97	76 - 119	4	27
Benzo[a]pyrene	ND		1030	829		ug/Kg	☼	81	72 - 117	7	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1429-3 MSD
Matrix: Solid
Analysis Batch: 195628

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 195470

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	11	J	1030	935		ug/Kg	☼	90	63 - 132	13	31
Benzo[g,h,i]perylene	ND		1030	663		ug/Kg	☼	65	55 - 139	8	28
Benzo[k]fluoranthene	10	J	1030	749		ug/Kg	☼	72	63 - 119	2	31
Benzoic acid	ND	F1	2060	ND	F1	ug/Kg	☼	0	29 - 158	NC	60
Benzyl alcohol	ND		1030	814		ug/Kg	☼	79	55 - 123	3	60
bis (2-chloroisopropyl) ether	ND		1030	961		ug/Kg	☼	94	41 - 126	6	60
Bis(2-chloroethoxy)methane	ND		1030	936		ug/Kg	☼	91	69 - 107	6	60
Bis(2-chloroethyl)ether	ND		1030	866		ug/Kg	☼	84	62 - 110	4	60
Bis(2-ethylhexyl) phthalate	ND		1030	1010		ug/Kg	☼	98	62 - 144	5	60
Butyl benzyl phthalate	72	J B	1030	997		ug/Kg	☼	90	69 - 142	7	60
Carbazole	ND		1030	992		ug/Kg	☼	97	76 - 135	5	60
Chrysene	6.1	J	1030	904		ug/Kg	☼	87	75 - 114	8	26
Dibenz(a,h)anthracene	ND		1030	737		ug/Kg	☼	72	56 - 134	13	30
Dibenzofuran	ND		1030	902		ug/Kg	☼	88	72 - 109	5	60
Diethyl phthalate	ND		1030	962		ug/Kg	☼	94	73 - 116	7	26
Dimethyl phthalate	ND		1030	984		ug/Kg	☼	96	78 - 117	6	60
Di-n-butyl phthalate	ND		1030	938		ug/Kg	☼	91	66 - 140	4	60
Di-n-octyl phthalate	ND		1030	969		ug/Kg	☼	94	65 - 141	8	31
Fluoranthene	ND		1030	894		ug/Kg	☼	87	73 - 125	2	36
Fluorene	ND		1030	883		ug/Kg	☼	86	70 - 121	8	31
Hexachlorobenzene	ND		1030	965		ug/Kg	☼	94	66 - 117	5	60
Hexachlorobutadiene	ND		1030	880		ug/Kg	☼	86	65 - 116	4	60
Hexachlorocyclopentadiene	ND	F1	1030	492		ug/Kg	☼	48	46 - 131	17	60
Hexachloroethane	ND		1030	839		ug/Kg	☼	82	62 - 120	7	60
Indeno[1,2,3-cd]pyrene	ND		1030	815		ug/Kg	☼	79	56 - 127	8	29
Isophorone	ND		1030	972		ug/Kg	☼	95	67 - 119	8	60
Naphthalene	ND		1030	815		ug/Kg	☼	79	62 - 112	5	26
Nitrobenzene	ND		1030	954		ug/Kg	☼	93	64 - 118	2	60
N-Nitrosodi-n-propylamine	ND		1030	967		ug/Kg	☼	94	62 - 116	5	28
N-Nitrosodiphenylamine	ND		2060	1730		ug/Kg	☼	84	73 - 115	1	60
Pentachlorophenol	ND	F1	2060	828	F1	ug/Kg	☼	40	45 - 117	40	68
Phenanthrene	ND		1030	873		ug/Kg	☼	85	73 - 106	6	28
Phenol	ND		1030	794		ug/Kg	☼	77	63 - 111	3	26
Pyrene	ND		1030	895		ug/Kg	☼	87	70 - 120	4	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*98*		*28 - 143*
2-Fluorobiphenyl	*86*		*42 - 140*
2-Fluorophenol	*79*		*36 - 145*
Nitrobenzene-d5	*93*		*38 - 141*
Phenol-d5	*90*		*38 - 149*
Terphenyl-d14	*100*		*42 - 151*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-195564/1-A
Matrix: Solid
Analysis Batch: 195872

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195564

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
4,4'-DDE	ND		2.0	0.14	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
4,4'-DDT	ND		2.0	0.15	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Aldrin	ND		1.0	0.22	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
alpha-BHC	ND		1.0	0.28	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
beta-BHC	ND		1.0	0.32	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
delta-BHC	ND		1.0	0.15	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Dieldrin	ND		2.0	0.12	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Endosulfan I	ND		1.0	0.10	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Endosulfan II	ND		2.0	0.17	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Endrin	ND		2.0	0.16	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Endrin ketone	ND		2.0	0.26	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
gamma-Chlordane	ND		1.0	0.13	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Heptachlor	ND		2.0	0.46	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Methoxychlor	ND		10	0.26	ug/Kg		07/21/15 16:25	07/24/15 14:18	1
Toxaphene	ND		100	23	ug/Kg		07/21/15 16:25	07/24/15 14:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*60 - 128*	*07/21/15 16:25*	*07/24/15 14:18*	*1*
Tetrachloro-m-xylene	*56*		*35 - 129*	*07/21/15 16:25*	*07/24/15 14:18*	*1*

Lab Sample ID: LCS 580-195564/2-A
Matrix: Solid
Analysis Batch: 195872

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195564

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	20.0	13.2		ug/Kg		66	48 - 136
4,4'-DDE	20.0	13.2		ug/Kg		66	50 - 138
4,4'-DDT	20.0	12.1		ug/Kg		60	53 - 132
Aldrin	20.0	12.7		ug/Kg		63	59 - 127
alpha-BHC	20.0	11.7		ug/Kg		58	48 - 132
alpha-Chlordane	20.0	13.3		ug/Kg		67	52 - 137
beta-BHC	20.0	10.9		ug/Kg		54	45 - 122
delta-BHC	20.0	12.2		ug/Kg		61	27 - 124
Dieldrin	20.0	13.6		ug/Kg		68	53 - 145
Endosulfan I	20.0	12.8		ug/Kg		64	57 - 140
Endosulfan II	20.0	12.5		ug/Kg		63	58 - 144
Endosulfan sulfate	20.0	11.4		ug/Kg		57	55 - 125
Endrin	20.0	13.9		ug/Kg		70	51 - 143
Endrin aldehyde	20.0	10.0		ug/Kg		50	45 - 130
Endrin ketone	20.0	12.5		ug/Kg		62	53 - 139
gamma-BHC (Lindane)	20.0	11.8		ug/Kg		59	47 - 127
gamma-Chlordane	20.0	13.8		ug/Kg		69	52 - 137

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-195564/2-A
Matrix: Solid
Analysis Batch: 195872

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195564

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Heptachlor			20.0	12.5		ug/Kg		63	43 - 141		
Heptachlor epoxide			20.0	13.3		ug/Kg		66	47 - 143		
Methoxychlor			20.0	12.6		ug/Kg		63	56 - 137		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*73*		*60 - 128*
Tetrachloro-m-xylene	*57*		*35 - 129*

Lab Sample ID: LCSD 580-195564/3-A
Matrix: Solid
Analysis Batch: 195872

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195564

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			20.0	13.8		ug/Kg		69	48 - 136	4	18
4,4'-DDE			20.0	13.9		ug/Kg		70	50 - 138	5	17
4,4'-DDT			20.0	12.5		ug/Kg		63	53 - 132	4	20
Aldrin			20.0	13.4		ug/Kg		67	59 - 127	5	19
alpha-BHC			20.0	12.4		ug/Kg		62	48 - 132	6	17
alpha-Chlordane			20.0	14.2		ug/Kg		71	52 - 137	6	17
beta-BHC			20.0	11.7		ug/Kg		59	45 - 122	8	18
delta-BHC			20.0	12.8		ug/Kg		64	27 - 124	5	19
Dieldrin			20.0	13.8		ug/Kg		69	53 - 145	1	18
Endosulfan I			20.0	13.5		ug/Kg		67	57 - 140	5	19
Endosulfan II			20.0	13.5		ug/Kg		68	58 - 144	7	19
Endosulfan sulfate			20.0	13.3		ug/Kg		67	55 - 125	15	18
Endrin			20.0	14.4		ug/Kg		72	51 - 143	3	18
Endrin aldehyde			20.0	11.5		ug/Kg		58	45 - 130	14	21
Endrin ketone			20.0	13.9		ug/Kg		69	53 - 139	10	17
gamma-BHC (Lindane)			20.0	12.3		ug/Kg		61	47 - 127	4	17
gamma-Chlordane			20.0	14.3		ug/Kg		71	52 - 137	4	17
Heptachlor			20.0	13.5		ug/Kg		68	43 - 141	8	18
Heptachlor epoxide			20.0	13.8		ug/Kg		69	47 - 143	4	17
Methoxychlor			20.0	13.2		ug/Kg		66	56 - 137	4	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*78*		*60 - 128*
Tetrachloro-m-xylene	*59*		*35 - 129*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-2586/1-A
Matrix: Solid
Analysis Batch: 2593

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1
PCB-1221	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-2586/1-A
Matrix: Solid
Analysis Batch: 2593

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1
PCB-1242	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1
PCB-1248	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1
PCB-1254	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1
PCB-1260	ND		10	2.2	ug/Kg		07/20/15 11:12	07/20/15 14:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*51.9 - 151*	*07/20/15 11:12*	*07/20/15 14:38*	*1*
DCB Decachlorobiphenyl (Surr)	*108*		*73.5 - 164*	*07/20/15 11:12*	*07/20/15 14:38*	*1*

Lab Sample ID: LCS 590-2586/2-A
Matrix: Solid
Analysis Batch: 2593

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2586

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			66.7	66.8		ug/Kg		100	58 - 146		
PCB-1260			66.7	63.7		ug/Kg		96	64.2 - 152		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*103*		*73.5 - 164*

Lab Sample ID: 590-1429-1 MS
Matrix: Solid
Analysis Batch: 2593

Client Sample ID: MW-16 (69-70)
Prep Type: Total/NA
Prep Batch: 2586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		72.1	73.4		ug/Kg	☼	102	50.6 - 145		
PCB-1260	ND		72.1	73.5		ug/Kg	☼	102	57.6 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*112*		*73.5 - 164*

Lab Sample ID: 590-1429-1 MSD
Matrix: Solid
Analysis Batch: 2593

Client Sample ID: MW-16 (69-70)
Prep Type: Total/NA
Prep Batch: 2586

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		73.4	72.9		ug/Kg	☼	99	50.6 - 145	1	40
PCB-1260	ND		73.4	72.1		ug/Kg	☼	98	57.6 - 120	2	27.4

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*79*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*110*		*73.5 - 164*

Method: 8141A - Organophosphorous Pesticides (GC)

Lab Sample ID: MB 280-286728/1-A
Matrix: Solid
Analysis Batch: 287000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 286728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		64	12	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Bolstar	ND		12	4.1	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Chlorpyrifos	ND		19	6.2	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Coumaphos	ND		12	2.7	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Demeton, Total	ND		37	7.2	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Diazinon	ND		21	7.0	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Dichlorvos	ND		22	7.1	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Dimethoate	ND		21	6.8	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Disulfoton	ND		46	7.4	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
EPN	ND		12	3.5	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Famphur	ND		12	3.1	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Fensulfothion	ND		24	7.8	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Mevinphos	ND		14	4.4	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Methyl parathion	ND		19	6.1	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Merphos	ND		29	4.9	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Malathion	ND		14	4.4	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Fenthion	ND		32	8.4	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Ethyl Parathion	ND		17	5.1	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Phorate	ND		19	5.5	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Ronnel	ND		44	15	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Simazine	ND		64	21	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Sulfotepp	ND		19	6.0	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Thionazin	ND		17	5.3	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Tokuthion	ND		19	3.7	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Trichloronate	ND		19	6.0	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Ethoprop	ND		14	4.7	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Propazine	ND		64	8.3	ug/Kg		07/19/15 15:37	07/21/15 14:33	1
Azinphos-methyl	ND		12	3.4	ug/Kg		07/19/15 15:37	07/21/15 14:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*55*		*42 - 132*	*07/19/15 15:37*	*07/21/15 14:33*	*1*
Triphenylphosphate	*88*		*47 - 161*	*07/19/15 15:37*	*07/21/15 14:33*	*1*

Lab Sample ID: LCS 280-286728/2-A
Matrix: Solid
Analysis Batch: 287000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 286728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	124	96.9		ug/Kg		78	49 - 115
Chlorpyrifos	124	92.9		ug/Kg		75	38 - 130
Coumaphos	124	108		ug/Kg		87	50 - 119
Demeton, Total	124	71.7		ug/Kg		58	36 - 115
Diazinon	124	89.0		ug/Kg		72	53 - 115
Dichlorvos	124	97.9		ug/Kg		79	43 - 139
Dimethoate	124	93.1		ug/Kg		75	25 - 138
Disulfoton	124	75.0		ug/Kg		60	29 - 115
EPN	124	99.6		ug/Kg		80	58 - 131
Famphur	124	102		ug/Kg		82	49 - 140

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-286728/2-A
Matrix: Solid
Analysis Batch: 287000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 286728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fensulfothion	124	99.8		ug/Kg		80	52 - 121
Mevinphos	124	71.9		ug/Kg		58	10 - 226
Methyl parathion	124	93.3		ug/Kg		75	46 - 119
Merphos	124	74.6		ug/Kg		60	19 - 115
Malathion	124	83.9		ug/Kg		68	50 - 122
Fenthion	124	86.6		ug/Kg		70	45 - 115
Ethyl Parathion	124	93.3		ug/Kg		75	24 - 163
Phorate	124	58.8		ug/Kg		47	40 - 115
Ronnel	124	91.9		ug/Kg		74	43 - 118
Simazine	124	85.1		ug/Kg		69	11 - 179
Sulfotepp	124	97.0		ug/Kg		78	55 - 115
Thionazin	124	93.6		ug/Kg		75	46 - 115
Trichloronate	124	89.2		ug/Kg		72	27 - 115
BolstarFamphur	248	200		ug/Kg		80	
Ethoprop	124	93.8		ug/Kg		76	53 - 115
Azinphos-methyl	124	96.1		ug/Kg		77	51 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*74*		*42 - 132*
Triphenylphosphate	*92*		*47 - 161*

Lab Sample ID: 590-1429-3 MS
Matrix: Solid
Analysis Batch: 287000

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 286728

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	ND		135	108		ug/Kg	☼	80	49 - 115
Chlorpyrifos	ND		135	96.6		ug/Kg	☼	71	38 - 130
Coumaphos	ND		135	118		ug/Kg	☼	88	50 - 119
Demeton, Total	ND		135	77.0		ug/Kg	☼	57	36 - 115
Diazinon	ND		135	91.2		ug/Kg	☼	67	53 - 115
Dichlorvos	ND		135	118		ug/Kg	☼	87	43 - 139
Dimethoate	ND		135	107		ug/Kg	☼	79	25 - 138
Disulfoton	ND		135	75.9		ug/Kg	☼	56	29 - 115
EPN	ND		135	107		ug/Kg	☼	79	58 - 131
Famphur	ND		135	107		ug/Kg	☼	79	49 - 140
Fensulfothion	ND		135	107		ug/Kg	☼	79	52 - 121
Mevinphos	ND		135	77.8		ug/Kg	☼	58	10 - 226
Methyl parathion	ND		135	97.4		ug/Kg	☼	72	46 - 119
Merphos	ND		135	79.3		ug/Kg	☼	59	19 - 115
Malathion	ND		135	87.2		ug/Kg	☼	65	50 - 122
Fenthion	ND		135	90.0		ug/Kg	☼	67	45 - 115
Ethyl Parathion	ND		135	97.1		ug/Kg	☼	72	24 - 163
Phorate	ND		135	63.3		ug/Kg	☼	47	40 - 115
Ronnel	ND		135	98.3		ug/Kg	☼	73	43 - 118
Simazine	ND		135	98.5		ug/Kg	☼	73	11 - 179
Sulfotepp	ND		135	105		ug/Kg	☼	77	55 - 115
Thionazin	ND		135	99.2		ug/Kg	☼	73	46 - 115

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: 590-1429-3 MS
Matrix: Solid
Analysis Batch: 287000

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 286728

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloronate	ND		135	94.7		ug/Kg	☼	70	27 - 115
BolstarFamphur	ND		270	209		ug/Kg	☼	77	
Ethoprop	ND		135	101		ug/Kg	☼	74	53 - 115
Azinphos-methyl	ND		135	101		ug/Kg	☼	75	51 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Chlormefos	*77*		*42 - 132*
Triphenylphosphate	*94*		*47 - 161*

Lab Sample ID: 590-1429-3 MSD
Matrix: Solid
Analysis Batch: 287000

Client Sample ID: LFB-8 (17-18)
Prep Type: Total/NA
Prep Batch: 286728

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	ND		135	107		ug/Kg	☼	79	49 - 115	1	50
Chlorpyrifos	ND		135	97.1		ug/Kg	☼	72	38 - 130	0	37
Coumaphos	ND		135	112		ug/Kg	☼	83	50 - 119	5	27
Demeton, Total	ND		135	80.2		ug/Kg	☼	59	36 - 115	4	47
Diazinon	ND		135	89.8		ug/Kg	☼	66	53 - 115	2	40
Dichlorvos	ND		135	112		ug/Kg	☼	83	43 - 139	5	77
Dimethoate	ND		135	100		ug/Kg	☼	74	25 - 138	6	98
Disulfoton	ND		135	81.5		ug/Kg	☼	60	29 - 115	7	40
EPN	ND		135	104		ug/Kg	☼	77	58 - 131	3	50
Famphur	ND		135	106		ug/Kg	☼	79	49 - 140	0	31
Fensulfothion	ND		135	109		ug/Kg	☼	80	52 - 121	2	49
Mevinphos	ND		135	74.4		ug/Kg	☼	55	10 - 226	4	78
Methyl parathion	ND		135	100		ug/Kg	☼	74	46 - 119	3	53
Merphos	ND		135	80.0		ug/Kg	☼	59	19 - 115	1	50
Malathion	ND		135	89.0		ug/Kg	☼	66	50 - 122	2	53
Fenthion	ND		135	92.5		ug/Kg	☼	68	45 - 115	3	43
Ethyl Parathion	ND		135	98.2		ug/Kg	☼	73	24 - 163	1	47
Phorate	ND		135	61.6		ug/Kg	☼	46	40 - 115	3	40
Ronnel	ND		135	97.4		ug/Kg	☼	72	43 - 118	1	41
Simazine	ND		135	93.9		ug/Kg	☼	69	11 - 179	5	58
Sulfotepp	ND		135	99.7		ug/Kg	☼	74	55 - 115	5	40
Thionazin	ND		135	95.8		ug/Kg	☼	71	46 - 115	4	40
Trichloronate	ND		135	89.2		ug/Kg	☼	66	27 - 115	6	43
BolstarFamphur	ND		270	214		ug/Kg	☼	79		2	
Ethoprop	ND		135	99.2		ug/Kg	☼	73	53 - 115	1	54
Azinphos-methyl	ND		135	99.8		ug/Kg	☼	74	51 - 122	1	43

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Chlormefos	*73*		*42 - 132*
Triphenylphosphate	*90*		*47 - 161*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-287783/1-A
Matrix: Solid
Analysis Batch: 290062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		19	2.2	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
2,4-D	ND		77	14	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
2,4-DB	21.9	J	77	7.2	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Dalapon	ND		39	1.4	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Dicamba	ND		39	1.4	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Dichlorprop	ND		77	3.1	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
MCPA	ND		7700	1900	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
MCPP	ND		7700	1900	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Silvex (2,4,5-TP)	ND		19	1.4	ug/Kg		07/27/15 10:22	08/12/15 04:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*68*		*31 - 105*	*07/27/15 10:22*	*08/12/15 04:45*	*1*

Lab Sample ID: LCS 280-287783/2-A
Matrix: Solid
Analysis Batch: 290062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	98.8	68.4		ug/Kg		69	53 - 129
2,4-D	98.8	77.7	J	ug/Kg		79	50 - 136
2,4-DB	98.8	73.7	J	ug/Kg		75	29 - 134
Dalapon	98.8	89.8		ug/Kg		91	35 - 105
Dicamba	98.8	64.9		ug/Kg		66	45 - 120
Dichlorprop	98.8	58.2	J	ug/Kg		59	50 - 118
MCPA	9880	5610	J	ug/Kg		57	42 - 123
MCPP	9880	6960	J	ug/Kg		70	40 - 127
Silvex (2,4,5-TP)	98.8	70.6		ug/Kg		71	52 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*76*		*31 - 105*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2549/1-A
Matrix: Solid
Analysis Batch: 2613

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2549

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		07/17/15 12:00	07/21/15 10:35	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		07/17/15 12:00	07/21/15 10:35	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		07/17/15 12:00	07/21/15 10:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*50 - 150*	*07/17/15 12:00*	*07/21/15 10:35*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*07/17/15 12:00*	*07/21/15 10:35*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Lab Sample ID: 590-1429-1 DU
Matrix: Solid
Analysis Batch: 2613

Client Sample ID: MW-16 (69-70)
Prep Type: Total/NA
Prep Batch: 2549

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND			ND		mg/Kg	☼			NC	25
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	25
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*100*		*50 - 150*
n-Triacontane-d62	*92*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-195662/17-A
Matrix: Solid
Analysis Batch: 195840

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195662

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.10	0.021	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Arsenic	ND		0.25	0.090	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Barium	ND		0.25	0.039	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Beryllium	ND		0.10	0.018	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Cadmium	ND		0.10	0.0095	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Chromium	ND		0.25	0.032	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Copper	ND		0.20	0.049	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Iron	ND		20	5.4	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Lead	ND		0.25	0.024	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Manganese	ND		0.50	0.085	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Nickel	ND		0.25	0.041	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Selenium	ND		0.50	0.10	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Silver	ND		0.10	0.0060	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Thallium	ND		0.20	0.065	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Zinc	ND		2.5	0.56	mg/Kg		07/22/15 13:29	07/23/15 14:15	5
Vanadium	ND		1.0	0.24	mg/Kg		07/22/15 13:29	07/23/15 14:15	5

Lab Sample ID: LCS 580-195662/18-A
Matrix: Solid
Analysis Batch: 195840

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195662

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	150	152		mg/Kg		101	80 - 120
Arsenic	200	207		mg/Kg		103	80 - 120
Barium	200	207		mg/Kg		103	80 - 120
Beryllium	5.00	4.87		mg/Kg		97	80 - 120
Cadmium	5.00	5.24		mg/Kg		105	80 - 120
Chromium	20.0	20.7		mg/Kg		104	80 - 120
Copper	25.0	26.6		mg/Kg		106	80 - 120
Iron	1100	1130		mg/Kg		103	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-195662/18-A
Matrix: Solid
Analysis Batch: 195840

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195662

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	50.0	50.6		mg/Kg		101	80 - 120
Manganese	50.0	52.1		mg/Kg		104	80 - 120
Nickel	50.0	52.1		mg/Kg		104	80 - 120
Selenium	200	205		mg/Kg		103	80 - 120
Silver	30.0	30.3		mg/Kg		101	80 - 120
Thallium	200	198		mg/Kg		99	80 - 120
Zinc	200	206		mg/Kg		103	80 - 120
Vanadium	50.0	50.5		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 580-195662/19-A
Matrix: Solid
Analysis Batch: 195840

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 195662

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	155		mg/Kg		104	80 - 120	3	20
Arsenic	200	211		mg/Kg		105	80 - 120	2	20
Barium	200	211		mg/Kg		106	80 - 120	2	20
Beryllium	5.00	5.03		mg/Kg		101	80 - 120	3	20
Cadmium	5.00	5.24		mg/Kg		105	80 - 120	0	20
Chromium	20.0	21.6		mg/Kg		108	80 - 120	4	20
Copper	25.0	27.4		mg/Kg		110	80 - 120	3	20
Iron	1100	1160		mg/Kg		105	80 - 120	2	20
Lead	50.0	51.7		mg/Kg		103	80 - 120	2	20
Manganese	50.0	53.4		mg/Kg		107	80 - 120	3	20
Nickel	50.0	53.0		mg/Kg		106	80 - 120	2	20
Selenium	200	208		mg/Kg		104	80 - 120	2	20
Silver	30.0	30.7		mg/Kg		102	80 - 120	1	20
Thallium	200	205		mg/Kg		102	80 - 120	3	20
Zinc	200	212		mg/Kg		106	80 - 120	3	20
Vanadium	50.0	51.4		mg/Kg		103	80 - 120	2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-2579/9-A
Matrix: Solid
Analysis Batch: 2618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2579

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		07/21/15 09:15	07/21/15 13:29	1

Lab Sample ID: LCS 590-2579/8-A
Matrix: Solid
Analysis Batch: 2618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2579

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	192		ug/Kg		96	80 - 120

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-195455/1-A
Matrix: Solid
Analysis Batch: 195510

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195455

Analyte	MB Result	MB Qualifier	RL		RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0		2.0	mg/Kg		07/20/15 10:50	07/21/15 11:04	1

Lab Sample ID: LCS 580-195455/2-A
Matrix: Solid
Analysis Batch: 195510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195455

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			10.0	9.34		mg/Kg		93	80 - 120		

Lab Sample ID: 590-1429-1 MS
Matrix: Solid
Analysis Batch: 195510

Client Sample ID: MW-16 (69-70)
Prep Type: Total/NA
Prep Batch: 195455

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		10.4	9.65		mg/Kg	☼	93	80 - 120		

Lab Sample ID: 590-1429-1 MSD
Matrix: Solid
Analysis Batch: 195510

Client Sample ID: MW-16 (69-70)
Prep Type: Total/NA
Prep Batch: 195455

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		10.2	9.81		mg/Kg	☼	96	80 - 120	2	20

Lab Sample ID: 590-1429-1 DU
Matrix: Solid
Analysis Batch: 195510

Client Sample ID: MW-16 (69-70)
Prep Type: Total/NA
Prep Batch: 195455

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/Kg	☼			NC	20

Client Sample ID: MW-16 (69-70)
Date Collected: 07/14/15 15:30
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2551	07/17/15 11:40	IAB	TAL SPK

Client Sample ID: MW-16 (69-70)
Date Collected: 07/14/15 15:30
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-1
Matrix: Solid
Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.521 g	10 mL	195845	07/18/15 19:04	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.521 g	10 mL	195834	07/23/15 21:22	D1R	TAL SEA
Total/NA	Prep	3550B			10.426 g	10 mL	195470	07/21/15 08:47	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.426 g	10 mL	195628	07/22/15 20:36	AHP	TAL SEA
Total/NA	Prep	3550C			15.23 g	5 mL	2586	07/20/15 11:12	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.23 g	5 mL	2593	07/20/15 16:01	NMI	TAL SPK
Total/NA	Prep	NWTPH-HCID			11.20 g	20 mL	2549	07/17/15 12:00	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.20 g	20 mL	2613	07/21/15 11:11	NMI	TAL SPK
Total/NA	Prep	3050B			1.0132 g	50 mL	195662	07/22/15 13:29	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.0132 g	50 mL	195840	07/23/15 15:42	FCW	TAL SEA
Total/NA	Prep	7471B			0.76 g	50 mL	2579	07/21/15 09:15	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.76 g	50 mL	2618	07/21/15 13:41	JSP	TAL SPK
Total/NA	Prep	9012A			5.42 g	100 mL	195455	07/20/15 10:50	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.42 g	100 mL	195510	07/21/15 11:04	SPP	TAL SEA

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2551	07/17/15 11:40	IAB	TAL SPK

Client Sample ID: LFB-8 (17-18)
Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3
Matrix: Solid
Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.032 g	10 mL	195845	07/18/15 17:00	IWH	TAL SEA
Total/NA	Analysis	8260B		1	7.032 g	10 mL	195834	07/23/15 21:50	D1R	TAL SEA
Total/NA	Prep	3550B			10.108 g	10 mL	195470	07/21/15 08:47	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.108 g	10 mL	195628	07/22/15 21:02	AHP	TAL SEA
Total/NA	Prep	3550B			10.182 g	10 mL	195564	07/21/15 16:25	KZ1	TAL SEA
Total/NA	Analysis	8081A		1	10.182 g	10 mL	195872	07/24/15 19:30	EKK	TAL SEA
Total/NA	Prep	3550C			15.66 g	5 mL	2586	07/20/15 11:12	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.66 g	5 mL	2593	07/20/15 16:22	NMI	TAL SPK
Total/NA	Prep	3540C			30.7 g	2 mL	286728	07/19/15 15:37	DFB1	TAL DEN

Client Sample ID: LFB-8 (17-18)

Date Collected: 07/16/15 10:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-3

Matrix: Solid
Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8141A		1	30.7 g	2 mL	287000	07/21/15 16:40	TEM	TAL DEN
Total/NA	Prep	8151A			51.6 g	10 mL	287783	07/27/15 10:22	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	51.6 g	10 mL	290062	08/12/15 02:48	DAW	TAL DEN
Total/NA	Prep	NWTPH-HCID			11.03 g	20 mL	2549	07/17/15 12:00	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.03 g	20 mL	2613	07/21/15 11:29	NMI	TAL SPK
Total/NA	Prep	3050B			1.0246 g	50 mL	195662	07/22/15 13:29	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.0246 g	50 mL	195840	07/23/15 15:46	FCW	TAL SEA
Total/NA	Prep	7471B			0.65 g	50 mL	2579	07/21/15 09:15	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.65 g	50 mL	2618	07/21/15 13:43	JSP	TAL SPK
Total/NA	Prep	9012A			5.25 g	100 mL	195455	07/20/15 10:50	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.25 g	100 mL	195510	07/21/15 11:04	SPP	TAL SEA

Client Sample ID: LFB-9 (11-12)

Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2551	07/17/15 11:40	IAB	TAL SPK

Client Sample ID: LFB-9 (11-12)

Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4

Matrix: Solid
Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.086 g	10 mL	195845	07/18/15 17:00	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.086 g	10 mL	195834	07/23/15 22:16	D1R	TAL SEA
Total/NA	Prep	3550B			10.330 g	10 mL	195470	07/21/15 08:47	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.330 g	10 mL	195628	07/22/15 22:20	AHP	TAL SEA
Total/NA	Prep	3550B			10.349 g	10 mL	195564	07/21/15 16:26	KZ1	TAL SEA
Total/NA	Analysis	8081A		1	10.349 g	10 mL	195872	07/24/15 20:56	EKK	TAL SEA
Total/NA	Prep	3550C			15.09 g	5 mL	2586	07/20/15 11:12	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.09 g	5 mL	2593	07/20/15 16:43	NMI	TAL SPK
Total/NA	Prep	3540C			31.4 g	2 mL	286728	07/19/15 15:37	DFB1	TAL DEN
Total/NA	Analysis	8141A		1	31.4 g	2 mL	287000	07/21/15 23:00	TEM	TAL DEN
Total/NA	Prep	8151A			52.4 g	10 mL	287783	07/27/15 10:22	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	52.4 g	10 mL	290062	08/12/15 03:12	DAW	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.69 g	20 mL	2549	07/17/15 12:00	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.69 g	20 mL	2613	07/21/15 11:47	NMI	TAL SPK
Total/NA	Prep	3050B			1.0284 g	50 mL	195662	07/22/15 13:29	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.0284 g	50 mL	195840	07/23/15 15:28	FCW	TAL SEA
Total/NA	Prep	7471B			0.66 g	50 mL	2579	07/21/15 09:15	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.66 g	50 mL	2618	07/21/15 13:45	JSP	TAL SPK
Total/NA	Prep	9012A			5.43 g	100 mL	195455	07/20/15 10:50	SPP	TAL SEA

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Client Sample ID: LFB-9 (11-12)

Date Collected: 07/16/15 11:20
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-4

Matrix: Solid
Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9012A		1	5.43 g	100 mL	195510	07/21/15 11:04	SPP	TAL SEA

Client Sample ID: LFB-10 (45-46)

Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2551	07/17/15 11:40	IAB	TAL SPK

Client Sample ID: LFB-10 (45-46)

Date Collected: 07/16/15 14:00
Date Received: 07/17/15 17:02

Lab Sample ID: 590-1429-5

Matrix: Solid
Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.259 g	10 mL	195845	07/18/15 17:00	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.259 g	10 mL	195834	07/23/15 22:43	D1R	TAL SEA
Total/NA	Prep	3550B			10.017 g	10 mL	195470	07/21/15 08:47	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.017 g	10 mL	195628	07/22/15 22:46	AHP	TAL SEA
Total/NA	Prep	3550B			10.340 g	10 mL	195564	07/21/15 16:26	KZ1	TAL SEA
Total/NA	Analysis	8081A		1	10.340 g	10 mL	195872	07/24/15 21:14	EKK	TAL SEA
Total/NA	Prep	3550C			15.04 g	5 mL	2586	07/20/15 11:12	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.04 g	5 mL	2593	07/20/15 17:04	NMI	TAL SPK
Total/NA	Prep	3540C			30.4 g	2 mL	286728	07/19/15 15:37	DFB1	TAL DEN
Total/NA	Analysis	8141A		1	30.4 g	2 mL	287000	07/21/15 23:32	TEM	TAL DEN
Total/NA	Prep	8151A			50.4 g	10 mL	287783	07/27/15 10:22	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	50.4 g	10 mL	290062	08/12/15 03:35	DAW	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.73 g	20 mL	2549	07/17/15 12:00	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.73 g	20 mL	2611	07/21/15 10:35	NMI	TAL SPK
Total/NA	Prep	3050B			1.3518 g	50 mL	195662	07/22/15 13:29	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.3518 g	50 mL	195840	07/23/15 16:09	FCW	TAL SEA
Total/NA	Prep	7471B			0.71 g	50 mL	2579	07/21/15 09:15	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.71 g	50 mL	2618	07/21/15 13:48	JSP	TAL SPK
Total/NA	Prep	9012A			5.35 g	100 mL	195455	07/20/15 10:50	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.35 g	100 mL	195510	07/21/15 11:04	SPP	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-16
Arizona	State Program	9	AZ0713	12-19-15
Arkansas DEQ	State Program	6	88-0687	06-01-16
California	State Program	9	2513	08-31-16
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-15 *
Georgia	State Program	4	N/A	01-09-15 *
Illinois	NELAP	5	200017	04-30-16
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	09-30-15
Louisiana	NELAP	6	02096	06-30-16
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-15
Nevada	State Program	9	CO0026	07-31-16
New Hampshire	NELAP	1	205310	04-28-16
New Jersey	NELAP	2	CO004	09-30-15
New York	NELAP	2	11964	04-01-16
North Carolina (WW/SW)	State Program	4	358	12-31-15
North Dakota	State Program	8	R-034	01-09-16
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-16
Pennsylvania	NELAP	3	68-00664	08-30-15
South Carolina	State Program	4	72002001	06-30-15 *
Texas	NELAP	6	T104704183-13-8	09-30-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-16
Virginia	NELAP	3	460232	06-14-16
Washington	State Program	10	C583	08-03-15 *
West Virginia DEP	State Program	3	354	11-30-15
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron

* Certification renewal pending - certification considered valid.

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8081A	3550B	Solid	4,4'-DDD
8081A	3550B	Solid	4,4'-DDE
8081A	3550B	Solid	4,4'-DDT
8081A	3550B	Solid	Aldrin
8081A	3550B	Solid	alpha-BHC
8081A	3550B	Solid	alpha-Chlordane
8081A	3550B	Solid	beta-BHC
8081A	3550B	Solid	delta-BHC
8081A	3550B	Solid	Dieldrin
8081A	3550B	Solid	Endosulfan I
8081A	3550B	Solid	Endosulfan II
8081A	3550B	Solid	Endosulfan sulfate
8081A	3550B	Solid	Endrin
8081A	3550B	Solid	Endrin aldehyde
8081A	3550B	Solid	Endrin ketone
8081A	3550B	Solid	gamma-BHC (Lindane)
8081A	3550B	Solid	gamma-Chlordane
8081A	3550B	Solid	Heptachlor
8081A	3550B	Solid	Heptachlor epoxide
8081A	3550B	Solid	Methoxychlor
8081A	3550B	Solid	Toxaphene
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1429-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8081A	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141A	Organophosphorous Pesticides (GC)	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 [X]
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [ ]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]

8/17/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers

REPORT TO: jmarshall@GeoEngineers.com

ADDRESS: 523 E. Second Ave. Spokane, WA 99202

PHONE: 509-363-3125 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Marshall

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [10 STD.] [7] [5] [4] [3] [2] [1] [<1]

Petroleum Hydrocarbon Analyses: [X STD.] [4] [3] [2] [1] [<1]

[OTHER] Specify:

* *Turnaround Requests less than standard may incur Rush Charges.*

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	HCID	Metals	8260	EDB	8270	Pesticides	Herbicides	PCBs						MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	MW-16 (69-70)	7/14/2015 1530		X	X	X	X	X			X						S	5		
2	MW-16 (108-109)	7/14/2015 1650																	Hold	
3	LFB-8 (17-18)	7/16/2015 1000		X	X	X	X	X	X	X	X									
4	LFB-9 (11-12)	7/16/2015 1120		X	X	X	X	X	X	X	X									
5	LFB-10 (45-46)	7/16/2015 1400		X	X	X	X	X	X	X	X						V	V		
6																				
7																				
8																				
9																				
10																				

RELEASED BY: Josh Lee DATE: 7/16/2015

PRINT NAME: Josh Lee FIRM: GEI TIME: 1700

RECEIVED BY: Sheila Bridz DATE: 7/16/15

PRINT NAME: Sheila Bridz FIRM: TA SPOK TIME: 17:02

RELEASED BY: DATE:

PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:

PRINT NAME: TIME:

ADDITIONAL REMARKS.

TEMP: 3.8 PAGE 1 OF 1

590-1429 Chain of Custody

TAL-1000 (0714)

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1429-1

Login Number: 1429
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1429-1

Login Number: 1429
List Number: 3
Creator: White, Denise E

List Source: TestAmerica Denver
List Creation: 07/18/15 04:02 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1429-1

Login Number: 1429
List Number: 4
Creator: White, Denise E

List Source: TestAmerica Denver
List Creation: 07/18/15 04:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1429-1

Login Number: 1429
List Number: 2
Creator: Rivers, Zachary V

List Source: TestAmerica Seattle
List Creation: 07/18/15 02:42 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1460-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
8/17/2015 3:46:03 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-1460-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 7/20/2015 4:45 PM; the sample arrived in good condition. The temperature of the cooler at receipt was 7.8º C.

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria: LFB-11 (42-43) (590-1460-1).

GC/MS VOA Method 8260B:
The method blank for analytical batch 580-196522 contained Methylene Chloride above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-196522 recovered outside control limits for the following analytes: Multi analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The following sample was prepared outside of the preparation holding time (48hrs for unfrozen bulk soil preparation) due to the preserved samples not being located until after the holding had expired. Sample reported and H flag qualifier has been added: LFB-11 (42-43) (590-1460-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The method blank for preparation batch 580-196274 and analytical batch 580-196337 contained Benzyl alcohol above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA Method 8141A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-288625. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15 %D. The associated samples were ND for the affected analytes. Naled recoveries were over 80% low in the closing CCV, therefore naled is reported from a more diluted sample earlier in the run.

GC Semi VOA Method 8151A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-290062 for the following compounds: MCPA and MCPP. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15 %D. The associated samples are ND for the affected compounds.

The laboratory control sample (LCS) in preparation batch 280-287783 and analytical batch 280-290062 recovered below the lower control limit on one column for MCPA and Dichlorprop. The associated samples are ND on both columns and are reported from the column which is in control in the LCS.

GC Semi VOA Method 8081A:
In analytical batch 580-197011, the continuing calibration verification (CCV) associated with samples from preparation batch 580-196413 recovered above the upper control limit for DCB Decachlorobiphenyl, Methoxychlor and Toxaphene. The samples associated with this CCV were non-detects for the affected analytes, all sample DCB surrogate recoveries were not adversely affected by the high bias, and the Methoxychlor recoveries in the LCS, LCSD, MS and MSD were not adversely affected by the high bias; therefore, the data have been qualified and reported. The following samples are impacted: LFB-11 (42-43) (590-1460-1), (CCV 580-197011/56), (CCV 580-197011/65), (CCV 580-197011/66), (LCS 580-196413/2-A), (LCSD 580-196413/3-A), (MB 580-196413/1-A), (590-1460-B-1-K MS) and (590-1460-B-1-L MSD).

Job ID: 590-1460-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

In analytical batch 580-197011, the following samples from preparation batch 580-196413 required a Florisil clean-up, via EPA Method 3620C, to reduce matrix interferences: LFB-11 (42-43) (590-1460-1), (LCS 580-196413/2-A), (LCSD 580-196413/3-A), (MB 580-196413/1-A), (590-1460-B-1-K MS) and (590-1460-B-1-L MSD). The Florisil lot ID used was: 1298295.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1460-1	LFB-11 (42-43)	Solid	07/17/15 11:30	07/20/15 16:45

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
*	LCS or LCSD is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Client Sample ID: LFB-11 (42-43)
Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	0.94	0.23	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,1,1-Trichloroethane	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,1,2,2-Tetrachloroethane	ND	* H	3.8	0.85	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,1,2-Trichloroethane	ND	* H	1.9	0.24	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,1-Dichloroethane	ND	H	0.94	0.18	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,1-Dichloroethene	ND	H	4.7	0.47	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,1-Dichloropropene	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2,3-Trichlorobenzene	ND	H	2.8	0.57	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2,3-Trichloropropane	ND	* H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2,4-Trichlorobenzene	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2,4-Trimethylbenzene	ND	H	1.9	0.15	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2-Dibromo-3-Chloropropane	ND	* H	9.4	1.5	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2-Dichlorobenzene	ND	H	1.9	0.29	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2-Dichloroethane	ND	H	0.94	0.14	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,2-Dichloropropane	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,3,5-Trimethylbenzene	ND	H	4.7	0.16	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,3-Dichlorobenzene	ND	H	1.9	0.25	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,3-Dichloropropane	ND	* H	1.9	0.22	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
1,4-Dichlorobenzene	ND	H	0.94	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
2,2-Dichloropropane	ND	H	4.7	0.85	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
2-Chlorotoluene	ND	H	1.9	0.16	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
4-Chlorotoluene	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
4-Isopropyltoluene	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Benzene	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Bromobenzene	ND	H	9.4	2.2	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Bromoform	ND	* H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Bromomethane	ND	H	0.94	0.20	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Carbon tetrachloride	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Chlorobenzene	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Chlorobromomethane	ND	H	1.9	0.24	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Chlorodibromomethane	ND	H	1.9	0.25	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Chloroethane	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Chloroform	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Chloromethane	ND	H	0.94	0.13	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
cis-1,2-Dichloroethene	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
cis-1,3-Dichloropropene	ND	H	0.94	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Dibromomethane	ND	* H	0.94	0.16	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Dichlorobromomethane	ND	H	0.94	0.17	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Dichlorodifluoromethane	ND	H	1.9	0.46	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Ethylbenzene	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Ethylene Dibromide	ND	* H	0.94	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Hexachlorobutadiene	ND	H	2.8	0.57	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Isopropylbenzene	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Methyl tert-butyl ether	ND	* H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Methylene Chloride	**1.6**	**J B H**	14	0.23	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
m-Xylene & p-Xylene	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Naphthalene	ND	H	9.4	1.7	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
n-Butylbenzene	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
N-Propylbenzene	ND	H	1.9	0.30	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1

Client Sample ID: LFB-11 (42-43)
Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	H	1.9	0.25	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
sec-Butylbenzene	ND	H	1.9	0.24	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Styrene	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
tert-Butylbenzene	ND	H	1.9	0.19	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Tetrachloroethene	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Toluene	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
trans-1,2-Dichloroethene	ND	H	1.9	0.38	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
trans-1,3-Dichloropropene	ND	* H	9.4	1.3	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Trichloroethene	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Trichlorofluoromethane	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1
Vinyl chloride	ND	H	1.9	0.28	ug/Kg	☼	07/30/15 12:01	07/30/15 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*75*		*71 - 136*	*07/30/15 12:01*	*07/30/15 19:44*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 120*	*07/30/15 12:01*	*07/30/15 19:44*	*1*
Dibromofluoromethane (Surr)	*91*		*75 - 132*	*07/30/15 12:01*	*07/30/15 19:44*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*07/30/15 12:01*	*07/30/15 19:44*	*1*
Trifluorotoluene (Surr)	*98*		*65 - 140*	*07/30/15 12:01*	*07/30/15 19:44*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2-Methylphenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
3 & 4 Methylphenol	ND		200	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4-Chloroaniline	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4-Nitroaniline	ND		100	20	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
4-Nitrophenol	ND		1000	250	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Acenaphthene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1

Client Sample ID: LFB-11 (42-43)
Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Anthracene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzo[a]anthracene	**13**	**J**	20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzoic acid	ND		2500	760	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Benzyl alcohol	**15**	**J B**	100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Butyl benzyl phthalate	ND		200	50	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Carbazole	ND		100	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Chrysene	**7.7**	**J**	25	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Dibenzofuran	ND		100	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Diethyl phthalate	ND		200	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Dimethyl phthalate	ND		100	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Di-n-butyl phthalate	ND		500	50	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Fluoranthene	**16**	**J**	20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Fluorene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Hexachlorobenzene	ND		50	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Hexachlorobutadiene	ND		50	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Hexachloroethane	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Isophorone	ND		100	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Naphthalene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Nitrobenzene	ND		100	34	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Pentachlorophenol	ND		200	20	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Phenanthrene	ND		20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Phenol	ND		100	15	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1
Pyrene	**10**	**J**	20	5.0	ug/Kg	☼	07/28/15 14:46	07/29/15 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*105*		*28 - 143*	*07/28/15 14:46*	*07/29/15 17:53*	*1*
2-Fluorobiphenyl	*77*		*42 - 140*	*07/28/15 14:46*	*07/29/15 17:53*	*1*
2-Fluorophenol	*103*		*36 - 145*	*07/28/15 14:46*	*07/29/15 17:53*	*1*
Nitrobenzene-d5	*69*		*38 - 141*	*07/28/15 14:46*	*07/29/15 17:53*	*1*
Phenol-d5	*93*		*38 - 149*	*07/28/15 14:46*	*07/29/15 17:53*	*1*
Terphenyl-d14	*102*		*42 - 151*	*07/28/15 14:46*	*07/29/15 17:53*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	**0.21**	**J**	2.0	0.14	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1

Client Sample ID: LFB-11 (42-43)
Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.0	0.14	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
4,4'-DDT	ND		2.0	0.15	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Aldrin	ND		0.99	0.22	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
alpha-BHC	ND		0.99	0.27	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
alpha-Chlordane	ND		0.99	0.13	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
beta-BHC	ND		0.99	0.32	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
delta-BHC	ND		0.99	0.15	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Dieldrin	ND		2.0	0.12	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Endosulfan I	ND		0.99	0.10	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Endosulfan II	ND		2.0	0.17	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Endosulfan sulfate	ND		2.0	0.18	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Endrin	ND		2.0	0.16	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Endrin ketone	ND		2.0	0.26	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
gamma-BHC (Lindane)	ND		0.99	0.30	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
gamma-Chlordane	ND		0.99	0.13	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Heptachlor	ND		2.0	0.46	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Heptachlor epoxide	ND		0.99	0.0030	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Methoxychlor	ND	^	9.9	0.26	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1
Toxaphene	ND	^	99	23	ug/Kg	☼	07/29/15 17:42	08/06/15 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*97*	^	*60 - 128*	*07/29/15 17:42*	*08/06/15 03:57*	*1*
Tetrachloro-m-xylene	*55*		*35 - 129*	*07/29/15 17:42*	*08/06/15 03:57*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1
PCB-1221	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1
PCB-1232	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1
PCB-1242	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1
PCB-1248	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1
PCB-1254	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1
PCB-1260	ND		10	2.3	ug/Kg	☼	07/29/15 11:14	07/30/15 11:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*51.9 - 151*	*07/29/15 11:14*	*07/30/15 11:00*	*1*
DCB Decachlorobiphenyl (Surr)	*74*		*73.5 - 164*	*07/29/15 11:14*	*07/30/15 11:00*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		70	13	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Bolstar	ND		14	4.4	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Chlorpyrifos	ND		21	6.8	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Coumaphos	ND		14	2.9	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Demeton, Total	ND		41	7.9	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Diazinon	ND		23	7.6	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Dichlorvos	ND		24	7.7	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Dimethoate	ND		23	7.4	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Disulfoton	ND		50	8.1	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1

Client Sample ID: LFB-11 (42-43)
Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		14	3.9	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Famphur	ND		14	3.4	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Fensulfothion	ND		26	8.5	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Mevinphos	ND		16	4.8	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Methyl parathion	ND		21	6.7	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Merphos	ND		31	5.4	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Malathion	ND		16	4.9	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Fenthion	ND		35	9.1	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Ethyl Parathion	ND		19	5.5	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Phorate	ND		21	6.0	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Ronnel	ND		48	16	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Simazine	ND		70	23	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Sulfotepp	ND		21	6.5	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Thionazin	ND		19	5.8	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Tokuthion	ND		21	4.1	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Trichloronate	ND		21	6.5	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Ethoprop	ND		16	5.2	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Propazine	ND		70	9.0	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1
Azinphos-methyl	ND		14	3.7	ug/Kg	☼	07/27/15 18:50	07/31/15 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*56*		*42 - 132*	*07/27/15 18:50*	*07/31/15 21:35*	*1*
Triphenylphosphate	*113*		*47 - 161*	*07/27/15 18:50*	*07/31/15 21:35*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
2,4-D	ND		83	14	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
2,4-DB	**9.3**	**J p B**	83	7.7	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
Dalapon	ND		41	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
Dicamba	ND		41	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
Dichlorprop	ND		83	3.3	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
MCPA	ND	*	8300	2100	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
MCPP	ND		8300	2100	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1
Silvex (2,4,5-TP)	ND		21	1.4	ug/Kg	☼	07/27/15 10:22	08/12/15 04:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*70*		*31 - 105*	*07/27/15 10:22*	*08/12/15 04:22*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		39	39	mg/Kg	☼	07/21/15 08:47	07/21/15 11:47	1
Diesel Range Organics (DRO) (C10-C25)	ND		97	97	mg/Kg	☼	07/21/15 08:47	07/21/15 11:47	1
Residual Range Organics (RRO) (C25-C36)	ND		97	97	mg/Kg	☼	07/21/15 08:47	07/21/15 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*111*		*50 - 150*	*07/21/15 08:47*	*07/21/15 11:47*	*1*
n-Triacontane-d62	*121*		*50 - 150*	*07/21/15 08:47*	*07/21/15 11:47*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Client Sample ID: LFB-11 (42-43)
Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.29		0.19	0.039	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Arsenic	5.0		0.46	0.17	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Barium	130		0.46	0.072	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Beryllium	0.41		0.19	0.032	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Cadmium	0.16	J	0.19	0.018	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Chromium	7.7		0.46	0.058	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Copper	15		0.37	0.091	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Iron	33000		37	9.9	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Lead	6.7		0.46	0.044	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Manganese	510		0.93	0.16	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Nickel	9.5		0.46	0.075	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Selenium	1.6		0.93	0.19	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Silver	0.028	J	0.19	0.011	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Thallium	ND		0.37	0.12	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Zinc	69		4.6	1.0	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10
Vanadium	66		1.9	0.44	mg/Kg	☼	07/29/15 07:18	07/29/15 17:11	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	5.1	J	41	1.7	ug/Kg	☼	07/21/15 09:15	07/21/15 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.1	2.1	mg/Kg	☼	07/23/15 15:18	07/30/15 10:46	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-196522/4
Matrix: Solid
Analysis Batch: 196522

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/Kg			07/30/15 15:18	1
1,1,1-Trichloroethane	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.45	ug/Kg			07/30/15 15:18	1
1,1,2-Trichloroethane	ND		1.0	0.13	ug/Kg			07/30/15 15:18	1
1,1-Dichloroethane	ND		0.50	0.095	ug/Kg			07/30/15 15:18	1
1,1-Dichloroethene	ND		2.5	0.25	ug/Kg			07/30/15 15:18	1
1,1-Dichloropropene	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
1,2,3-Trichlorobenzene	ND		1.5	0.30	ug/Kg			07/30/15 15:18	1
1,2,3-Trichloropropane	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.080	ug/Kg			07/30/15 15:18	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.80	ug/Kg			07/30/15 15:18	1
1,2-Dichlorobenzene	ND		1.0	0.16	ug/Kg			07/30/15 15:18	1
1,2-Dichloroethane	ND		0.50	0.075	ug/Kg			07/30/15 15:18	1
1,2-Dichloropropane	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
1,3,5-Trimethylbenzene	ND		2.5	0.085	ug/Kg			07/30/15 15:18	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/Kg			07/30/15 15:18	1
1,3-Dichloropropane	ND		1.0	0.12	ug/Kg			07/30/15 15:18	1
1,4-Dichlorobenzene	ND		0.50	0.10	ug/Kg			07/30/15 15:18	1
2,2-Dichloropropane	ND		2.5	0.45	ug/Kg			07/30/15 15:18	1
2-Chlorotoluene	ND		1.0	0.085	ug/Kg			07/30/15 15:18	1
4-Chlorotoluene	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1
4-Isopropyltoluene	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
Benzene	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Bromobenzene	ND		5.0	1.2	ug/Kg			07/30/15 15:18	1
Bromoform	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Bromomethane	ND		0.50	0.11	ug/Kg			07/30/15 15:18	1
Carbon tetrachloride	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Chlorobenzene	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
Chlorobromomethane	ND		1.0	0.13	ug/Kg			07/30/15 15:18	1
Chlorodibromomethane	ND		1.0	0.14	ug/Kg			07/30/15 15:18	1
Chloroethane	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1
Chloroform	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Chloromethane	ND		0.50	0.070	ug/Kg			07/30/15 15:18	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
cis-1,3-Dichloropropene	ND		0.50	0.10	ug/Kg			07/30/15 15:18	1
Dibromomethane	ND		0.50	0.085	ug/Kg			07/30/15 15:18	1
Dichlorobromomethane	ND		0.50	0.090	ug/Kg			07/30/15 15:18	1
Dichlorodifluoromethane	ND		1.0	0.25	ug/Kg			07/30/15 15:18	1
Ethylbenzene	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
Ethylene Dibromide	ND		0.50	0.10	ug/Kg			07/30/15 15:18	1
Hexachlorobutadiene	ND		1.5	0.30	ug/Kg			07/30/15 15:18	1
Isopropylbenzene	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1
Methyl tert-butyl ether	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Methylene Chloride	0.265	J	7.5	0.12	ug/Kg			07/30/15 15:18	1
m-Xylene & p-Xylene	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1
Naphthalene	ND		5.0	0.90	ug/Kg			07/30/15 15:18	1
n-Butylbenzene	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-196522/4
Matrix: Solid
Analysis Batch: 196522

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		1.0	0.16	ug/Kg			07/30/15 15:18	1
o-Xylene	ND		1.0	0.13	ug/Kg			07/30/15 15:18	1
sec-Butylbenzene	ND		1.0	0.13	ug/Kg			07/30/15 15:18	1
Styrene	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1
tert-Butylbenzene	ND		1.0	0.10	ug/Kg			07/30/15 15:18	1
Tetrachloroethene	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
Toluene	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/Kg			07/30/15 15:18	1
trans-1,3-Dichloropropene	ND		5.0	0.70	ug/Kg			07/30/15 15:18	1
Trichloroethene	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Trichlorofluoromethane	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1
Vinyl chloride	ND		1.0	0.15	ug/Kg			07/30/15 15:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*71 - 136*		*07/30/15 15:18*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 120*		*07/30/15 15:18*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 132*		*07/30/15 15:18*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*07/30/15 15:18*	*1*
Trifluorotoluene (Surr)	*93*		*65 - 140*		*07/30/15 15:18*	*1*

Lab Sample ID: LCS 580-196522/5
Matrix: Solid
Analysis Batch: 196522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	23.7		ug/Kg		118	72 - 123
1,1,1-Trichloroethane	20.0	20.2		ug/Kg		101	63 - 135
1,1,2,2-Tetrachloroethane	20.0	27.6	*	ug/Kg		138	73 - 125
1,1,2-Trichloroethane	20.0	25.1	*	ug/Kg		125	77 - 124
1,1-Dichloroethane	20.0	22.4		ug/Kg		112	70 - 128
1,1-Dichloroethene	20.0	22.0		ug/Kg		110	70 - 133
1,1-Dichloropropene	20.0	22.8		ug/Kg		114	77 - 125
1,2,3-Trichlorobenzene	20.0	23.7		ug/Kg		119	61 - 130
1,2,3-Trichloropropane	20.0	25.5	*	ug/Kg		127	77 - 123
1,2,4-Trichlorobenzene	20.0	24.9		ug/Kg		125	61 - 130
1,2,4-Trimethylbenzene	20.0	21.7		ug/Kg		108	79 - 124
1,2-Dibromo-3-Chloropropane	20.0	27.4	*	ug/Kg		137	53 - 132
1,2-Dichlorobenzene	20.0	22.4		ug/Kg		112	79 - 117
1,2-Dichloroethane	20.0	24.2		ug/Kg		121	71 - 128
1,2-Dichloropropane	20.0	23.1		ug/Kg		116	76 - 161
1,3,5-Trimethylbenzene	20.0	21.2		ug/Kg		106	80 - 125
1,3-Dichlorobenzene	20.0	20.4		ug/Kg		102	79 - 119
1,3-Dichloropropane	20.0	24.8	*	ug/Kg		124	77 - 123
1,4-Dichlorobenzene	20.0	20.6		ug/Kg		103	79 - 117
2,2-Dichloropropane	20.0	17.5		ug/Kg		88	56 - 144
2-Chlorotoluene	20.0	20.8		ug/Kg		104	79 - 122
4-Chlorotoluene	20.0	20.7		ug/Kg		103	80 - 122
4-Isopropyltoluene	20.0	19.3		ug/Kg		96	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-196522/5
Matrix: Solid
Analysis Batch: 196522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	21.8		ug/Kg		109	70 - 128
Bromobenzene	20.0	20.1		ug/Kg		100	80 - 120
Bromoform	20.0	25.3	*	ug/Kg		126	50 - 124
Bromomethane	25.0	24.5		ug/Kg		98	57 - 148
Carbon tetrachloride	20.0	21.7		ug/Kg		109	59 - 145
Chlorobenzene	20.0	20.7		ug/Kg		104	75 - 120
Chlorobromomethane	20.0	24.3		ug/Kg		121	78 - 123
Chlorodibromomethane	20.0	25.1		ug/Kg		125	42 - 129
Chloroethane	25.0	26.5		ug/Kg		106	48 - 167
Chloroform	20.0	20.9		ug/Kg		105	78 - 125
Chloromethane	25.1	25.0		ug/Kg		100	55 - 136
cis-1,2-Dichloroethene	20.0	21.6		ug/Kg		108	70 - 130
cis-1,3-Dichloropropene	20.0	24.5		ug/Kg		123	69 - 129
Dibromomethane	20.0	25.7	*	ug/Kg		128	78 - 126
Dichlorobromomethane	20.0	22.2		ug/Kg		111	58 - 133
Dichlorodifluoromethane	24.9	23.2		ug/Kg		93	38 - 150
Ethylbenzene	20.0	21.1		ug/Kg		106	78 - 126
Ethylene Dibromide	20.0	25.9	*	ug/Kg		129	69 - 126
Hexachlorobutadiene	20.0	20.9		ug/Kg		105	68 - 134
Isopropylbenzene	20.0	21.0		ug/Kg		105	79 - 127
Methyl tert-butyl ether	20.0	28.3	*	ug/Kg		141	65 - 125
Methylene Chloride	20.0	22.4		ug/Kg		112	57 - 146
m-Xylene & p-Xylene	20.0	21.1		ug/Kg		106	78 - 126
Naphthalene	20.0	27.1		ug/Kg		136	14 - 170
n-Butylbenzene	20.0	20.0		ug/Kg		100	78 - 128
N-Propylbenzene	20.0	20.2		ug/Kg		101	81 - 127
o-Xylene	20.0	21.6		ug/Kg		108	77 - 127
sec-Butylbenzene	20.0	20.4		ug/Kg		102	78 - 128
Styrene	20.0	22.3		ug/Kg		111	79 - 127
tert-Butylbenzene	20.0	21.2		ug/Kg		106	71 - 136
Tetrachloroethene	20.0	25.6		ug/Kg		128	56 - 155
Toluene	20.0	20.4		ug/Kg		102	75 - 126
trans-1,2-Dichloroethene	20.0	22.3		ug/Kg		112	76 - 131
trans-1,3-Dichloropropene	20.0	26.1	*	ug/Kg		131	72 - 129
Trichloroethene	20.0	21.2		ug/Kg		106	83 - 124
Trichlorofluoromethane	25.0	25.5		ug/Kg		102	47 - 165
Vinyl chloride	25.0	23.7		ug/Kg		95	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*117*		*71 - 136*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*
Dibromofluoromethane (Surr)	*109*		*75 - 132*
Toluene-d8 (Surr)	*103*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-196522/6
Matrix: Solid
Analysis Batch: 196522

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	20.0	22.8		ug/Kg		114	72 - 123	4	20
1,1,1-Trichloroethane	20.0	19.9		ug/Kg		99	63 - 135	2	20
1,1,2,2-Tetrachloroethane	20.0	27.1	*	ug/Kg		135	73 - 125	2	22
1,1,2-Trichloroethane	20.0	24.3		ug/Kg		121	77 - 124	3	18
1,1-Dichloroethane	20.0	20.8		ug/Kg		104	70 - 128	7	21
1,1-Dichloroethene	20.0	21.4		ug/Kg		107	70 - 133	3	23
1,1-Dichloropropene	20.0	23.1		ug/Kg		116	77 - 125	2	16
1,2,3-Trichlorobenzene	20.0	22.0		ug/Kg		110	61 - 130	8	23
1,2,3-Trichloropropane	20.0	25.2	*	ug/Kg		126	77 - 123	1	23
1,2,4-Trichlorobenzene	20.0	22.4		ug/Kg		112	61 - 130	11	22
1,2,4-Trimethylbenzene	20.0	22.2		ug/Kg		111	79 - 124	2	18
1,2-Dibromo-3-Chloropropane	20.0	26.1		ug/Kg		131	53 - 132	5	27
1,2-Dichlorobenzene	20.0	22.4		ug/Kg		112	79 - 117	0	17
1,2-Dichloroethane	20.0	22.7		ug/Kg		114	71 - 128	6	18
1,2-Dichloropropane	20.0	23.9		ug/Kg		119	76 - 161	3	15
1,3,5-Trimethylbenzene	20.0	22.0		ug/Kg		110	80 - 125	4	18
1,3-Dichlorobenzene	20.0	21.3		ug/Kg		106	79 - 119	4	17
1,3-Dichloropropane	20.0	25.1	*	ug/Kg		126	77 - 123	1	19
1,4-Dichlorobenzene	20.0	21.4		ug/Kg		107	79 - 117	4	18
2,2-Dichloropropane	20.0	17.3		ug/Kg		86	56 - 144	2	21
2-Chlorotoluene	20.0	21.6		ug/Kg		108	79 - 122	4	18
4-Chlorotoluene	20.0	21.7		ug/Kg		109	80 - 122	5	18
4-Isopropyltoluene	20.0	20.6		ug/Kg		103	78 - 126	7	18
Benzene	20.0	22.0		ug/Kg		110	70 - 128	1	19
Bromobenzene	20.0	21.1		ug/Kg		106	80 - 120	5	19
Bromoform	20.0	25.3	*	ug/Kg		127	50 - 124	0	25
Bromomethane	25.0	24.5		ug/Kg		98	57 - 148	0	29
Carbon tetrachloride	20.0	21.5		ug/Kg		107	59 - 145	1	19
Chlorobenzene	20.0	21.3		ug/Kg		107	75 - 120	3	21
Chlorobromomethane	20.0	23.8		ug/Kg		119	78 - 123	2	19
Chlorodibromomethane	20.0	24.7		ug/Kg		124	42 - 129	1	23
Chloroethane	25.0	25.1		ug/Kg		100	48 - 167	5	53
Chloroform	20.0	20.2		ug/Kg		101	78 - 125	4	17
Chloromethane	25.1	24.4		ug/Kg		97	55 - 136	3	26
cis-1,2-Dichloroethene	20.0	20.7		ug/Kg		104	70 - 130	4	19
cis-1,3-Dichloropropene	20.0	24.9		ug/Kg		125	69 - 129	1	19
Dibromomethane	20.0	25.4	*	ug/Kg		127	78 - 126	1	18
Dichlorobromomethane	20.0	21.5		ug/Kg		107	58 - 133	3	19
Dichlorodifluoromethane	24.9	22.0		ug/Kg		88	38 - 150	6	26
Ethylbenzene	20.0	21.6		ug/Kg		108	78 - 126	2	23
Ethylene Dibromide	20.0	24.0		ug/Kg		120	69 - 126	8	21
Hexachlorobutadiene	20.0	20.0		ug/Kg		100	68 - 134	4	21
Isopropylbenzene	20.0	21.8		ug/Kg		109	79 - 127	4	20
Methyl tert-butyl ether	20.0	26.1	*	ug/Kg		130	65 - 125	8	30
Methylene Chloride	20.0	20.9		ug/Kg		105	57 - 146	7	21
m-Xylene & p-Xylene	20.0	21.8		ug/Kg		109	78 - 126	3	23
Naphthalene	20.0	24.0		ug/Kg		120	14 - 170	12	50
n-Butylbenzene	20.0	20.4		ug/Kg		102	78 - 128	2	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-196522/6
Matrix: Solid
Analysis Batch: 196522

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			20.0	21.4		ug/Kg		107	81 - 127	6	20
o-Xylene			20.0	21.7		ug/Kg		109	77 - 127	0	22
sec-Butylbenzene			20.0	21.7		ug/Kg		109	78 - 128	6	17
Styrene			20.0	23.1		ug/Kg		116	79 - 127	4	21
tert-Butylbenzene			20.0	22.2		ug/Kg		111	71 - 136	5	27
Tetrachloroethene			20.0	20.8		ug/Kg		104	56 - 155	20	27
Toluene			20.0	20.3		ug/Kg		102	75 - 126	0	19
trans-1,2-Dichloroethene			20.0	21.3		ug/Kg		106	76 - 131	5	18
trans-1,3-Dichloropropene			20.0	24.9		ug/Kg		124	72 - 129	5	20
Trichloroethene			20.0	21.5		ug/Kg		107	83 - 124	1	17
Trichlorofluoromethane			25.0	24.7		ug/Kg		98	47 - 165	3	54
Vinyl chloride			25.0	22.9		ug/Kg		92	67 - 131	3	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*71 - 136*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*
Dibromofluoromethane (Surr)	*101*		*75 - 132*
Toluene-d8 (Surr)	*98*		*80 - 120*
Trifluorotoluene (Surr)	*88*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-196274/1-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2-Chlorophenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2-Methylphenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2-Nitroaniline	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
2-Nitrophenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
3-Nitroaniline	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-196274/1-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
4-Chloroaniline	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
4-Nitroaniline	ND		100	20	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
4-Nitrophenol	ND		1000	250	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Acenaphthene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Acenaphthylene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Anthracene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzoic acid	ND		2500	750	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Benzyl alcohol	18.6	J	100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Butyl benzyl phthalate	ND		200	50	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Carbazole	ND		100	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Chrysene	ND		25	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Dibenzofuran	ND		100	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Diethyl phthalate	ND		200	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Fluoranthene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Fluorene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Hexachlorobutadiene	ND		50	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Hexachloroethane	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Isophorone	ND		100	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Naphthalene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Nitrobenzene	ND		100	34	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Pentachlorophenol	ND		200	20	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Phenanthrene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Phenol	ND		100	15	ug/Kg		07/28/15 14:46	07/29/15 13:03	1
Pyrene	ND		20	5.0	ug/Kg		07/28/15 14:46	07/29/15 13:03	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-196274/1-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196274

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	76		28 - 143	07/28/15 14:46	07/29/15 13:03	1
2-Fluorobiphenyl	97		42 - 140	07/28/15 14:46	07/29/15 13:03	1
2-Fluorophenol	112		36 - 145	07/28/15 14:46	07/29/15 13:03	1
Nitrobenzene-d5	83		38 - 141	07/28/15 14:46	07/29/15 13:03	1
Phenol-d5	93		38 - 149	07/28/15 14:46	07/29/15 13:03	1
Terphenyl-d14	95		42 - 151	07/28/15 14:46	07/29/15 13:03	1

Lab Sample ID: LCS 580-196274/2-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	886		ug/Kg		89	66 - 115
1,2-Dichlorobenzene	1000	751		ug/Kg		75	64 - 112
1,3-Dichlorobenzene	1000	758		ug/Kg		76	64 - 111
1,4-Dichlorobenzene	1000	731		ug/Kg		73	65 - 110
1-Methylnaphthalene	1000	956		ug/Kg		96	62 - 118
2,4,5-Trichlorophenol	1000	933		ug/Kg		93	57 - 133
2,4,6-Trichlorophenol	1000	1000		ug/Kg		100	62 - 133
2,4-Dichlorophenol	1000	1060		ug/Kg		106	68 - 125
2,4-Dimethylphenol	1000	1380		ug/Kg		138	54 - 139
2,4-Dinitrophenol	2000	1280		ug/Kg		64	20 - 141
2,4-Dinitrotoluene	1000	887		ug/Kg		89	68 - 121
2,6-Dinitrotoluene	1000	915		ug/Kg		92	66 - 123
2-Chloronaphthalene	1000	955		ug/Kg		95	68 - 112
2-Chlorophenol	1000	963		ug/Kg		96	68 - 117
2-Methylnaphthalene	1000	957		ug/Kg		96	64 - 119
2-Methylphenol	1000	1050		ug/Kg		105	71 - 116
2-Nitroaniline	1000	905		ug/Kg		90	64 - 112
2-Nitrophenol	1000	917		ug/Kg		92	67 - 127
3 & 4 Methylphenol	1000	1080		ug/Kg		108	70 - 116
3,3'-Dichlorobenzidine	2000	1580		ug/Kg		79	20 - 103
3-Nitroaniline	1000	847		ug/Kg		85	27 - 103
4,6-Dinitro-2-methylphenol	2000	1740		ug/Kg		87	48 - 130
4-Bromophenyl phenyl ether	1000	1020		ug/Kg		102	68 - 122
4-Chloro-3-methylphenol	1000	1000		ug/Kg		100	69 - 121
4-Chloroaniline	1000	919		ug/Kg		92	20 - 103
4-Chlorophenyl phenyl ether	1000	971		ug/Kg		97	75 - 108
4-Nitroaniline	1000	869		ug/Kg		87	58 - 108
4-Nitrophenol	2000	1580		ug/Kg		79	20 - 165
Acenaphthene	1000	910		ug/Kg		91	68 - 116
Acenaphthylene	1000	989		ug/Kg		99	68 - 120
Anthracene	1000	1100		ug/Kg		110	73 - 116
Benzo[a]anthracene	1000	961		ug/Kg		96	76 - 119
Benzo[a]pyrene	1000	828		ug/Kg		83	72 - 117
Benzo[b]fluoranthene	1000	789		ug/Kg		79	63 - 132
Benzo[g,h,i]perylene	1000	807		ug/Kg		81	55 - 139
Benzo[k]fluoranthene	1000	815		ug/Kg		81	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-196274/2-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	870	J	ug/Kg		43	29 - 158
Benzyl alcohol	1000	1150		ug/Kg		115	55 - 123
bis (2-chloroisopropyl) ether	1000	779		ug/Kg		78	41 - 126
Bis(2-chloroethoxy)methane	1000	1030		ug/Kg		103	69 - 107
Bis(2-chloroethyl)ether	1000	836		ug/Kg		84	62 - 110
Bis(2-ethylhexyl) phthalate	1000	871		ug/Kg		87	62 - 144
Butyl benzyl phthalate	1000	903		ug/Kg		90	69 - 142
Carbazole	1000	1070		ug/Kg		107	76 - 135
Chrysene	1000	1020		ug/Kg		102	75 - 114
Dibenz(a,h)anthracene	1000	830		ug/Kg		83	56 - 134
Dibenzofuran	1000	915		ug/Kg		92	72 - 109
Diethyl phthalate	1000	827		ug/Kg		83	73 - 116
Dimethyl phthalate	1000	1050		ug/Kg		105	78 - 117
Di-n-butyl phthalate	1000	947		ug/Kg		95	66 - 140
Di-n-octyl phthalate	1000	666		ug/Kg		67	65 - 141
Fluoranthene	1000	984		ug/Kg		98	73 - 125
Fluorene	1000	984		ug/Kg		98	70 - 121
Hexachlorobenzene	1000	1090		ug/Kg		109	66 - 117
Hexachlorobutadiene	1000	914		ug/Kg		91	65 - 116
Hexachlorocyclopentadiene	1000	1110		ug/Kg		111	46 - 131
Hexachloroethane	1000	775		ug/Kg		78	62 - 120
Indeno[1,2,3-cd]pyrene	1000	796		ug/Kg		80	56 - 127
Isophorone	1000	952		ug/Kg		95	67 - 119
Naphthalene	1000	875		ug/Kg		87	62 - 112
Nitrobenzene	1000	925		ug/Kg		92	64 - 118
N-Nitrosodi-n-propylamine	1000	984		ug/Kg		98	62 - 116
N-Nitrosodiphenylamine	2010	1940		ug/Kg		97	73 - 115
Pentachlorophenol	2000	1940		ug/Kg		97	45 - 117
Phenanthrene	1000	966		ug/Kg		97	73 - 106
Phenol	1000	941		ug/Kg		94	63 - 111
Pyrene	1000	987		ug/Kg		99	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*106*		*28 - 143*
2-Fluorobiphenyl	*95*		*42 - 140*
2-Fluorophenol	*109*		*36 - 145*
Nitrobenzene-d5	*92*		*38 - 141*
Phenol-d5	*93*		*38 - 149*
Terphenyl-d14	*104*		*42 - 151*

Lab Sample ID: LCSD 580-196274/3-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196274

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	869		ug/Kg		87	66 - 115	2	28
1,2-Dichlorobenzene	1000	773		ug/Kg		77	64 - 112	3	30
1,3-Dichlorobenzene	1000	699		ug/Kg		70	64 - 111	8	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-196274/3-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196274

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	1000	705		ug/Kg		71	65 - 110	4	30
1-Methylnaphthalene	1000	929		ug/Kg		93	62 - 118	3	30
2,4,5-Trichlorophenol	1000	961		ug/Kg		96	57 - 133	3	30
2,4,6-Trichlorophenol	1000	922		ug/Kg		92	62 - 133	8	30
2,4-Dichlorophenol	1000	1030		ug/Kg		103	68 - 125	2	30
2,4-Dimethylphenol	1000	1250		ug/Kg		125	54 - 139	10	30
2,4-Dinitrophenol	2000	1100		ug/Kg		55	20 - 141	15	36
2,4-Dinitrotoluene	1000	913		ug/Kg		91	68 - 121	3	30
2,6-Dinitrotoluene	1000	882		ug/Kg		88	66 - 123	4	30
2-Chloronaphthalene	1000	967		ug/Kg		97	68 - 112	1	25
2-Chlorophenol	1000	885		ug/Kg		89	68 - 117	8	27
2-Methylnaphthalene	1000	926		ug/Kg		93	64 - 119	3	27
2-Methylphenol	1000	1040		ug/Kg		104	71 - 116	2	25
2-Nitroaniline	1000	857		ug/Kg		86	64 - 112	5	22
2-Nitrophenol	1000	909		ug/Kg		91	67 - 127	1	30
3 & 4 Methylphenol	1000	1100		ug/Kg		110	70 - 116	2	27
3,3'-Dichlorobenzidine	2000	1140		ug/Kg		57	20 - 103	32	60
3-Nitroaniline	1000	766		ug/Kg		77	27 - 103	10	33
4,6-Dinitro-2-methylphenol	2000	1420		ug/Kg		71	48 - 130	21	22
4-Bromophenyl phenyl ether	1000	1060		ug/Kg		106	68 - 122	4	30
4-Chloro-3-methylphenol	1000	946		ug/Kg		95	69 - 121	6	27
4-Chloroaniline	1000	655		ug/Kg		65	20 - 103	34	60
4-Chlorophenyl phenyl ether	1000	933		ug/Kg		93	75 - 108	4	30
4-Nitroaniline	1000	786		ug/Kg		79	58 - 108	10	32
4-Nitrophenol	2000	1640		ug/Kg		82	20 - 165	4	30
Acenaphthene	1000	944		ug/Kg		94	68 - 116	4	27
Acenaphthylene	1000	1020		ug/Kg		102	68 - 120	3	28
Anthracene	1000	1070		ug/Kg		107	73 - 116	2	27
Benzo[a]anthracene	1000	951		ug/Kg		95	76 - 119	1	27
Benzo[a]pyrene	1000	817		ug/Kg		82	72 - 117	1	30
Benzo[b]fluoranthene	1000	777		ug/Kg		78	63 - 132	1	30
Benzo[g,h,i]perylene	1000	742		ug/Kg		74	55 - 139	8	28
Benzo[k]fluoranthene	1000	814		ug/Kg		81	63 - 119	0	30
Benzoic acid	2010	897	J	ug/Kg		45	29 - 158	3	28
Benzyl alcohol	1000	1030		ug/Kg		103	55 - 123	10	60
bis (2-chloroisopropyl) ether	1000	728		ug/Kg		73	41 - 126	7	57
Bis(2-chloroethoxy)methane	1000	914		ug/Kg		91	69 - 107	12	30
Bis(2-chloroethyl)ether	1000	754		ug/Kg		75	62 - 110	10	22
Bis(2-ethylhexyl) phthalate	1000	787		ug/Kg		79	62 - 144	10	30
Butyl benzyl phthalate	1000	856		ug/Kg		86	69 - 142	5	30
Carbazole	1000	1040		ug/Kg		104	76 - 135	3	30
Chrysene	1000	932		ug/Kg		93	75 - 114	9	26
Dibenz(a,h)anthracene	1000	812		ug/Kg		81	56 - 134	2	30
Dibenzofuran	1000	930		ug/Kg		93	72 - 109	2	30
Diethyl phthalate	1000	826		ug/Kg		83	73 - 116	0	26
Dimethyl phthalate	1000	987		ug/Kg		99	78 - 117	6	30
Di-n-butyl phthalate	1000	897		ug/Kg		90	66 - 140	5	30
Di-n-octyl phthalate	1000	697		ug/Kg		70	65 - 141	5	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-196274/3-A
Matrix: Solid
Analysis Batch: 196337

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196274

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	994		ug/Kg		99	73 - 125	1	30
Fluorene			1000	1010		ug/Kg		101	70 - 121	3	30
Hexachlorobenzene			1000	1090		ug/Kg		109	66 - 117	0	30
Hexachlorobutadiene			1000	902		ug/Kg		90	65 - 116	1	30
Hexachlorocyclopentadiene			1000	1080		ug/Kg		108	46 - 131	3	29
Hexachloroethane			1000	719		ug/Kg		72	62 - 120	7	30
Indeno[1,2,3-cd]pyrene			1000	789		ug/Kg		79	56 - 127	1	29
Isophorone			1000	908		ug/Kg		91	67 - 119	5	30
Naphthalene			1000	862		ug/Kg		86	62 - 112	2	26
Nitrobenzene			1000	916		ug/Kg		92	64 - 118	1	30
N-Nitrosodi-n-propylamine			1000	942		ug/Kg		94	62 - 116	4	28
N-Nitrosodiphenylamine			2010	1860		ug/Kg		93	73 - 115	4	30
Pentachlorophenol			2000	1910		ug/Kg		95	45 - 117	2	23
Phenanthrene			1000	954		ug/Kg		95	73 - 106	1	28
Phenol			1000	929		ug/Kg		93	63 - 111	1	26
Pyrene			1000	974		ug/Kg		97	70 - 120	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*105*		*28 - 143*
2-Fluorobiphenyl	*95*		*42 - 140*
2-Fluorophenol	*104*		*36 - 145*
Nitrobenzene-d5	*85*		*38 - 141*
Phenol-d5	*92*		*38 - 149*
Terphenyl-d14	*103*		*42 - 151*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-196413/1-A
Matrix: Solid
Analysis Batch: 197011

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196413

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
4,4'-DDE	ND		2.0	0.14	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
4,4'-DDT	ND		2.0	0.15	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Aldrin	ND		1.0	0.22	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
alpha-BHC	ND		1.0	0.28	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
beta-BHC	ND		1.0	0.32	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
delta-BHC	ND		1.0	0.15	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Dieldrin	ND		2.0	0.12	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Endosulfan I	ND		1.0	0.10	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Endosulfan II	ND		2.0	0.17	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Endrin	ND		2.0	0.16	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Endrin ketone	ND		2.0	0.26	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg		07/29/15 17:42	08/06/15 03:05	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-196413/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 197011 — **Prep Batch: 196413**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		1.0	0.13	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Heptachlor	ND		2.0	0.46	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Methoxychlor	ND	^	10	0.26	ug/Kg		07/29/15 17:42	08/06/15 03:05	1
Toxaphene	ND	^	100	23	ug/Kg		07/29/15 17:42	08/06/15 03:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*97*	^	*60 - 128*	*07/29/15 17:42*	*08/06/15 03:05*	*1*
Tetrachloro-m-xylene	*56*		*35 - 129*	*07/29/15 17:42*	*08/06/15 03:05*	*1*

Lab Sample ID: LCS 580-196413/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 197011 — **Prep Batch: 196413**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	20.0	15.9		ug/Kg		79	48 - 136
4,4'-DDE	20.0	15.1		ug/Kg		75	50 - 138
4,4'-DDT	20.0	14.6		ug/Kg		73	53 - 132
Aldrin	20.0	14.6		ug/Kg		73	59 - 127
alpha-BHC	20.0	13.0		ug/Kg		65	48 - 132
alpha-Chlordane	20.0	15.3		ug/Kg		76	52 - 137
beta-BHC	20.0	12.2		ug/Kg		61	45 - 122
delta-BHC	20.0	14.4		ug/Kg		72	27 - 124
Dieldrin	20.0	15.6		ug/Kg		78	53 - 145
Endosulfan I	20.0	14.7		ug/Kg		74	57 - 140
Endosulfan II	20.0	14.8		ug/Kg		74	58 - 144
Endosulfan sulfate	20.0	16.5		ug/Kg		82	55 - 125
Endrin	20.0	17.3		ug/Kg		86	51 - 143
Endrin aldehyde	20.0	13.6		ug/Kg		68	45 - 130
Endrin ketone	20.0	15.7		ug/Kg		79	53 - 139
gamma-BHC (Lindane)	20.0	12.4		ug/Kg		62	47 - 127
gamma-Chlordane	20.0	15.7		ug/Kg		78	52 - 137
Heptachlor	20.0	14.4		ug/Kg		72	43 - 141
Heptachlor epoxide	20.0	15.1		ug/Kg		75	47 - 143
Methoxychlor	20.0	16.6	^	ug/Kg		83	56 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*101*	^	*60 - 128*
Tetrachloro-m-xylene	*56*		*35 - 129*

Lab Sample ID: LCSD 580-196413/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 197011 — **Prep Batch: 196413**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	20.0	14.9		ug/Kg		74	48 - 136	7	18
4,4'-DDE	20.0	14.3		ug/Kg		72	50 - 138	5	17
4,4'-DDT	20.0	13.8		ug/Kg		69	53 - 132	5	20

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-196413/3-A
Matrix: Solid
Analysis Batch: 197011

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196413

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin			20.0	13.9		ug/Kg		69	59 - 127	5	19
alpha-BHC			20.0	12.5		ug/Kg		63	48 - 132	4	17
alpha-Chlordane			20.0	14.4		ug/Kg		72	52 - 137	6	17
beta-BHC			20.0	11.9		ug/Kg		59	45 - 122	3	18
delta-BHC			20.0	13.7		ug/Kg		69	27 - 124	5	19
Dieldrin			20.0	14.9		ug/Kg		74	53 - 145	5	18
Endosulfan I			20.0	13.9		ug/Kg		70	57 - 140	6	19
Endosulfan II			20.0	13.9		ug/Kg		69	58 - 144	7	19
Endosulfan sulfate			20.0	15.3		ug/Kg		77	55 - 125	7	18
Endrin			20.0	16.2		ug/Kg		81	51 - 143	7	18
Endrin aldehyde			20.0	14.7		ug/Kg		74	45 - 130	8	21
Endrin ketone			20.0	14.9		ug/Kg		74	53 - 139	6	17
gamma-BHC (Lindane)			20.0	11.9		ug/Kg		60	47 - 127	4	17
gamma-Chlordane			20.0	14.7		ug/Kg		74	52 - 137	6	17
Heptachlor			20.0	13.8		ug/Kg		69	43 - 141	5	18
Heptachlor epoxide			20.0	14.2		ug/Kg		71	47 - 143	6	17
Methoxychlor			20.0	14.9	^	ug/Kg		74	56 - 137	11	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*96*	^	*60 - 128*
Tetrachloro-m-xylene	*56*		*35 - 129*

Lab Sample ID: 590-1460-1 MS
Matrix: Solid
Analysis Batch: 197011

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 196413

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.21	J	20.6	14.3		ug/Kg	☼	69	48 - 136
4,4'-DDE	ND		20.6	14.6		ug/Kg	☼	71	50 - 138
4,4'-DDT	ND		20.6	14.7		ug/Kg	☼	71	53 - 132
Aldrin	ND		20.6	12.7		ug/Kg	☼	62	59 - 127
alpha-BHC	ND		20.6	12.6		ug/Kg	☼	61	48 - 132
alpha-Chlordane	ND		20.6	14.7		ug/Kg	☼	71	52 - 137
beta-BHC	ND		20.6	10.9		ug/Kg	☼	53	45 - 122
delta-BHC	ND		20.6	13.2		ug/Kg	☼	64	27 - 124
Dieldrin	ND		20.6	15.5		ug/Kg	☼	75	53 - 145
Endosulfan I	ND		20.6	14.5		ug/Kg	☼	70	57 - 140
Endosulfan II	ND		20.6	13.2		ug/Kg	☼	64	58 - 144
Endosulfan sulfate	ND		20.6	12.8		ug/Kg	☼	62	55 - 125
Endrin	ND		20.6	16.7		ug/Kg	☼	81	51 - 143
Endrin aldehyde	ND		20.6	11.5		ug/Kg	☼	56	45 - 130
Endrin ketone	ND		20.6	13.8		ug/Kg	☼	67	53 - 139
gamma-BHC (Lindane)	ND		20.6	12.7		ug/Kg	☼	62	47 - 127
gamma-Chlordane	ND		20.6	16.3		ug/Kg	☼	79	52 - 137
Heptachlor	ND		20.6	13.6		ug/Kg	☼	66	43 - 141
Heptachlor epoxide	ND		20.6	14.2		ug/Kg	☼	69	47 - 143
Methoxychlor	ND	^	20.6	18.0	^	ug/Kg	☼	87	56 - 137

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 590-1460-1 MS
Matrix: Solid
Analysis Batch: 197011

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 196413

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	105	^	60 - 128
Tetrachloro-m-xylene	60		35 - 129

Lab Sample ID: 590-1460-1 MSD
Matrix: Solid
Analysis Batch: 197011

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 196413

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.21	J	20.2	14.5		ug/Kg	☼	71	48 - 136	1	18
4,4'-DDE	ND		20.2	15.0		ug/Kg	☼	74	50 - 138	3	17
4,4'-DDT	ND		20.2	15.2		ug/Kg	☼	75	53 - 132	3	20
Aldrin	ND		20.2	14.6		ug/Kg	☼	73	59 - 127	14	19
alpha-BHC	ND		20.2	13.6		ug/Kg	☼	68	48 - 132	8	17
alpha-Chlordane	ND		20.2	14.9		ug/Kg	☼	74	52 - 137	2	17
beta-BHC	ND		20.2	12.2		ug/Kg	☼	60	45 - 122	11	18
delta-BHC	ND		20.2	14.4		ug/Kg	☼	71	27 - 124	9	19
Dieldrin	ND		20.2	15.9		ug/Kg	☼	79	53 - 145	2	18
Endosulfan I	ND		20.2	15.2		ug/Kg	☼	75	57 - 140	5	19
Endosulfan II	ND		20.2	13.2		ug/Kg	☼	66	58 - 144	0	19
Endosulfan sulfate	ND		20.2	13.8		ug/Kg	☼	68	55 - 125	7	18
Endrin	ND		20.2	16.9		ug/Kg	☼	84	51 - 143	1	18
Endrin aldehyde	ND		20.2	11.0		ug/Kg	☼	55	45 - 130	4	21
Endrin ketone	ND		20.2	13.8		ug/Kg	☼	69	53 - 139	0	17
gamma-BHC (Lindane)	ND		20.2	13.2		ug/Kg	☼	65	47 - 127	4	17
gamma-Chlordane	ND		20.2	17.2		ug/Kg	☼	85	52 - 137	5	17
Heptachlor	ND		20.2	14.9		ug/Kg	☼	74	43 - 141	9	18
Heptachlor epoxide	ND		20.2	14.5		ug/Kg	☼	72	47 - 143	2	17
Methoxychlor	ND	^	20.2	16.5	^	ug/Kg	☼	82	56 - 137	9	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	110	^	60 - 128
Tetrachloro-m-xylene	61		35 - 129

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-2740/1-A
Matrix: Solid
Analysis Batch: 2756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2740

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1
PCB-1221	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1
PCB-1232	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1
PCB-1242	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1
PCB-1248	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1
PCB-1254	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1
PCB-1260	ND		10	2.2	ug/Kg		07/29/15 11:14	07/30/15 09:36	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-2740/1-A
Matrix: Solid
Analysis Batch: 2756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2740

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	98		51.9 - 151	07/29/15 11:14	07/30/15 09:36	1
DCB Decachlorobiphenyl (Surr)	134		73.5 - 164	07/29/15 11:14	07/30/15 09:36	1

Lab Sample ID: LCS 590-2740/2-A
Matrix: Solid
Analysis Batch: 2756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	66.7	73.2		ug/Kg		110	58 - 146
PCB-1260	66.7	76.0		ug/Kg		114	64.2 - 152

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	101		51.9 - 151
DCB Decachlorobiphenyl (Surr)	132		73.5 - 164

Lab Sample ID: 590-1460-1 MS
Matrix: Solid
Analysis Batch: 2756

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 2740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		70.0	43.0		ug/Kg	☼	61	50.6 - 145
PCB-1260	ND		70.0	46.2		ug/Kg	☼	66	57.6 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	72		51.9 - 151
DCB Decachlorobiphenyl (Surr)	81		73.5 - 164

Lab Sample ID: 590-1460-1 MSD
Matrix: Solid
Analysis Batch: 2756

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 2740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		69.6	39.5		ug/Kg	☼	57	50.6 - 145	8	40
PCB-1260	ND		69.6	42.3		ug/Kg	☼	61	57.6 - 120	9	27.4

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	63		51.9 - 151
DCB Decachlorobiphenyl (Surr)	83		73.5 - 164

Method: 8141A - Organophosphorous Pesticides (GC)

Lab Sample ID: MB 280-287956/1-A
Matrix: Solid
Analysis Batch: 288625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287956

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		67	12	ug/Kg		07/27/15 18:50	07/31/15 19:09	1

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: MB 280-287956/1-A
Matrix: Solid
Analysis Batch: 288625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287956

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bolstar	ND		13	4.2	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Chlorpyrifos	ND		20	6.5	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Coumaphos	ND		13	2.8	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Demeton, Total	ND		39	7.5	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Diazinon	ND		22	7.3	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Dichlorvos	ND		23	7.4	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Dimethoate	ND		22	7.1	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Disulfoton	ND		48	7.7	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
EPN	ND		13	3.7	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Famphur	ND		13	3.2	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Fensulfothion	ND		25	8.2	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Mevinphos	ND		15	4.6	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Methyl parathion	ND		20	6.4	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Merphos	ND		30	5.1	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Malathion	ND		15	4.6	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Fenthion	ND		33	8.7	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Ethyl Parathion	ND		18	5.3	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Phorate	ND		20	5.7	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Ronnel	ND		46	15	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Simazine	ND		67	22	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Sulfotepp	ND		20	6.3	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Thionazin	ND		18	5.6	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Tokuthion	ND		20	3.9	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Trichloronate	ND		20	6.3	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Ethoprop	ND		15	4.9	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Propazine	ND		67	8.6	ug/Kg		07/27/15 18:50	07/31/15 19:09	1
Azinphos-methyl	ND		13	3.5	ug/Kg		07/27/15 18:50	07/31/15 19:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*58*		*42 - 132*	*07/27/15 18:50*	*07/31/15 19:09*	*1*
Triphenylphosphate	*73*		*47 - 161*	*07/27/15 18:50*	*07/31/15 19:09*	*1*

Lab Sample ID: LCS 280-287956/2-A
Matrix: Solid
Analysis Batch: 288625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287956

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	133	110		ug/Kg		83	49 - 115
Chlorpyrifos	133	113		ug/Kg		85	38 - 130
Coumaphos	133	118		ug/Kg		89	50 - 119
Demeton, Total	133	91.1		ug/Kg		69	36 - 115
Diazinon	133	123		ug/Kg		93	53 - 115
Dichlorvos	133	137		ug/Kg		103	43 - 139
Dimethoate	133	121		ug/Kg		91	25 - 138
Disulfoton	133	93.9		ug/Kg		71	29 - 115
EPN	133	123		ug/Kg		93	58 - 131
Famphur	133	132		ug/Kg		99	49 - 140
Fensulfothion	133	122		ug/Kg		92	52 - 121

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-287956/2-A
Matrix: Solid
Analysis Batch: 288625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287956

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mevinphos	133	91.8		ug/Kg		69	10 - 226
Methyl parathion	133	122		ug/Kg		92	46 - 119
Merphos	133	89.3		ug/Kg		67	19 - 115
Malathion	133	103		ug/Kg		78	50 - 122
Fenthion	133	110		ug/Kg		83	45 - 115
Ethyl Parathion	133	117		ug/Kg		88	24 - 163
Phorate	133	78.6		ug/Kg		59	40 - 115
Ronnel	133	119		ug/Kg		90	43 - 118
Simazine	133	112		ug/Kg		84	11 - 179
Sulfotepp	133	121		ug/Kg		91	55 - 115
Thionazin	133	112		ug/Kg		84	46 - 115
Trichloronate	133	108		ug/Kg		81	27 - 115
BolstarFamphur	266	240		ug/Kg		90	
Ethoprop	133	120		ug/Kg		90	53 - 115
Azinphos-methyl	133	123		ug/Kg		93	51 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*77*		*42 - 132*
Triphenylphosphate	*94*		*47 - 161*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-287783/1-A
Matrix: Solid
Analysis Batch: 290062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		19	2.2	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
2,4-D	ND		77	14	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
2,4-DB	21.9	J	77	7.2	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Dalapon	ND		39	1.4	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Dicamba	ND		39	1.4	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Dichlorprop	ND		77	3.1	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
MCPA	ND		7700	1900	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
MCPP	ND		7700	1900	ug/Kg		07/27/15 10:22	08/12/15 04:45	1
Silvex (2,4,5-TP)	ND		19	1.4	ug/Kg		07/27/15 10:22	08/12/15 04:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*68*		*31 - 105*	*07/27/15 10:22*	*08/12/15 04:45*	*1*

Lab Sample ID: LCS 280-287783/2-A
Matrix: Solid
Analysis Batch: 290062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	98.8	68.4		ug/Kg		69	53 - 129
2,4-D	98.8	77.7	J	ug/Kg		79	50 - 136

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-287783/2-A
Matrix: Solid
Analysis Batch: 290062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287783

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4-DB			98.8	73.7	J	ug/Kg		75	29 - 134		
Dalapon			98.8	89.8		ug/Kg		91	35 - 105		
Dicamba			98.8	64.9		ug/Kg		66	45 - 120		
Dichlorprop			98.8	58.2	J	ug/Kg		59	50 - 118		
MCPA			9880	5610	J	ug/Kg		57	42 - 123		
MCPP			9880	6960	J	ug/Kg		70	40 - 127		
Silvex (2,4,5-TP)			98.8	70.6		ug/Kg		71	52 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*76*		*31 - 105*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2605/1-A
Matrix: Solid
Analysis Batch: 2611

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2605

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		07/21/15 08:47	07/21/15 10:53	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		07/21/15 08:47	07/21/15 10:53	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		07/21/15 08:47	07/21/15 10:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*103*		*50 - 150*	*07/21/15 08:47*	*07/21/15 10:53*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*07/21/15 08:47*	*07/21/15 10:53*	*1*

Lab Sample ID: 590-1460-1 DU
Matrix: Solid
Analysis Batch: 2611

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 2605

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND			ND		mg/Kg	☼			NC	25
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	25
Residual Range Organics (RRO) (C25-C36)	ND			141		mg/Kg	☼			NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*95*		*50 - 150*
n-Triacontane-d62	*110*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-196313/16-A
Matrix: Solid
Analysis Batch: 196436

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196313

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.042	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Arsenic	ND		0.50	0.18	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Barium	ND		0.50	0.078	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Beryllium	ND		0.20	0.035	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Cadmium	ND		0.20	0.019	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Chromium	ND		0.50	0.063	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Copper	ND		0.40	0.098	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Iron	ND		40	11	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Lead	ND		0.50	0.048	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Manganese	ND		1.0	0.17	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Nickel	ND		0.50	0.081	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Selenium	ND		1.0	0.20	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Silver	ND		0.20	0.012	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Thallium	ND		0.40	0.13	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Zinc	ND		5.0	1.1	mg/Kg		07/29/15 07:18	07/29/15 16:03	10
Vanadium	ND		2.0	0.47	mg/Kg		07/29/15 07:18	07/29/15 16:03	10

Lab Sample ID: LCS 580-196313/17-A
Matrix: Solid
Analysis Batch: 196436

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	150	147		mg/Kg		98	80 - 120
Arsenic	200	199		mg/Kg		100	80 - 120
Barium	200	199		mg/Kg		100	80 - 120
Beryllium	5.00	4.93		mg/Kg		99	80 - 120
Cadmium	5.00	4.86		mg/Kg		97	80 - 120
Chromium	20.0	20.2		mg/Kg		101	80 - 120
Copper	25.0	25.4		mg/Kg		101	80 - 120
Iron	1100	1130		mg/Kg		103	80 - 120
Lead	50.0	47.2		mg/Kg		94	80 - 120
Manganese	50.0	49.4		mg/Kg		99	80 - 120
Nickel	50.0	51.1		mg/Kg		102	80 - 120
Selenium	200	199		mg/Kg		99	80 - 120
Silver	30.0	29.8		mg/Kg		99	80 - 120
Thallium	200	199		mg/Kg		100	80 - 120
Zinc	200	198		mg/Kg		99	80 - 120
Vanadium	50.0	47.8		mg/Kg		96	80 - 120

Lab Sample ID: LCSD 580-196313/18-A
Matrix: Solid
Analysis Batch: 196436

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196313

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	150		mg/Kg		100	80 - 120	2	20
Arsenic	200	203		mg/Kg		101	80 - 120	2	20
Barium	200	203		mg/Kg		101	80 - 120	2	20
Beryllium	5.00	4.91		mg/Kg		98	80 - 120	0	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-196313/18-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 196436 — **Prep Batch: 196313**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	5.00	5.14		mg/Kg		103	80 - 120	6	20
Chromium	20.0	20.8		mg/Kg		104	80 - 120	3	20
Copper	25.0	26.4		mg/Kg		106	80 - 120	4	20
Iron	1100	1170		mg/Kg		106	80 - 120	3	20
Lead	50.0	47.9		mg/Kg		96	80 - 120	1	20
Manganese	50.0	50.5		mg/Kg		101	80 - 120	2	20
Nickel	50.0	52.3		mg/Kg		105	80 - 120	2	20
Selenium	200	202		mg/Kg		101	80 - 120	2	20
Silver	30.0	30.0		mg/Kg		100	80 - 120	1	20
Thallium	200	202		mg/Kg		101	80 - 120	2	20
Zinc	200	202		mg/Kg		101	80 - 120	2	20
Vanadium	50.0	48.7		mg/Kg		97	80 - 120	2	20

Lab Sample ID: LCSSRM 580-196313/19-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 196436 — **Prep Batch: 196313**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.8	157		mg/Kg		177.1	22.0 - 259.0
Arsenic	139	141		mg/Kg		101.7	70.4 - 140.3
Barium	203	206		mg/Kg		101.7	73.4 - 127.1
Beryllium	96.1	92.7		mg/Kg		96.5	74.5 - 125.9
Cadmium	96.0	94.1		mg/Kg		98.0	73.2 - 127.1
Chromium	136	144		mg/Kg		106.2	69.9 - 129.4
Copper	168	171		mg/Kg		102.0	75.6 - 125.0
Iron	14100	18500		mg/Kg		131.4	35.0 - 165.2
Lead	133	128		mg/Kg		96.5	72.9 - 127.8
Manganese	297	299		mg/Kg		100.7	74.4 - 125.6
Nickel	123	127		mg/Kg		103.2	73.1 - 128.5
Selenium	177	178		mg/Kg		100.7	67.8 - 131.6
Silver	40.2	39.5		mg/Kg		98.2	66.2 - 134.1
Thallium	138	132		mg/Kg		95.7	68.1 - 131.9
Zinc	189	191		mg/Kg		101.2	69.8 - 130.7
Vanadium	107	113		mg/Kg		105.5	66.4 - 133.6

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-2579/9-A
Matrix: Solid
Analysis Batch: 2618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2579

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		07/21/15 09:15	07/21/15 13:29	1

Lab Sample ID: LCS 590-2579/8-A
Matrix: Solid
Analysis Batch: 2618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2579

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			200	192		ug/Kg		96	80 - 120		

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-195818/1-A
Matrix: Solid
Analysis Batch: 196496

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195818

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg		07/23/15 15:18	07/30/15 10:46	1

Lab Sample ID: LCS 580-195818/2-A
Matrix: Solid
Analysis Batch: 196496

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195818

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			10.0	9.54		mg/Kg		95	80 - 120		

Lab Sample ID: 590-1460-1 MS
Matrix: Solid
Analysis Batch: 196496

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 195818

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		10.3	8.62		mg/Kg	☼	83	80 - 120		

Lab Sample ID: 590-1460-1 MSD
Matrix: Solid
Analysis Batch: 196496

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 195818

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		9.61	8.16		mg/Kg	☼	85	80 - 120	5	20

Lab Sample ID: 590-1460-1 DU
Matrix: Solid
Analysis Batch: 196496

Client Sample ID: LFB-11 (42-43)
Prep Type: Total/NA
Prep Batch: 195818

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	ND		ND		mg/Kg	☼	NC	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Client Sample ID: LFB-11 (42-43)

Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2606	07/21/15 08:49	IAB	TAL SPK

Client Sample ID: LFB-11 (42-43)

Date Collected: 07/17/15 11:30
Date Received: 07/20/15 16:45

Lab Sample ID: 590-1460-1
Matrix: Solid
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.66 g	10 mL	196549	07/30/15 12:01	BAT	TAL SEA
Total/NA	Analysis	8260B		1	5.66 g	10 mL	196522	07/30/15 19:44	K1K	TAL SEA
Total/NA	Prep	3550B			10.596 g	10 mL	196274	07/28/15 14:46	KZ1	TAL SEA
Total/NA	Analysis	8270C		1	10.596 g	10 mL	196337	07/29/15 17:53	AHP	TAL SEA
Total/NA	Prep	3550B			10.764 g	10 mL	196413	07/29/15 17:42	KZ1	TAL SEA
Total/NA	Analysis	8081A		1	10.764 g	10 mL	197011	08/06/15 03:57	EKK	TAL SEA
Total/NA	Prep	3550C			15.31 g	5 mL	2740	07/29/15 11:14	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.31 g	5 mL	2756	07/30/15 11:00	NMI	TAL SPK
Total/NA	Prep	3540C			30.6 g	2 mL	287956	07/27/15 18:50	EJP	TAL DEN
Total/NA	Analysis	8141A		1	30.6 g	2 mL	288625	07/31/15 21:35	AMP	TAL DEN
Total/NA	Prep	8151A			51.6 g	10 mL	287783	07/27/15 10:22	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	51.6 g	10 mL	290062	08/12/15 04:22	DAW	TAL DEN
Total/NA	Prep	NWTPH-HCID			11.02 g	20 mL	2605	07/21/15 08:47	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.02 g	20 mL	2611	07/21/15 11:47	NMI	TAL SPK
Total/NA	Prep	3050B			1.1537 g	50 mL	196313	07/29/15 07:18	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.1537 g	50 mL	196436	07/29/15 17:11	FCW	TAL SEA
Total/NA	Prep	7471B			0.65 g	50 mL	2579	07/21/15 09:15	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.65 g	50 mL	2618	07/21/15 13:54	JSP	TAL SPK
Total/NA	Prep	9012A			5.10 g	100 mL	195818	07/23/15 15:18	JLS	TAL SEA
Total/NA	Analysis	9012A		1	5.10 g	100 mL	196496	07/30/15 10:46	JLS	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-16
Arizona	State Program	9	AZ0713	12-19-15
Arkansas DEQ	State Program	6	88-0687	06-01-16
California	State Program	9	2513	08-31-16
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-15 *
Georgia	State Program	4	N/A	01-09-15 *
Illinois	NELAP	5	200017	04-30-16
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	09-30-15
Louisiana	NELAP	6	02096	06-30-16
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-15
Nevada	State Program	9	CO0026	07-31-16
New Hampshire	NELAP	1	205310	04-28-16
New Jersey	NELAP	2	CO004	09-30-15
New York	NELAP	2	11964	04-01-16
North Carolina (WW/SW)	State Program	4	358	12-31-15
North Dakota	State Program	8	R-034	01-09-16
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-16
Pennsylvania	NELAP	3	68-00664	08-30-15
South Carolina	State Program	4	72002001	06-30-15 *
Texas	NELAP	6	T104704183-13-8	09-30-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-16
Virginia	NELAP	3	460232	06-14-16
Washington	State Program	10	C583	08-03-15 *
West Virginia DEP	State Program	3	354	11-30-15
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron

* Certification renewal pending - certification considered valid.

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8081A	3550B	Solid	4,4'-DDD
8081A	3550B	Solid	4,4'-DDE
8081A	3550B	Solid	4,4'-DDT
8081A	3550B	Solid	Aldrin
8081A	3550B	Solid	alpha-BHC
8081A	3550B	Solid	alpha-Chlordane
8081A	3550B	Solid	beta-BHC
8081A	3550B	Solid	delta-BHC
8081A	3550B	Solid	Dieldrin
8081A	3550B	Solid	Endosulfan I
8081A	3550B	Solid	Endosulfan II
8081A	3550B	Solid	Endosulfan sulfate
8081A	3550B	Solid	Endrin
8081A	3550B	Solid	Endrin aldehyde
8081A	3550B	Solid	Endrin ketone
8081A	3550B	Solid	gamma-BHC (Lindane)
8081A	3550B	Solid	gamma-Chlordane
8081A	3550B	Solid	Heptachlor
8081A	3550B	Solid	Heptachlor epoxide
8081A	3550B	Solid	Methoxychlor
8081A	3550B	Solid	Toxaphene
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1460-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8081A	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141A	Organophosphorous Pesticides (GC)	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 X
9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

8/17/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers, Inc.

REPORT TO: jhaney@geoengineers.com

ADDRESS: 523 E. Second Ave Spokane, WA 99019

PHONE: 509-363-3125 FAX: 509-363-3126

PROJECT NAME: Marshall Landfill

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

INVOICE TO:

P.O. NUMBER:

TURNAROUND REQUEST

In Business Days *

Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: X STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	HCID	Metals	8260 VOCs	EDB	8270 SVOCs Pesticides	Hydrocarbons	PCBs	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
LFB-11 (42-43)	7/17/2015 1130	X	X	X	X	X	X	X	S	5		
2												
3												
4												
5												
6												
7												
8												
9												
10												

PRESERVATIVE

REQUESTED ANALYSES

RELEASED BY:		DATE: 7/20/2015	RECEIVED BY: Sheila Drake		DATE: 7/20/15
PRINT NAME: Josh Lee	FIRM: GEI	TIME: 17:48	PRINT NAME: Sheila Drake	FIRM: TA SPOK	TIME: 10:45
RELEASED BY:		DATE:	RECEIVED BY:		DATE:
PRINT NAME:	FIRM:	TIME:	PRINT NAME:	FIRM:	TIME

ADDITIONAL REMARKS:

TEMP: 7.9C PAGE 1 OF 1

590-1460 Chain of Custody

TAL-1000 (0714)

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1460-1

Login Number: 1460
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1460-1

Login Number: 1460
List Number: 3
Creator: Soto, Mayra A

List Source: TestAmerica Denver
List Creation: 07/22/15 05:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1460-1

Login Number: 1460
List Number: 2
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 07/22/15 01:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1569-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
8/19/2015 2:58:24 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-1569-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 7/30/2015 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.1º C.

GC/MS VOA Method 8260B:
The continuing calibration verification (CCV) associated with batch 197353 recovered above the upper control limit for multi analytes. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-197353/2).

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 197353 recovered outside control limits for the following analytes: multi analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The method blank for batch 197353 contained Methylene chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Internal standard responses were outside of acceptance limits, biased low, for the following samples: LFB-15 (35-37) (590-1569-4), LFB-16 (35-37) (590-1569-5) and LFB-17 (42-43) (590-1569-6). The samples show evidence of matrix interference which was confirmed by re-analysis. The data has been qualified as high biased and reported.

Internal standard responses were essentially non-existent for the following sample: LFB-15 (35-37) (590-1569-4). This may be due to the sample matrix containing more than double the recommended solid weight.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The continuing calibration verification (CCV) associated with batch 580-198114 recovered above the upper control limit for Indeno(1,2,3-cd)pyrene. The affected analytes was not detected above the RL in the associated samples; therefore, the data have been reported. The following samples are impacted: LFB-12 (29-30) (590-1569-1), LFB-15 (35-37) (590-1569-4), LFB-16 (35-37) (590-1569-5), LFB-17 (42-43) (590-1569-6), (CCVIS 580-198114/3), (LCS 580-196778/2-A), (LCSD 580-196778/3-A), (MB 580-196778/1-A), (590-1569-C-6-C MS) and (590-1569-C-6-D MSD).

The following analyte recovered outside control limits for the LCS associated with preparation batch 580-196778 and analytical batch 580-198114: 4-Chloroaniline. The associated LCSD also failed the recovery criteria for Benzoic acid. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported. Affected samples: LFB-12 (29-30) (590-1569-1), LFB-13 (72-73) (590-1569-2), LFB-14 (97-98) (590-1569-3), LFB-15 (35-37) (590-1569-4), LFB-16 (35-37) (590-1569-5), LFB-17 (42-43) (590-1569-6), (LCS 580-196778/2-A) and (LCSD 580-196778/3-A)

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-196778 recovered outside control limits for the following analytes: Benzoic acid and 4,6-Dinitro-2-methylphenol.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA Method 8141A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-289733. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15 %D. The associated samples were ND for the affected analytes. A calibration level 1 standard was run following the CCVs and all target analytes were detected.

GC Semi VOA Method 8151A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-290627 for the following compounds: MCPA and 2,4-D. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15%D.

Job ID: 590-1569-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

GC Semi VOA Method 8081A:
The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-196777 recovered outside control limits for the following analytes, however the %R is still within control limits: gamma-Chlordane.

GC Semi VOA Method 8082A:
Surrogate recovery for the following samples was outside control limits: LFB-12 (29-30) (590-1569-1) and LFB-16 (35-37) (590-1569-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

GC Semi VOA Method NWTPH-HCID:
Surrogate recovery for the following sample was outside control limits: LFB-15 (35-37) (590-1569-4). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1569-1	LFB-12 (29-30)	Solid	07/27/15 14:00	07/30/15 09:05
590-1569-2	LFB-13 (72-73)	Solid	07/28/15 09:30	07/30/15 09:05
590-1569-3	LFB-14 (97-98)	Solid	07/28/15 15:30	07/30/15 09:05
590-1569-4	LFB-15 (35-37)	Solid	07/29/15 08:50	07/30/15 09:05
590-1569-5	LFB-16 (35-37)	Solid	07/29/15 12:00	07/30/15 09:05
590-1569-6	LFB-17 (42-43)	Solid	07/29/15 15:30	07/30/15 09:05

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
*	RPD of the LCS and LCSD exceeds the control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-12 (29-30)
Date Collected: 07/27/15 14:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-1
Matrix: Solid
Percent Solids: 94.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.88	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,1,1-Trichloroethane	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,1,2,2-Tetrachloroethane	ND	*	3.5	0.80	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,1,2-Trichloroethane	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,1-Dichloroethane	ND	*	0.88	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,1-Dichloroethene	ND	*	4.4	0.44	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,1-Dichloropropene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2,3-Trichlorobenzene	ND	*	2.7	0.53	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2,3-Trichloropropane	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2,4-Trichlorobenzene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2,4-Trimethylbenzene	ND	*	1.8	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2-Dibromo-3-Chloropropane	ND	*	8.8	1.4	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2-Dichlorobenzene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2-Dichloroethane	ND	*	0.88	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,2-Dichloropropane	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,3,5-Trimethylbenzene	ND	*	4.4	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,3-Dichlorobenzene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,3-Dichloropropane	ND	*	1.8	0.20	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
1,4-Dichlorobenzene	ND	*	0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
2,2-Dichloropropane	ND		4.4	0.80	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
2-Chlorotoluene	ND	*	1.8	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
4-Chlorotoluene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
4-Isopropyltoluene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Benzene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Bromobenzene	ND	*	8.8	2.0	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Bromoform	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Bromomethane	ND		0.88	0.19	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Carbon tetrachloride	ND		1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Chlorobenzene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Chlorobromomethane	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Chlorodibromomethane	ND	*	1.8	0.24	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Chloroethane	ND		1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Chloroform	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Chloromethane	ND		0.88	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
cis-1,2-Dichloroethene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
cis-1,3-Dichloropropene	ND	*	0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Dibromomethane	ND	*	0.88	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Dichlorobromomethane	ND	*	0.88	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Dichlorodifluoromethane	ND		1.8	0.43	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Ethylbenzene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Ethylene Dibromide	ND	*	0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Hexachlorobutadiene	ND	*	2.7	0.53	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Isopropylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Methyl tert-butyl ether	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Methylene Chloride	**3.5**	**J B**	13	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
m-Xylene & p-Xylene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Naphthalene	ND		8.8	1.6	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
n-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
N-Propylbenzene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1

Client Sample ID: LFB-12 (29-30)
Date Collected: 07/27/15 14:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-1
Matrix: Solid
Percent Solids: 94.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
sec-Butylbenzene	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Styrene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
tert-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Tetrachloroethene	ND		1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Toluene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
trans-1,2-Dichloroethene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
trans-1,3-Dichloropropene	ND	*	8.8	1.2	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Trichloroethene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Trichlorofluoromethane	ND		1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1
Vinyl chloride	ND		1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*71 - 136*	*08/07/15 12:14*	*08/08/15 19:24*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*	*08/07/15 12:14*	*08/08/15 19:24*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 132*	*08/07/15 12:14*	*08/08/15 19:24*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*08/07/15 12:14*	*08/08/15 19:24*	*1*
Trifluorotoluene (Surr)	*91*		*65 - 140*	*08/07/15 12:14*	*08/08/15 19:24*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
1,2-Dichlorobenzene	ND		57	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
1,3-Dichlorobenzene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
1,4-Dichlorobenzene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
1-Methylnaphthalene	ND		31	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,4-Dinitrophenol	ND		1000	210	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2-Chloronaphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2-Methylnaphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2-Methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
3 & 4 Methylphenol	ND		210	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
3,3'-Dichlorobenzidine	ND		210	31	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4,6-Dinitro-2-methylphenol	ND	*	1000	100	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4-Chloroaniline	ND	*	100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4-Nitroaniline	ND		100	21	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
4-Nitrophenol	ND		1000	260	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Acenaphthene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1

Client Sample ID: LFB-12 (29-30)
Date Collected: 07/27/15 14:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-1
Matrix: Solid
Percent Solids: 94.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	**5.5**	**J**	21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Anthracene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzo[a]anthracene	**23**		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzo[a]pyrene	**46**		31	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzo[b]fluoranthene	**56**		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzo[g,h,i]perylene	**38**		26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzo[k]fluoranthene	ND		26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzoic acid	ND	*	2600	770	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Benzyl alcohol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
bis (2-chloroisopropyl) ether	ND		260	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Bis(2-chloroethoxy)methane	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Bis(2-ethylhexyl) phthalate	ND		620	52	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Butyl benzyl phthalate	ND		210	52	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Carbazole	**5.8**	**J**	100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Chrysene	**24**	**J**	26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Dibenz(a,h)anthracene	**28**	**J**	41	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Dibenzofuran	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Diethyl phthalate	**20**	**J**	210	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Dimethyl phthalate	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Di-n-butyl phthalate	ND		520	52	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Di-n-octyl phthalate	ND		520	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Fluoranthene	**45**		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Fluorene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Hexachlorobenzene	ND		52	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Hexachlorobutadiene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Hexachloroethane	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Indeno[1,2,3-cd]pyrene	**38**	**J**	41	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Isophorone	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Naphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Nitrobenzene	ND		100	35	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
N-Nitrosodiphenylamine	ND		52	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Phenanthrene	**26**		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Phenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1
Pyrene	**50**		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*64*		*28 - 143*	*08/03/15 09:38*	*08/17/15 16:46*	*1*
2-Fluorobiphenyl	*81*		*42 - 140*	*08/03/15 09:38*	*08/17/15 16:46*	*1*
2-Fluorophenol	*75*		*36 - 145*	*08/03/15 09:38*	*08/17/15 16:46*	*1*
Nitrobenzene-d5	*83*		*38 - 141*	*08/03/15 09:38*	*08/17/15 16:46*	*1*
Phenol-d5	*77*		*38 - 149*	*08/03/15 09:38*	*08/17/15 16:46*	*1*
Terphenyl-d14	*114*		*42 - 151*	*08/03/15 09:38*	*08/17/15 16:46*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1

Client Sample ID: LFB-12 (29-30)
Date Collected: 07/27/15 14:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-1
Matrix: Solid
Percent Solids: 94.4

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
alpha-BHC	ND		1.0	0.29	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
beta-BHC	ND		1.0	0.33	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Endosulfan II	ND	F1	2.1	0.18	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Endosulfan sulfate	ND	F1	2.1	0.19	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Endrin	ND		2.1	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Endrin aldehyde	**2.0**	**J F1**	2.1	0.20	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Endrin ketone	ND		2.1	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Heptachlor	ND		2.1	0.48	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Methoxychlor	ND		10	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1
Toxaphene	ND		100	23	ug/Kg	☼	08/03/15 09:26	08/12/15 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*60 - 128*	*08/03/15 09:26*	*08/12/15 16:19*	*1*
Tetrachloro-m-xylene	*45*		*35 - 129*	*08/03/15 09:26*	*08/12/15 16:19*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1
PCB-1221	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1
PCB-1232	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1
PCB-1242	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1
PCB-1248	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1
PCB-1254	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1
PCB-1260	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*51.9 - 151*	*08/03/15 10:51*	*08/03/15 16:22*	*1*
DCB Decachlorobiphenyl (Surr)	*73*	*X*	*73.5 - 164*	*08/03/15 10:51*	*08/03/15 16:22*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		66	12	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Bolstar	ND		13	4.2	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Chlorpyrifos	ND		20	6.4	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Coumaphos	ND		13	2.8	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Demeton, Total	ND		39	7.4	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Diazinon	ND		22	7.2	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Dichlorvos	ND		23	7.3	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Dimethoate	ND		22	7.0	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Disulfoton	ND		48	7.7	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1

Client Sample ID: LFB-12 (29-30)
Date Collected: 07/27/15 14:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-1
Matrix: Solid
Percent Solids: 94.4

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		13	3.6	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Famphur	ND		13	3.2	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Fensulfothion	ND		25	8.1	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Mevinphos	ND		15	4.6	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Methyl parathion	ND		20	6.3	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Merphos	ND		30	5.1	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Malathion	ND		15	4.6	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Fenthion	ND		33	8.7	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Ethyl Parathion	ND		18	5.2	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Phorate	ND		20	5.6	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Ronnel	ND		46	15	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Simazine	ND		66	22	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Sulfotepp	ND		20	6.2	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Thionazin	ND		18	5.5	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Tokuthion	ND		20	3.9	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Trichloronate	ND		20	6.2	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Ethoprop	ND		15	4.9	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Propazine	ND		66	8.5	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1
Azinphos-methyl	ND		13	3.5	ug/Kg	☼	08/03/15 17:25	08/09/15 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*79*		*42 - 132*	*08/03/15 17:25*	*08/09/15 01:52*	*1*
Triphenylphosphate	*99*		*47 - 161*	*08/03/15 17:25*	*08/09/15 01:52*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
2,4-D	ND		84	15	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
2,4-DB	ND		84	7.8	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
Dalapon	ND		42	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
Dicamba	ND		42	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
Dichlorprop	ND		84	3.3	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
MCPA	ND		8400	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
MCPP	ND		8400	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1
Silvex (2,4,5-TP)	ND		21	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 11:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*66*		*31 - 105*	*08/02/15 13:00*	*08/14/15 11:12*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg	☼	08/04/15 09:26	08/04/15 14:46	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	08/04/15 09:26	08/04/15 14:46	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	08/04/15 09:26	08/04/15 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:46*	*1*
n-Triacontane-d62	*107*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:46*	*1*

Client Sample ID: LFB-12 (29-30)

Date Collected: 07/27/15 14:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-1

Matrix: Solid
Percent Solids: 94.4

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.18	J	0.20	0.042	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Arsenic	3.3		0.50	0.18	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Barium	68		0.50	0.077	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Beryllium	0.32	B	0.20	0.035	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Cadmium	0.067	J	0.20	0.019	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Chromium	6.7		0.50	0.062	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Copper	14		0.40	0.097	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Iron	19000		40	11	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Lead	4.3		0.50	0.048	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Manganese	210		0.99	0.17	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Nickel	8.3		0.50	0.080	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Selenium	0.78	J	0.99	0.20	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Silver	0.030	J	0.20	0.012	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Thallium	ND		0.40	0.13	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Zinc	37		5.0	1.1	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10
Vanadium	26		2.0	0.47	mg/Kg	☼	08/11/15 08:43	08/11/15 15:14	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	11	J	48	1.9	ug/Kg	☼	08/06/15 08:18	08/10/15 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		1.9	1.9	mg/Kg	☼	08/04/15 14:08	08/06/15 13:52	1

Client Sample ID: LFB-13 (72-73)

Date Collected: 07/28/15 09:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-2

Matrix: Solid
Percent Solids: 95.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.88	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,1,1-Trichloroethane	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,1,2,2-Tetrachloroethane	ND	*	3.5	0.79	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,1,2-Trichloroethane	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,1-Dichloroethane	ND	*	0.88	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,1-Dichloroethene	ND	*	4.4	0.44	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,1-Dichloropropene	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2,3-Trichlorobenzene	ND	*	2.6	0.53	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2,3-Trichloropropane	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2,4-Trichlorobenzene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2,4-Trimethylbenzene	ND	*	1.8	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2-Dibromo-3-Chloropropane	ND	*	8.8	1.4	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2-Dichlorobenzene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2-Dichloroethane	ND	*	0.88	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,2-Dichloropropane	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,3,5-Trimethylbenzene	ND	*	4.4	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,3-Dichlorobenzene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,3-Dichloropropane	ND	*	1.8	0.20	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
1,4-Dichlorobenzene	ND	*	0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-13 (72-73)
Date Collected: 07/28/15 09:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-2
Matrix: Solid
Percent Solids: 95.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		4.4	0.79	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
2-Chlorotoluene	ND	*	1.8	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
4-Chlorotoluene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
4-Isopropyltoluene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Benzene	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Bromobenzene	ND	*	8.8	2.0	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Bromoform	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Bromomethane	ND		0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Carbon tetrachloride	ND		1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Chlorobenzene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Chlorobromomethane	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Chlorodibromomethane	ND	*	1.8	0.24	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Chloroethane	ND		1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Chloroform	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Chloromethane	ND		0.88	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
cis-1,2-Dichloroethene	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
cis-1,3-Dichloropropene	ND	*	0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Dibromomethane	ND	*	0.88	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Dichlorobromomethane	ND	*	0.88	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Dichlorodifluoromethane	ND		1.8	0.43	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Ethylbenzene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Ethylene Dibromide	ND	*	0.88	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Hexachlorobutadiene	ND	*	2.6	0.53	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Isopropylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Methyl tert-butyl ether	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Methylene Chloride	**2.9**	**J B**	13	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
m-Xylene & p-Xylene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Naphthalene	ND		8.8	1.6	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
n-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
N-Propylbenzene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
o-Xylene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
sec-Butylbenzene	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Styrene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
tert-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Tetrachloroethene	ND		1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Toluene	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
trans-1,2-Dichloroethene	ND	*	1.8	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
trans-1,3-Dichloropropene	ND	*	8.8	1.2	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Trichloroethene	ND	*	1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Trichlorofluoromethane	ND		1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1
Vinyl chloride	ND		1.8	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 19:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*71 - 136*	*08/07/15 12:14*	*08/08/15 19:50*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 120*	*08/07/15 12:14*	*08/08/15 19:50*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 132*	*08/07/15 12:14*	*08/08/15 19:50*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*08/07/15 12:14*	*08/08/15 19:50*	*1*
Trifluorotoluene (Surr)	*97*		*65 - 140*	*08/07/15 12:14*	*08/08/15 19:50*	*1*

Client Sample ID: LFB-13 (72-73)
Date Collected: 07/28/15 09:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-2
Matrix: Solid
Percent Solids: 95.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		51	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
1,2-Dichlorobenzene	ND		56	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
1,3-Dichlorobenzene	ND		51	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
1,4-Dichlorobenzene	ND		51	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
1-Methylnaphthalene	ND		31	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2-Chloronaphthalene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2-Methylnaphthalene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2-Methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
3 & 4 Methylphenol	ND		200	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
3,3'-Dichlorobenzidine	ND		200	31	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4,6-Dinitro-2-methylphenol	ND	*	1000	100	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4-Chloroaniline	ND	*	100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4-Nitroaniline	ND		100	20	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
4-Nitrophenol	ND		1000	250	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Acenaphthene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Acenaphthylene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Anthracene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzo[a]anthracene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzo[a]pyrene	ND		31	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzo[b]fluoranthene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzo[g,h,i]perylene	ND		25	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzo[k]fluoranthene	ND		25	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzoic acid	ND	*	2500	760	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Benzyl alcohol	**15**	**J**	100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Bis(2-chloroethoxy)methane	ND		100	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Bis(2-ethylhexyl) phthalate	ND		610	51	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Butyl benzyl phthalate	ND		200	51	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Carbazole	ND		100	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Chrysene	ND		25	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Dibenz(a,h)anthracene	ND		41	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Dibenzofuran	ND		100	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Diethyl phthalate	**24**	**J**	200	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Dimethyl phthalate	ND		100	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-13 (72-73)
Date Collected: 07/28/15 09:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-2
Matrix: Solid
Percent Solids: 95.5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**77**	**J**	510	51	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Di-n-octyl phthalate	ND		510	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Fluoranthene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Fluorene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Hexachlorobenzene	ND		51	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Hexachlorobutadiene	ND		51	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Hexachloroethane	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Indeno[1,2,3-cd]pyrene	ND		41	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Isophorone	ND		100	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Naphthalene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Nitrobenzene	ND		100	35	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
N-Nitrosodiphenylamine	ND		51	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Pentachlorophenol	ND		200	20	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Phenanthrene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Phenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1
Pyrene	ND		20	5.1	ug/Kg	☼	08/03/15 09:38	08/17/15 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*67*		*28 - 143*	*08/03/15 09:38*	*08/17/15 17:11*	*1*
2-Fluorobiphenyl	*79*		*42 - 140*	*08/03/15 09:38*	*08/17/15 17:11*	*1*
2-Fluorophenol	*78*		*36 - 145*	*08/03/15 09:38*	*08/17/15 17:11*	*1*
Nitrobenzene-d5	*84*		*38 - 141*	*08/03/15 09:38*	*08/17/15 17:11*	*1*
Phenol-d5	*81*		*38 - 149*	*08/03/15 09:38*	*08/17/15 17:11*	*1*
Terphenyl-d14	*116*		*42 - 151*	*08/03/15 09:38*	*08/17/15 17:11*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
4,4'-DDE	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
alpha-BHC	ND		1.0	0.29	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
beta-BHC	ND		1.0	0.33	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Endrin	ND		2.1	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Endrin aldehyde	ND		2.1	0.20	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Endrin ketone	ND		2.1	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Heptachlor	ND		2.1	0.48	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Methoxychlor	ND		10	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1
Toxaphene	ND		100	23	ug/Kg	☼	08/03/15 09:26	08/12/15 17:11	1

Client Sample ID: LFB-13 (72-73)
Date Collected: 07/28/15 09:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-2
Matrix: Solid
Percent Solids: 95.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	89		60 - 128	08/03/15 09:26	08/12/15 17:11	1
Tetrachloro-m-xylene	77		35 - 129	08/03/15 09:26	08/12/15 17:11	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1
PCB-1221	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1
PCB-1232	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1
PCB-1242	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1
PCB-1248	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1
PCB-1254	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1
PCB-1260	ND		10	2.2	ug/Kg	☼	08/03/15 10:51	08/03/15 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		51.9 - 151	08/03/15 10:51	08/03/15 16:43	1
DCB Decachlorobiphenyl (Surr)	94		73.5 - 164	08/03/15 10:51	08/03/15 16:43	1

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		68	12	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Bolstar	ND		13	4.3	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Chlorpyrifos	ND		20	6.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Coumaphos	ND		13	2.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Demeton, Total	ND		40	7.6	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Diazinon	ND		22	7.4	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Dichlorvos	ND		23	7.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Dimethoate	ND		22	7.2	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Disulfoton	ND		49	7.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
EPN	ND		13	3.7	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Famphur	ND		13	3.3	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Fensulfothion	ND		25	8.3	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Mevinphos	ND		15	4.7	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Methyl parathion	ND		20	6.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Merphos	ND		30	5.2	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Malathion	ND		15	4.7	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Fenthion	ND		33	8.9	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Ethyl Parathion	ND		18	5.4	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Phorate	ND		20	5.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Ronnel	ND		47	15	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Simazine	ND		68	22	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Sulfotepp	ND		20	6.3	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Thionazin	ND		18	5.6	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Tokuthion	ND		20	4.0	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Trichloronate	ND		20	6.3	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Ethoprop	ND		15	5.0	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Propazine	ND		68	8.7	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1
Azinphos-methyl	ND		13	3.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	67		42 - 132	08/03/15 17:25	08/09/15 02:21	1
Triphenylphosphate	88		47 - 161	08/03/15 17:25	08/09/15 02:21	1

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
2,4-D	ND		82	14	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
2,4-DB	ND		82	7.7	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
Dalapon	ND		41	1.4	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
Dicamba	ND		41	1.4	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
Dichlorprop	ND		82	3.3	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
MCPA	ND		8200	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
MCPP	ND		8200	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1
Silvex (2,4,5-TP)	ND	F1	21	1.4	ug/Kg	☼	08/02/15 13:00	08/14/15 11:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*63*		*31 - 105*	*08/02/15 13:00*	*08/14/15 11:38*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		39	39	mg/Kg	☼	08/04/15 09:26	08/04/15 15:05	1
Diesel Range Organics (DRO) (C10-C25)	ND		96	96	mg/Kg	☼	08/04/15 09:26	08/04/15 15:05	1
Residual Range Organics (RRO) (C25-C36)	ND		96	96	mg/Kg	☼	08/04/15 09:26	08/04/15 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*50 - 150*	*08/04/15 09:26*	*08/04/15 15:05*	*1*
n-Triacontane-d62	*99*		*50 - 150*	*08/04/15 09:26*	*08/04/15 15:05*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.44**		0.19	0.039	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Arsenic	**8.6**		0.47	0.17	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Barium	**79**		0.47	0.073	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Beryllium	**0.42**	**B**	0.19	0.033	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Cadmium	**0.088**	**J**	0.19	0.018	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Chromium	**10**		0.47	0.059	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Copper	**13**		0.37	0.091	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Iron	**20000**		37	10	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Lead	**6.3**		0.47	0.045	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Manganese	**400**		0.93	0.16	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Nickel	**9.9**		0.47	0.075	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Selenium	**0.79**	**J**	0.93	0.19	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Silver	**0.041**	**J**	0.19	0.011	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Thallium	ND		0.37	0.12	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Zinc	**41**		4.7	1.0	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10
Vanadium	**27**		1.9	0.44	mg/Kg	☼	08/11/15 08:43	08/11/15 15:19	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**1.9**	**J**	37	1.5	ug/Kg	☼	08/06/15 08:18	08/10/15 14:19	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	08/04/15 14:08	08/06/15 13:52	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-14 (97-98)
Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.89	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,1,1-Trichloroethane	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,1,2,2-Tetrachloroethane	ND	*	3.6	0.80	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,1,2-Trichloroethane	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,1-Dichloroethane	ND	*	0.89	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,1-Dichloroethene	ND	*	4.5	0.45	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,1-Dichloropropene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2,3-Trichlorobenzene	ND	*	2.7	0.54	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2,3-Trichloropropane	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2,4-Trichlorobenzene	ND	*	1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2,4-Trimethylbenzene	ND	*	1.8	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2-Dibromo-3-Chloropropane	ND	*	8.9	1.4	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2-Dichlorobenzene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2-Dichloroethane	ND	*	0.89	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,2-Dichloropropane	ND	*	1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,3,5-Trimethylbenzene	ND	*	4.5	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,3-Dichlorobenzene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,3-Dichloropropane	ND	*	1.8	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
1,4-Dichlorobenzene	ND	*	0.89	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
2,2-Dichloropropane	ND		4.5	0.80	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
2-Chlorotoluene	ND	*	1.8	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
4-Chlorotoluene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
4-Isopropyltoluene	ND	*	1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Benzene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Bromobenzene	ND	*	8.9	2.1	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Bromoform	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Bromomethane	ND		0.89	0.19	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Carbon tetrachloride	ND		1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Chlorobenzene	ND	*	1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Chlorobromomethane	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Chlorodibromomethane	ND	*	1.8	0.24	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Chloroethane	ND		1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Chloroform	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Chloromethane	ND		0.89	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
cis-1,2-Dichloroethene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
cis-1,3-Dichloropropene	ND	*	0.89	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Dibromomethane	ND	*	0.89	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Dichlorobromomethane	ND	*	0.89	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Dichlorodifluoromethane	ND		1.8	0.44	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Ethylbenzene	ND	*	1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Ethylene Dibromide	ND	*	0.89	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Hexachlorobutadiene	ND	*	2.7	0.54	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Isopropylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Methyl tert-butyl ether	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Methylene Chloride	**2.8**	**J B**	13	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
m-Xylene & p-Xylene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Naphthalene	ND		8.9	1.6	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
n-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
N-Propylbenzene	ND	*	1.8	0.29	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1

Client Sample ID: LFB-14 (97-98)
Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
sec-Butylbenzene	ND	*	1.8	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Styrene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
tert-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Tetrachloroethene	ND		1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Toluene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
trans-1,2-Dichloroethene	ND	*	1.8	0.36	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
trans-1,3-Dichloropropene	ND	*	8.9	1.2	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Trichloroethene	ND	*	1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Trichlorofluoromethane	ND		1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1
Vinyl chloride	ND		1.8	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*71 - 136*	*08/07/15 12:14*	*08/08/15 20:16*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 120*	*08/07/15 12:14*	*08/08/15 20:16*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 132*	*08/07/15 12:14*	*08/08/15 20:16*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*	*08/07/15 12:14*	*08/08/15 20:16*	*1*
Trifluorotoluene (Surr)	*105*		*65 - 140*	*08/07/15 12:14*	*08/08/15 20:16*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2-Methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
3 & 4 Methylphenol	ND		200	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4,6-Dinitro-2-methylphenol	ND	*	1000	100	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4-Chloroaniline	ND	*	100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4-Nitroaniline	ND		100	20	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
4-Nitrophenol	ND		1000	250	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Acenaphthene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1

Client Sample ID: LFB-14 (97-98)
Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Anthracene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzoic acid	ND	*	2500	750	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Benzyl alcohol	**21**	**J**	100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Bis(2-ethylhexyl) phthalate	**96**	**J**	600	50	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Butyl benzyl phthalate	ND		200	50	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Carbazole	ND		100	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Chrysene	ND		25	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Dibenzofuran	ND		100	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Diethyl phthalate	**23**	**J**	200	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Dimethyl phthalate	ND		100	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Di-n-butyl phthalate	**140**	**J**	500	50	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Fluoranthene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Fluorene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Hexachlorobenzene	ND		50	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Hexachlorobutadiene	ND		50	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Hexachloroethane	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Isophorone	ND		100	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Naphthalene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Nitrobenzene	ND		100	34	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Pentachlorophenol	ND		200	20	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Phenanthrene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Phenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1
Pyrene	ND		20	5.0	ug/Kg	☼	08/03/15 09:38	08/17/15 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*69*		*28 - 143*	*08/03/15 09:38*	*08/17/15 17:37*	*1*
2-Fluorobiphenyl	*83*		*42 - 140*	*08/03/15 09:38*	*08/17/15 17:37*	*1*
2-Fluorophenol	*80*		*36 - 145*	*08/03/15 09:38*	*08/17/15 17:37*	*1*
Nitrobenzene-d5	*87*		*38 - 141*	*08/03/15 09:38*	*08/17/15 17:37*	*1*
Phenol-d5	*81*		*38 - 149*	*08/03/15 09:38*	*08/17/15 17:37*	*1*
Terphenyl-d14	*116*		*42 - 151*	*08/03/15 09:38*	*08/17/15 17:37*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1

Client Sample ID: LFB-14 (97-98)
Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
4,4'-DDT	ND		2.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
alpha-BHC	ND		1.0	0.28	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
beta-BHC	ND		1.0	0.33	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Dieldrin	ND		2.0	0.12	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Endosulfan II	ND		2.0	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Endrin	ND		2.0	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Endrin ketone	ND		2.0	0.26	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Heptachlor	ND		2.0	0.47	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Methoxychlor	ND		10	0.26	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1
Toxaphene	ND		100	23	ug/Kg	☼	08/03/15 09:26	08/12/15 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*60 - 128*	*08/03/15 09:26*	*08/12/15 17:28*	*1*
Tetrachloro-m-xylene	*72*		*35 - 129*	*08/03/15 09:26*	*08/12/15 17:28*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1
PCB-1221	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1
PCB-1232	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1
PCB-1242	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1
PCB-1248	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1
PCB-1254	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1
PCB-1260	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*51.9 - 151*	*08/03/15 10:51*	*08/03/15 17:04*	*1*
DCB Decachlorobiphenyl (Surr)	*97*		*73.5 - 164*	*08/03/15 10:51*	*08/03/15 17:04*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		70	13	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Bolstar	ND		14	4.4	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Chlorpyrifos	ND		21	6.7	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Coumaphos	ND		14	2.9	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Demeton, Total	ND		41	7.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Diazinon	ND		23	7.6	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Dichlorvos	ND		24	7.7	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Dimethoate	ND		23	7.4	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Disulfoton	ND		50	8.0	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1

Client Sample ID: LFB-14 (97-98)
Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		14	3.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Famphur	ND		14	3.4	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Fensulfothion	ND		26	8.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Mevinphos	ND		16	4.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Methyl parathion	ND		21	6.6	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Merphos	ND		31	5.3	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Malathion	ND		16	4.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Fenthion	ND		34	9.1	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Ethyl Parathion	ND		19	5.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Phorate	ND		21	5.9	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Ronnel	ND		48	16	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Simazine	ND		70	23	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Sulfotepp	ND		21	6.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Thionazin	ND		19	5.8	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Tokuthion	ND		21	4.1	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Trichloronate	ND		21	6.5	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Ethoprop	ND		16	5.1	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Propazine	ND		70	9.0	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1
Azinphos-methyl	ND		14	3.6	ug/Kg	☼	08/03/15 17:25	08/09/15 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*63*		*42 - 132*	*08/03/15 17:25*	*08/09/15 02:50*	*1*
Triphenylphosphate	*80*		*47 - 161*	*08/03/15 17:25*	*08/09/15 02:50*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
2,4-D	ND		82	14	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
2,4-DB	ND		82	7.7	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
Dalapon	ND		41	1.4	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
Dicamba	ND		41	1.4	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
Dichlorprop	ND		82	3.3	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
MCPA	ND		8200	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
MCPP	ND		8200	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1
Silvex (2,4,5-TP)	ND		21	1.4	ug/Kg	☼	08/02/15 13:00	08/14/15 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*54*		*31 - 105*	*08/02/15 13:00*	*08/14/15 13:03*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		38	38	mg/Kg	☼	08/04/15 09:26	08/04/15 14:09	1
Diesel Range Organics (DRO) (C10-C25)	ND		95	95	mg/Kg	☼	08/04/15 09:26	08/04/15 14:09	1
Residual Range Organics (RRO) (C25-C36)	ND		95	95	mg/Kg	☼	08/04/15 09:26	08/04/15 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*105*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:09*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:09*	*1*

Client Sample ID: LFB-14 (97-98)

Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.56		0.17	0.036	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Arsenic	12		0.43	0.15	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Barium	87		0.43	0.067	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Beryllium	0.40	B	0.17	0.030	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Cadmium	0.15	J	0.17	0.016	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Chromium	10		0.43	0.054	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Copper	15		0.34	0.084	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Iron	26000		34	9.2	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Lead	9.3		0.43	0.041	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Manganese	380		0.86	0.15	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Nickel	12		0.43	0.070	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Selenium	1.0		0.86	0.17	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Silver	0.051	J	0.17	0.010	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Thallium	ND		0.34	0.11	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Zinc	52		4.3	0.96	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10
Vanadium	34		1.7	0.41	mg/Kg	☼	08/11/15 08:43	08/11/15 15:41	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	4.2	J	28	1.1	ug/Kg	☼	08/06/15 08:18	08/10/15 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	08/04/15 14:08	08/06/15 13:52	1

Client Sample ID: LFB-15 (35-37)

Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid
Percent Solids: 92.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.45	0.11	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,1,1-Trichloroethane	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,1,2,2-Tetrachloroethane	ND	*	1.8	0.40	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,1,2-Trichloroethane	ND	*	0.90	0.11	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,1-Dichloroethane	ND	*	0.45	0.085	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,1-Dichloroethene	ND	*	2.2	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,1-Dichloropropene	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2,3-Trichlorobenzene	ND	*	1.3	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2,3-Trichloropropane	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2,4-Trichlorobenzene	ND	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2,4-Trimethylbenzene	ND	*	0.90	0.072	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2-Dibromo-3-Chloropropane	ND	*	4.5	0.72	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2-Dichlorobenzene	ND	*	0.90	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2-Dichloroethane	ND	*	0.45	0.067	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,2-Dichloropropane	ND	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,3,5-Trimethylbenzene	ND	*	2.2	0.076	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,3-Dichlorobenzene	ND	*	0.90	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,3-Dichloropropane	ND	*	0.90	0.10	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
1,4-Dichlorobenzene	ND	*	0.45	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1

Client Sample ID: LFB-15 (35-37)
Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid
Percent Solids: 92.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND	*	2.2	0.40	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
2-Chlorotoluene	ND	*	0.90	0.076	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
4-Chlorotoluene	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
4-Isopropyltoluene	**14**	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Benzene	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Bromobenzene	ND	*	4.5	1.0	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Bromoform	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Bromomethane	ND	*	0.45	0.094	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Carbon tetrachloride	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Chlorobenzene	ND	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Chlorobromomethane	ND	*	0.90	0.11	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Chlorodibromomethane	ND	*	0.90	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Chloroethane	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Chloroform	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Chloromethane	ND	*	0.45	0.063	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
cis-1,2-Dichloroethene	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
cis-1,3-Dichloropropene	ND	*	0.45	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Dibromomethane	ND	*	0.45	0.076	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Dichlorobromomethane	ND	*	0.45	0.081	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Dichlorodifluoromethane	ND	*	0.90	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Ethylbenzene	ND	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Ethylene Dibromide	ND	*	0.45	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Hexachlorobutadiene	ND	*	1.3	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Isopropylbenzene	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Methyl tert-butyl ether	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Methylene Chloride	ND	*	6.7	0.11	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
m-Xylene & p-Xylene	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Naphthalene	ND	*	4.5	0.81	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
n-Butylbenzene	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
N-Propylbenzene	ND	*	0.90	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
o-Xylene	**0.83**	**J ***	0.90	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
sec-Butylbenzene	ND	*	0.90	0.11	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Styrene	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
tert-Butylbenzene	ND	*	0.90	0.090	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Tetrachloroethene	ND	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Toluene	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
trans-1,2-Dichloroethene	ND	*	0.90	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
trans-1,3-Dichloropropene	ND	*	4.5	0.63	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Trichloroethene	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Trichlorofluoromethane	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1
Vinyl chloride	ND	*	0.90	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*	*	*71 - 136*	*08/07/15 12:14*	*08/08/15 21:35*	*1*
4-Bromofluorobenzene (Surr)	*104*	*	*70 - 120*	*08/07/15 12:14*	*08/08/15 21:35*	*1*
Dibromofluoromethane (Surr)	*76*	*	*75 - 132*	*08/07/15 12:14*	*08/08/15 21:35*	*1*
Toluene-d8 (Surr)	*94*	*	*80 - 120*	*08/07/15 12:14*	*08/08/15 21:35*	*1*
Trifluorotoluene (Surr)	*127*	*	*65 - 140*	*08/07/15 12:14*	*08/08/15 21:35*	*1*

Client Sample ID: LFB-15 (35-37)
Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid
Percent Solids: 92.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		53	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
1,2-Dichlorobenzene	ND		58	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
1,3-Dichlorobenzene	ND		53	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
1,4-Dichlorobenzene	ND		53	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
1-Methylnaphthalene	ND		32	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,4,5-Trichlorophenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,4,6-Trichlorophenol	ND		160	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,4-Dichlorophenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,4-Dimethylphenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,4-Dinitrophenol	ND		1100	210	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,4-Dinitrotoluene	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2,6-Dinitrotoluene	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2-Chloronaphthalene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2-Chlorophenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2-Methylnaphthalene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2-Methylphenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2-Nitroaniline	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
2-Nitrophenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
3 & 4 Methylphenol	ND		210	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
3,3'-Dichlorobenzidine	ND		210	32	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
3-Nitroaniline	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4,6-Dinitro-2-methylphenol	ND	*	1100	110	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4-Bromophenyl phenyl ether	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4-Chloro-3-methylphenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4-Chloroaniline	ND	*	110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4-Chlorophenyl phenyl ether	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4-Nitroaniline	ND		110	21	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
4-Nitrophenol	ND		1100	270	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Acenaphthene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Acenaphthylene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Anthracene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzo[a]anthracene	**17**	**J**	21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzo[a]pyrene	**35**		32	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzo[b]fluoranthene	**23**		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzo[g,h,i]perylene	**26**	**J**	27	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzo[k]fluoranthene	**15**	**J**	27	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzoic acid	ND	*	2700	800	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Benzyl alcohol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
bis (2-chloroisopropyl) ether	ND		270	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Bis(2-chloroethoxy)methane	ND		110	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Bis(2-chloroethyl)ether	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Bis(2-ethylhexyl) phthalate	**310**	**J**	640	53	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Butyl benzyl phthalate	ND		210	53	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Carbazole	ND		110	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Chrysene	**24**	**J**	27	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Dibenz(a,h)anthracene	ND		42	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Dibenzofuran	ND		110	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Diethyl phthalate	**19**	**J**	210	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Dimethyl phthalate	ND		110	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-15 (35-37)
Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid
Percent Solids: 92.8

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		530	53	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Di-n-octyl phthalate	**96**	**J**	530	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Fluoranthene	**20**	**J**	21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Fluorene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Hexachlorobenzene	ND		53	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Hexachlorobutadiene	ND		53	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Hexachlorocyclopentadiene	ND		110	11	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Hexachloroethane	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Indeno[1,2,3-cd]pyrene	**30**	**J**	42	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Isophorone	ND		110	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Naphthalene	ND		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Nitrobenzene	ND		110	36	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
N-Nitrosodi-n-propylamine	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
N-Nitrosodiphenylamine	ND		53	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Phenanthrene	**14**	**J**	21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Phenol	ND		110	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1
Pyrene	**24**		21	5.3	ug/Kg	☼	08/03/15 09:38	08/17/15 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*76*		*28 - 143*	*08/03/15 09:38*	*08/17/15 18:03*	*1*
2-Fluorobiphenyl	*89*		*42 - 140*	*08/03/15 09:38*	*08/17/15 18:03*	*1*
2-Fluorophenol	*85*		*36 - 145*	*08/03/15 09:38*	*08/17/15 18:03*	*1*
Nitrobenzene-d5	*95*		*38 - 141*	*08/03/15 09:38*	*08/17/15 18:03*	*1*
Phenol-d5	*87*		*38 - 149*	*08/03/15 09:38*	*08/17/15 18:03*	*1*
Terphenyl-d14	*119*		*42 - 151*	*08/03/15 09:38*	*08/17/15 18:03*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
4,4'-DDE	ND		2.1	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
alpha-BHC	ND		1.0	0.28	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
beta-BHC	ND		1.0	0.33	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Endosulfan I	ND		1.0	0.10	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Endrin	ND		2.1	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Endrin aldehyde	ND		2.1	0.20	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Endrin ketone	ND		2.1	0.26	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
gamma-Chlordane	ND	*	1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Heptachlor	ND		2.1	0.48	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Methoxychlor	ND		10	0.26	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1
Toxaphene	ND		100	23	ug/Kg	☼	08/03/15 09:26	08/12/15 17:46	1

Client Sample ID: LFB-15 (35-37)
Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid
Percent Solids: 92.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	87		60 - 128	08/03/15 09:26	08/12/15 17:46	1
Tetrachloro-m-xylene	64		35 - 129	08/03/15 09:26	08/12/15 17:46	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		11	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:25	1
PCB-1221	ND		11	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:25	1
PCB-1232	ND		11	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:25	1
PCB-1242	ND		11	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:25	1
PCB-1248	31		11	2.3	ug/Kg	☼	08/03/15 10:51	08/04/15 13:52	1
PCB-1254	ND		11	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:25	1
PCB-1260	ND		11	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	59		51.9 - 151	08/03/15 10:51	08/03/15 17:25	1
DCB Decachlorobiphenyl (Surr)	75		73.5 - 164	08/03/15 10:51	08/03/15 17:25	1

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		72	13	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Bolstar	ND		14	4.5	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Chlorpyrifos	ND		21	6.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Coumaphos	ND		14	3.0	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Demeton, Total	ND		42	8.0	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Diazinon	ND		23	7.8	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Dichlorvos	ND		25	7.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Dimethoate	ND		23	7.6	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Disulfoton	ND		51	8.2	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
EPN	ND		14	3.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Famphur	ND		14	3.4	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Fensulfothion	ND		27	8.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Mevinphos	ND		16	4.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Methyl parathion	ND		21	6.8	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Merphos	ND		32	5.5	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Malathion	ND		16	5.0	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Fenthion	ND		35	9.3	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Ethyl Parathion	ND		19	5.6	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Phorate	ND		21	6.1	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Ronnel	ND		49	16	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Simazine	ND		72	24	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Sulfotepp	ND		21	6.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Thionazin	ND		19	5.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Tokuthion	ND		21	4.2	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Trichloronate	ND		21	6.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Ethoprop	ND		16	5.3	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Propazine	ND		72	9.2	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1
Azinphos-methyl	ND		14	3.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	43		42 - 132	08/03/15 17:25	08/09/15 03:19	1
Triphenylphosphate	50		47 - 161	08/03/15 17:25	08/09/15 03:19	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.5	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
2,4-D	ND		86	15	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
2,4-DB	ND		86	8.0	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
Dalapon	ND		43	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
Dicamba	ND		43	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
Dichlorprop	ND		86	3.4	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
MCPA	ND		8600	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
MCPP	ND		8600	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1
Silvex (2,4,5-TP)	ND		21	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*61*		*31 - 105*	*08/02/15 13:00*	*08/14/15 13:32*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		39	39	mg/Kg	☼	08/04/15 09:26	08/04/15 14:27	1
Diesel Range Organics (DRO) (C10-C25)	ND		97	97	mg/Kg	☼	08/04/15 09:26	08/04/15 14:27	1
Residual Range Organics (RRO) (C25-C36)	**450**		97	97	mg/Kg	☼	08/04/15 09:26	08/04/15 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:27*	*1*
n-Triacontane-d62	*155*	*X*	*50 - 150*	*08/04/15 09:26*	*08/04/15 14:27*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.87**		0.20	0.042	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Arsenic	**9.6**		0.50	0.18	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Barium	**120**		0.50	0.078	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Beryllium	**0.48**	**B**	0.20	0.035	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Cadmium	**0.29**		0.20	0.019	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Chromium	**37**		0.50	0.063	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Copper	**36**		0.40	0.098	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Iron	**32000**		40	11	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Lead	**24**		0.50	0.048	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Manganese	**450**		1.0	0.17	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Nickel	**13**		0.50	0.081	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Selenium	**1.4**		1.0	0.20	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Silver	**0.065**	**J**	0.20	0.012	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Thallium	ND		0.40	0.13	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Zinc	**110**		5.0	1.1	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10
Vanadium	**49**		2.0	0.47	mg/Kg	☼	08/11/15 08:43	08/11/15 15:46	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**42**	**J**	45	1.8	ug/Kg	☼	08/06/15 08:18	08/10/15 14:24	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	08/04/15 14:08	08/06/15 13:52	1

Client Sample ID: LFB-16 (35-37)
Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid
Percent Solids: 94.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.87	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,1,1-Trichloroethane	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,1,2,2-Tetrachloroethane	ND	*	3.5	0.79	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,1,2-Trichloroethane	ND	*	1.7	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,1-Dichloroethane	ND	*	0.87	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,1-Dichloroethene	ND	*	4.4	0.44	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,1-Dichloropropene	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2,3-Trichlorobenzene	ND	*	2.6	0.52	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2,3-Trichloropropane	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2,4-Trichlorobenzene	ND	*	1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2,4-Trimethylbenzene	ND	*	1.7	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2-Dibromo-3-Chloropropane	ND	*	8.7	1.4	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2-Dichlorobenzene	ND	*	1.7	0.27	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2-Dichloroethane	ND	*	0.87	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,2-Dichloropropane	ND	*	1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,3,5-Trimethylbenzene	ND	*	4.4	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,3-Dichlorobenzene	ND	*	1.7	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,3-Dichloropropane	ND	*	1.7	0.20	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
1,4-Dichlorobenzene	ND	*	0.87	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
2,2-Dichloropropane	ND	*	4.4	0.79	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
2-Chlorotoluene	ND	*	1.7	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
4-Chlorotoluene	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
4-Isopropyltoluene	ND	*	1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Benzene	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Bromobenzene	ND	*	8.7	2.0	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Bromoform	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Bromomethane	ND	*	0.87	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Carbon tetrachloride	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Chlorobenzene	ND	*	1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Chlorobromomethane	ND	*	1.7	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Chlorodibromomethane	ND	*	1.7	0.24	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Chloroethane	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Chloroform	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Chloromethane	ND	*	0.87	0.12	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
cis-1,2-Dichloroethene	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
cis-1,3-Dichloropropene	ND	*	0.87	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Dibromomethane	ND	*	0.87	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Dichlorobromomethane	ND	*	0.87	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Dichlorodifluoromethane	ND	*	1.7	0.43	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Ethylbenzene	ND	*	1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Ethylene Dibromide	ND	*	0.87	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Hexachlorobutadiene	ND	*	2.6	0.52	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Isopropylbenzene	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Methyl tert-butyl ether	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Methylene Chloride	**6.2**	**J B ***	13	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
m-Xylene & p-Xylene	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Naphthalene	ND		8.7	1.6	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
n-Butylbenzene	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
N-Propylbenzene	ND	*	1.7	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1

Client Sample ID: LFB-16 (35-37)
Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid
Percent Solids: 94.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	*	1.7	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
sec-Butylbenzene	ND	*	1.7	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Styrene	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
tert-Butylbenzene	ND	*	1.7	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Tetrachloroethene	**1.7**		1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Toluene	**0.35**	**J ***	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
trans-1,2-Dichloroethene	ND	*	1.7	0.35	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
trans-1,3-Dichloropropene	ND	*	8.7	1.2	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Trichloroethene	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Trichlorofluoromethane	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1
Vinyl chloride	ND	*	1.7	0.26	ug/Kg	☼	08/07/15 12:14	08/08/15 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*	*	*71 - 136*	*08/07/15 12:14*	*08/08/15 20:43*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 120*	*08/07/15 12:14*	*08/08/15 20:43*	*1*
Dibromofluoromethane (Surr)	*97*	*	*75 - 132*	*08/07/15 12:14*	*08/08/15 20:43*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*	*08/07/15 12:14*	*08/08/15 20:43*	*1*
Trifluorotoluene (Surr)	*106*	*	*65 - 140*	*08/07/15 12:14*	*08/08/15 20:43*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		52	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
1,2-Dichlorobenzene	ND		57	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
1,3-Dichlorobenzene	ND		52	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
1,4-Dichlorobenzene	ND		52	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
1-Methylnaphthalene	ND		31	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,4,5-Trichlorophenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,4,6-Trichlorophenol	ND		160	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,4-Dichlorophenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,4-Dimethylphenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,4-Dinitrophenol	ND		1000	210	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,4-Dinitrotoluene	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2,6-Dinitrotoluene	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2-Chloronaphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2-Chlorophenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2-Methylnaphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2-Methylphenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2-Nitroaniline	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
2-Nitrophenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
3 & 4 Methylphenol	ND		210	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
3,3'-Dichlorobenzidine	ND		210	31	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
3-Nitroaniline	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4,6-Dinitro-2-methylphenol	ND	*	1000	100	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4-Bromophenyl phenyl ether	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4-Chloro-3-methylphenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4-Chloroaniline	ND	*	100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4-Chlorophenyl phenyl ether	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4-Nitroaniline	ND		100	21	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
4-Nitrophenol	ND		1000	260	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Acenaphthene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1

Client Sample ID: LFB-16 (35-37)
Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid
Percent Solids: 94.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Anthracene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzo[a]anthracene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzo[a]pyrene	ND		31	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzo[b]fluoranthene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzo[g,h,i]perylene	ND		26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzo[k]fluoranthene	ND		26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzoic acid	ND	*	2600	780	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Benzyl alcohol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
bis (2-chloroisopropyl) ether	ND		260	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Bis(2-chloroethoxy)methane	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Bis(2-chloroethyl)ether	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Bis(2-ethylhexyl) phthalate	**71**	**J**	630	52	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Butyl benzyl phthalate	ND		210	52	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Carbazole	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Chrysene	ND		26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Dibenz(a,h)anthracene	ND		42	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Dibenzofuran	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Diethyl phthalate	**24**	**J**	210	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Dimethyl phthalate	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Di-n-butyl phthalate	ND		520	52	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Di-n-octyl phthalate	ND		520	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Fluoranthene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Fluorene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Hexachlorobenzene	ND		52	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Hexachlorobutadiene	ND		52	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Hexachloroethane	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Indeno[1,2,3-cd]pyrene	ND		42	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Isophorone	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Naphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Nitrobenzene	ND		100	35	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
N-Nitrosodi-n-propylamine	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
N-Nitrosodiphenylamine	ND		52	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Phenanthrene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Phenol	ND		100	16	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1
Pyrene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*28 - 143*	*08/03/15 09:38*	*08/17/15 18:29*	*1*
2-Fluorobiphenyl	*89*		*42 - 140*	*08/03/15 09:38*	*08/17/15 18:29*	*1*
2-Fluorophenol	*87*		*36 - 145*	*08/03/15 09:38*	*08/17/15 18:29*	*1*
Nitrobenzene-d5	*94*		*38 - 141*	*08/03/15 09:38*	*08/17/15 18:29*	*1*
Phenol-d5	*87*		*38 - 149*	*08/03/15 09:38*	*08/17/15 18:29*	*1*
Terphenyl-d14	*124*		*42 - 151*	*08/03/15 09:38*	*08/17/15 18:29*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1

Client Sample ID: LFB-16 (35-37)
Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid
Percent Solids: 94.7

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Aldrin	ND		1.0	0.23	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
alpha-BHC	ND		1.0	0.29	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
alpha-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
beta-BHC	ND		1.0	0.34	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
delta-BHC	ND		1.0	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Endosulfan I	ND		1.0	0.11	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Endrin	ND		2.1	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Endrin aldehyde	ND		2.1	0.21	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Endrin ketone	ND		2.1	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
gamma-BHC (Lindane)	ND		1.0	0.31	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
gamma-Chlordane	ND		1.0	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Heptachlor	ND		2.1	0.48	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Heptachlor epoxide	ND		1.0	0.0031	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Methoxychlor	ND		10	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1
Toxaphene	ND		100	24	ug/Kg	☼	08/03/15 09:26	08/12/15 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*60 - 128*	*08/03/15 09:26*	*08/12/15 18:03*	*1*
Tetrachloro-m-xylene	*74*		*35 - 129*	*08/03/15 09:26*	*08/12/15 18:03*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1
PCB-1221	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1
PCB-1232	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1
PCB-1242	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1
PCB-1248	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1
PCB-1254	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1
PCB-1260	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*51.9 - 151*	*08/03/15 10:51*	*08/03/15 17:46*	*1*
DCB Decachlorobiphenyl (Surr)	*69*	*X*	*73.5 - 164*	*08/03/15 10:51*	*08/03/15 17:46*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		68	12	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Bolstar	ND		13	4.3	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Chlorpyrifos	ND		20	6.6	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Coumaphos	ND		13	2.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Demeton, Total	ND		40	7.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Diazinon	ND		22	7.4	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Dichlorvos	ND		24	7.6	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Dimethoate	ND		22	7.2	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Disulfoton	ND		49	7.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1

Client Sample ID: LFB-16 (35-37)
Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid
Percent Solids: 94.7

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		13	3.8	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Famphur	ND		13	3.3	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Fensulfothion	ND		26	8.3	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Mevinphos	ND		15	4.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Methyl parathion	ND		20	6.5	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Merphos	ND		31	5.3	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Malathion	ND		15	4.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Fenthion	ND		34	8.9	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Ethyl Parathion	ND		18	5.4	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Phorate	ND		20	5.8	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Ronnel	ND		47	16	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Simazine	ND		68	23	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Sulfotepp	ND		20	6.4	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Thionazin	ND		18	5.7	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Tokuthion	ND		20	4.0	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Trichloronate	ND		20	6.4	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Ethoprop	ND		15	5.0	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Propazine	ND		68	8.8	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1
Azinphos-methyl	ND		13	3.6	ug/Kg	☼	08/03/15 17:25	08/09/15 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*78*		*42 - 132*	*08/03/15 17:25*	*08/09/15 03:48*	*1*
Triphenylphosphate	*91*		*47 - 161*	*08/03/15 17:25*	*08/09/15 03:48*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
2,4-D	ND		84	15	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
2,4-DB	ND		84	7.8	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
Dalapon	ND		42	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
Dicamba	ND		42	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
Dichlorprop	ND		84	3.3	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
MCPA	ND		8400	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
MCPP	ND		8400	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1
Silvex (2,4,5-TP)	ND		21	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*55*		*31 - 105*	*08/02/15 13:00*	*08/14/15 14:02*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg	☼	08/04/15 09:26	08/04/15 14:46	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	08/04/15 09:26	08/04/15 14:46	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	08/04/15 09:26	08/04/15 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*102*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:46*	*1*
n-Triacontane-d62	*135*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:46*	*1*

Client Sample ID: LFB-16 (35-37)

Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5

Matrix: Solid
Percent Solids: 94.7

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.53		0.18	0.039	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Arsenic	9.5		0.46	0.17	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Barium	76		0.46	0.072	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Beryllium	0.42	B	0.18	0.032	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Cadmium	0.13	J	0.18	0.018	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Chromium	11		0.46	0.058	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Copper	14		0.37	0.090	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Iron	21000		37	9.9	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Lead	11		0.46	0.044	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Manganese	400		0.92	0.16	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Nickel	11		0.46	0.075	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Selenium	0.87	J	0.92	0.19	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Silver	0.049	J	0.18	0.011	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Thallium	ND		0.37	0.12	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Zinc	49		4.6	1.0	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10
Vanadium	25		1.8	0.44	mg/Kg	☼	08/11/15 08:43	08/11/15 15:50	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	J	30	1.2	ug/Kg	☼	08/06/15 08:18	08/10/15 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	08/04/15 14:08	08/06/15 13:52	1

Client Sample ID: LFB-17 (42-43)

Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6

Matrix: Solid
Percent Solids: 95.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	0.92	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,1,1-Trichloroethane	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,1,2,2-Tetrachloroethane	ND	*	3.7	0.83	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,1,2-Trichloroethane	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,1-Dichloroethane	ND	*	0.92	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,1-Dichloroethene	ND	*	4.6	0.46	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,1-Dichloropropene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2,3-Trichlorobenzene	ND	*	2.8	0.55	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2,3-Trichloropropane	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2,4-Trichlorobenzene	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2,4-Trimethylbenzene	ND	*	1.8	0.15	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2-Dibromo-3-Chloropropane	ND	*	9.2	1.5	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2-Dichlorobenzene	ND	*	1.8	0.29	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2-Dichloroethane	ND	*	0.92	0.14	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,2-Dichloropropane	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,3,5-Trimethylbenzene	ND	*	4.6	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,3-Dichlorobenzene	ND	*	1.8	0.24	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,3-Dichloropropane	ND	*	1.8	0.21	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
1,4-Dichlorobenzene	ND	*	0.92	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-17 (42-43)
Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6
Matrix: Solid
Percent Solids: 95.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND	*	4.6	0.83	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
2-Chlorotoluene	ND	*	1.8	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
4-Chlorotoluene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
4-Isopropyltoluene	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Benzene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Bromobenzene	ND	*	9.2	2.1	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Bromoform	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Bromomethane	ND	*	0.92	0.19	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Carbon tetrachloride	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Chlorobenzene	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Chlorobromomethane	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Chlorodibromomethane	ND	*	1.8	0.25	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Chloroethane	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Chloroform	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Chloromethane	ND	*	0.92	0.13	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
cis-1,2-Dichloroethene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
cis-1,3-Dichloropropene	ND	*	0.92	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Dibromomethane	ND	*	0.92	0.16	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Dichlorobromomethane	ND	*	0.92	0.17	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Dichlorodifluoromethane	ND	*	1.8	0.45	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Ethylbenzene	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Ethylene Dibromide	ND	*	0.92	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Hexachlorobutadiene	ND	*	2.8	0.55	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Isopropylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Methyl tert-butyl ether	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Methylene Chloride	**5.2**	**J * B**	14	0.22	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
m-Xylene & p-Xylene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Naphthalene	ND	*	9.2	1.7	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
n-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
N-Propylbenzene	ND	*	1.8	0.29	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
o-Xylene	ND	*	1.8	0.24	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
sec-Butylbenzene	ND	*	1.8	0.23	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Styrene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
tert-Butylbenzene	ND	*	1.8	0.18	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Tetrachloroethene	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Toluene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
trans-1,2-Dichloroethene	ND	*	1.8	0.37	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
trans-1,3-Dichloropropene	ND	*	9.2	1.3	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Trichloroethene	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Trichlorofluoromethane	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1
Vinyl chloride	ND	*	1.8	0.28	ug/Kg	☼	08/07/15 12:14	08/08/15 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*70*	** X*	*71 - 136*	*08/07/15 12:14*	*08/08/15 21:08*	*1*
4-Bromofluorobenzene (Surr)	*102*	*	*70 - 120*	*08/07/15 12:14*	*08/08/15 21:08*	*1*
Dibromofluoromethane (Surr)	*81*	*	*75 - 132*	*08/07/15 12:14*	*08/08/15 21:08*	*1*
Toluene-d8 (Surr)	*98*	*	*80 - 120*	*08/07/15 12:14*	*08/08/15 21:08*	*1*
Trifluorotoluene (Surr)	*127*	*	*65 - 140*	*08/07/15 12:14*	*08/08/15 21:08*	*1*

Client Sample ID: LFB-17 (42-43)
Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6
Matrix: Solid
Percent Solids: 95.1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
1,2-Dichlorobenzene	ND		57	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
1,3-Dichlorobenzene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
1,4-Dichlorobenzene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
1-Methylnaphthalene	ND		31	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,4-Dichlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,4-Dimethylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,4-Dinitrophenol	ND		1000	210	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2-Chloronaphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2-Chlorophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2-Methylnaphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2-Methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
2-Nitrophenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
3 & 4 Methylphenol	ND		210	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
3,3'-Dichlorobenzidine	ND		210	31	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
3-Nitroaniline	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4,6-Dinitro-2-methylphenol	ND	*	1000	100	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4-Chloroaniline	ND	F1 *	100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4-Nitroaniline	ND		100	21	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
4-Nitrophenol	ND		1000	260	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Acenaphthene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Acenaphthylene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Anthracene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzo[a]anthracene	**13**	**J**	21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzo[a]pyrene	**31**		31	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzo[b]fluoranthene	**27**		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzo[g,h,i]perylene	**19**	**J**	26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzo[k]fluoranthene	**12**	**J**	26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzoic acid	ND	*	2600	770	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Benzyl alcohol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
bis (2-chloroisopropyl) ether	ND		260	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Bis(2-chloroethoxy)methane	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Bis(2-ethylhexyl) phthalate	**120**	**J F1 F2**	620	52	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Butyl benzyl phthalate	ND		210	52	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Carbazole	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Chrysene	**10**	**J**	26	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Dibenz(a,h)anthracene	ND		41	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Dibenzofuran	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Diethyl phthalate	**26**	**J**	210	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Dimethyl phthalate	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1

Client Sample ID: LFB-17 (42-43)
Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6
Matrix: Solid
Percent Solids: 95.1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		520	52	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Di-n-octyl phthalate	ND		520	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Fluoranthene	**15**	**J**	21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Fluorene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Hexachlorobenzene	ND		52	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Hexachlorobutadiene	ND		52	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Hexachloroethane	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Indeno[1,2,3-cd]pyrene	**21**	**J**	41	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Isophorone	ND		100	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Naphthalene	ND		21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Nitrobenzene	ND		100	35	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
N-Nitrosodiphenylamine	ND		52	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Pentachlorophenol	ND		210	21	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Phenanthrene	**9.8**	**J**	21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Phenol	ND		100	15	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1
Pyrene	**16**	**J**	21	5.2	ug/Kg	☼	08/03/15 09:38	08/17/15 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*80*		*28 - 143*	*08/03/15 09:38*	*08/17/15 18:54*	*1*
2-Fluorobiphenyl	*94*		*42 - 140*	*08/03/15 09:38*	*08/17/15 18:54*	*1*
2-Fluorophenol	*91*		*36 - 145*	*08/03/15 09:38*	*08/17/15 18:54*	*1*
Nitrobenzene-d5	*97*		*38 - 141*	*08/03/15 09:38*	*08/17/15 18:54*	*1*
Phenol-d5	*94*		*38 - 149*	*08/03/15 09:38*	*08/17/15 18:54*	*1*
Terphenyl-d14	*126*		*42 - 151*	*08/03/15 09:38*	*08/17/15 18:54*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
4,4'-DDE	ND		2.1	0.15	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
4,4'-DDT	ND		2.1	0.16	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Aldrin	ND		1.1	0.23	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
alpha-BHC	ND		1.1	0.29	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
alpha-Chlordane	ND		1.1	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
beta-BHC	ND		1.1	0.34	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
delta-BHC	ND		1.1	0.16	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Dieldrin	ND		2.1	0.12	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Endosulfan I	ND		1.1	0.11	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Endosulfan II	ND		2.1	0.18	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Endosulfan sulfate	ND		2.1	0.19	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Endrin	ND		2.1	0.17	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Endrin aldehyde	ND		2.1	0.21	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Endrin ketone	ND		2.1	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
gamma-BHC (Lindane)	ND		1.1	0.32	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
gamma-Chlordane	ND		1.1	0.14	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Heptachlor	ND		2.1	0.49	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Heptachlor epoxide	ND		1.1	0.0032	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Methoxychlor	ND		11	0.27	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1
Toxaphene	ND		110	24	ug/Kg	☼	08/03/15 09:26	08/12/15 19:12	1

Client Sample ID: LFB-17 (42-43)

Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6

Matrix: Solid
Percent Solids: 95.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	86		60 - 128	08/03/15 09:26	08/12/15 19:12	1
Tetrachloro-m-xylene	76		35 - 129	08/03/15 09:26	08/12/15 19:12	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1
PCB-1221	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1
PCB-1232	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1
PCB-1242	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1
PCB-1248	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1
PCB-1254	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1
PCB-1260	ND		10	2.3	ug/Kg	☼	08/03/15 10:51	08/03/15 18:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		51.9 - 151	08/03/15 10:51	08/03/15 18:07	1
DCB Decachlorobiphenyl (Surr)	86		73.5 - 164	08/03/15 10:51	08/03/15 18:07	1

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		67	12	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Bolstar	ND		13	4.2	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Chlorpyrifos	ND		20	6.4	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Coumaphos	ND		13	2.8	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Demeton, Total	ND		39	7.5	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Diazinon	ND		22	7.3	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Dichlorvos	ND		23	7.4	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Dimethoate	ND		22	7.1	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Disulfoton	ND		48	7.7	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
EPN	ND		13	3.7	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Famphur	ND		13	3.2	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Fensulfothion	ND		25	8.1	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Mevinphos	ND		15	4.6	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Methyl parathion	ND		20	6.4	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Merphos	ND		30	5.1	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Malathion	ND		15	4.6	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Fenthion	ND		33	8.7	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Ethyl Parathion	ND		18	5.3	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Phorate	ND		20	5.7	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Ronnel	ND		46	15	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Simazine	ND		67	22	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Sulfotepp	ND		20	6.2	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Thionazin	ND		18	5.6	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Tokuthion	ND		20	3.9	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Trichloronate	ND		20	6.2	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Ethoprop	ND		15	4.9	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Propazine	ND		67	8.6	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1
Azinphos-methyl	ND		13	3.5	ug/Kg	☼	08/03/15 17:25	08/09/15 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	70		42 - 132	08/03/15 17:25	08/09/15 05:15	1
Triphenylphosphate	87		47 - 161	08/03/15 17:25	08/09/15 05:15	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	2.4	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
2,4-D	ND		83	15	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
2,4-DB	ND		83	7.7	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
Dalapon	ND		42	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
Dicamba	ND		42	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
Dichlorprop	ND		83	3.3	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
MCPA	ND		8300	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
MCPP	ND		8300	2100	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1
Silvex (2,4,5-TP)	ND		21	1.5	ug/Kg	☼	08/02/15 13:00	08/14/15 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*46*		*31 - 105*	*08/02/15 13:00*	*08/14/15 14:32*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg	☼	08/04/15 09:26	08/04/15 15:05	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg	☼	08/04/15 09:26	08/04/15 15:05	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg	☼	08/04/15 09:26	08/04/15 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*08/04/15 09:26*	*08/04/15 15:05*	*1*
n-Triacontane-d62	*117*		*50 - 150*	*08/04/15 09:26*	*08/04/15 15:05*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.56**		0.18	0.037	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Arsenic	**8.6**		0.44	0.16	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Barium	**73**		0.44	0.069	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Beryllium	**0.46**	**B**	0.18	0.031	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Cadmium	**0.13**	**J**	0.18	0.017	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Chromium	**12**		0.44	0.056	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Copper	**17**		0.35	0.087	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Iron	**24000**		35	9.5	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Lead	**11**		0.44	0.042	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Manganese	**400**		0.88	0.15	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Nickel	**12**		0.44	0.072	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Selenium	**0.86**	**J**	0.88	0.18	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Silver	**0.047**	**J**	0.18	0.011	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Thallium	ND		0.35	0.12	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Zinc	**52**		4.4	0.99	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10
Vanadium	**31**		1.8	0.42	mg/Kg	☼	08/11/15 08:43	08/11/15 15:55	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**3.9**	**J**	28	1.1	ug/Kg	☼	08/06/15 08:18	08/12/15 12:02	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg	☼	08/04/15 14:08	08/06/15 13:52	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-197266/1-A
Matrix: Solid
Analysis Batch: 197353

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 197266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Benzene	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Bromobenzene	ND		10	2.3	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Bromoform	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Bromomethane	ND		1.0	0.21	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Chloroethane	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Chloroform	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Chloromethane	ND		1.0	0.14	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Dibromomethane	ND		1.0	0.17	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Methylene Chloride	2.21	J	15	0.24	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Naphthalene	ND		10	1.8	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-197266/1-A
Matrix: Solid
Analysis Batch: 197353

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 197266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
o-Xylene	ND		2.0	0.26	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Styrene	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Toluene	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Trichloroethene	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		08/07/15 12:13	08/08/15 17:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 136*	*08/07/15 12:13*	*08/08/15 17:13*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*	*08/07/15 12:13*	*08/08/15 17:13*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 132*	*08/07/15 12:13*	*08/08/15 17:13*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*08/07/15 12:13*	*08/08/15 17:13*	*1*
Trifluorotoluene (Surr)	*96*		*65 - 140*	*08/07/15 12:13*	*08/08/15 17:13*	*1*

Lab Sample ID: LCS 580-197266/2-A
Matrix: Solid
Analysis Batch: 197353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	54.3	*	ug/Kg		136	72 - 123
1,1,1-Trichloroethane	40.0	54.0		ug/Kg		135	63 - 135
1,1,2,2-Tetrachloroethane	40.0	57.8	*	ug/Kg		144	73 - 125
1,1,2-Trichloroethane	40.0	56.9	*	ug/Kg		142	77 - 124
1,1-Dichloroethane	40.0	55.0	*	ug/Kg		138	70 - 128
1,1-Dichloroethene	40.0	51.3		ug/Kg		128	70 - 133
1,1-Dichloropropene	40.0	56.2	*	ug/Kg		140	77 - 125
1,2,3-Trichlorobenzene	40.0	54.0	*	ug/Kg		135	61 - 130
1,2,3-Trichloropropane	40.0	51.7	*	ug/Kg		129	77 - 123
1,2,4-Trichlorobenzene	40.0	56.8	*	ug/Kg		142	61 - 130
1,2,4-Trimethylbenzene	40.0	56.0	*	ug/Kg		140	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	56.2	*	ug/Kg		140	53 - 132
1,2-Dichlorobenzene	40.0	55.4	*	ug/Kg		139	79 - 117
1,2-Dichloroethane	40.0	57.6	*	ug/Kg		144	71 - 128
1,2-Dichloropropane	40.0	60.2		ug/Kg		151	76 - 161
1,3,5-Trimethylbenzene	40.0	53.7	*	ug/Kg		134	80 - 125
1,3-Dichlorobenzene	40.0	51.7	*	ug/Kg		129	79 - 119
1,3-Dichloropropane	40.0	57.4	*	ug/Kg		144	77 - 123
1,4-Dichlorobenzene	40.0	51.0	*	ug/Kg		127	79 - 117
2,2-Dichloropropane	40.0	56.0		ug/Kg		140	56 - 144
2-Chlorotoluene	40.0	51.3	*	ug/Kg		128	79 - 122
4-Chlorotoluene	40.0	52.6	*	ug/Kg		131	80 - 122
4-Isopropyltoluene	40.0	51.5	*	ug/Kg		129	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-197266/2-A
Matrix: Solid
Analysis Batch: 197353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	55.5	*	ug/Kg		139	70 - 128
Bromobenzene	40.0	48.6	*	ug/Kg		121	80 - 120
Bromoform	40.0	53.8	*	ug/Kg		135	50 - 124
Bromomethane	49.9	47.7		ug/Kg		95	57 - 148
Carbon tetrachloride	40.0	55.7		ug/Kg		139	59 - 145
Chlorobenzene	40.0	51.5	*	ug/Kg		129	75 - 120
Chlorobromomethane	40.0	57.0	*	ug/Kg		142	78 - 123
Chlorodibromomethane	40.0	57.5	*	ug/Kg		144	42 - 129
Chloroethane	50.0	50.8		ug/Kg		102	48 - 167
Chloroform	40.0	52.3	*	ug/Kg		131	78 - 125
Chloromethane	50.1	54.0		ug/Kg		108	55 - 136
cis-1,2-Dichloroethene	40.0	52.8	*	ug/Kg		132	70 - 130
cis-1,3-Dichloropropene	40.0	59.0	*	ug/Kg		147	69 - 129
Dibromomethane	40.0	61.9	*	ug/Kg		155	78 - 126
Dichlorobromomethane	40.0	59.7	*	ug/Kg		149	58 - 133
Dichlorodifluoromethane	49.9	54.2		ug/Kg		109	38 - 150
Ethylbenzene	40.0	53.5	*	ug/Kg		134	78 - 126
Ethylene Dibromide	40.0	56.4	*	ug/Kg		141	69 - 126
Hexachlorobutadiene	40.0	52.4		ug/Kg		131	68 - 134
Isopropylbenzene	40.0	53.8	*	ug/Kg		135	79 - 127
Methyl tert-butyl ether	40.0	60.8	*	ug/Kg		152	65 - 125
Methylene Chloride	40.0	53.0		ug/Kg		133	57 - 146
m-Xylene & p-Xylene	40.0	54.2	*	ug/Kg		136	78 - 126
Naphthalene	40.0	53.9		ug/Kg		135	14 - 170
n-Butylbenzene	40.0	53.7	*	ug/Kg		134	78 - 128
N-Propylbenzene	40.0	51.1	*	ug/Kg		128	81 - 127
o-Xylene	40.0	53.7	*	ug/Kg		134	77 - 127
sec-Butylbenzene	40.0	53.8	*	ug/Kg		135	78 - 128
Styrene	40.0	54.8	*	ug/Kg		137	79 - 127
tert-Butylbenzene	40.0	54.3		ug/Kg		136	71 - 136
Tetrachloroethene	40.0	49.7		ug/Kg		124	56 - 155
Toluene	40.0	50.2		ug/Kg		125	75 - 126
trans-1,2-Dichloroethene	40.0	53.2	*	ug/Kg		133	76 - 131
trans-1,3-Dichloropropene	40.0	59.6	*	ug/Kg		149	72 - 129
Trichloroethene	40.0	54.5	*	ug/Kg		136	83 - 124
Trichlorofluoromethane	50.1	51.2		ug/Kg		102	47 - 165
Vinyl chloride	50.0	51.5		ug/Kg		103	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*118*		*71 - 136*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*
Dibromofluoromethane (Surr)	*108*		*75 - 132*
Toluene-d8 (Surr)	*94*		*80 - 120*
Trifluorotoluene (Surr)	*90*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-197266/3-A
Matrix: Solid
Analysis Batch: 197353

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 197266

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	58.2	*	ug/Kg		146	72 - 123	7	20
1,1,1-Trichloroethane	40.0	56.9	*	ug/Kg		142	63 - 135	5	20
1,1,2,2-Tetrachloroethane	40.0	59.7	*	ug/Kg		149	73 - 125	3	22
1,1,2-Trichloroethane	40.0	60.3	*	ug/Kg		151	77 - 124	6	18
1,1-Dichloroethane	40.0	58.7	*	ug/Kg		147	70 - 128	7	21
1,1-Dichloroethene	40.0	57.3	*	ug/Kg		143	70 - 133	11	23
1,1-Dichloropropene	40.0	57.9	*	ug/Kg		145	77 - 125	3	16
1,2,3-Trichlorobenzene	40.0	58.7	*	ug/Kg		147	61 - 130	8	23
1,2,3-Trichloropropane	40.0	54.1	*	ug/Kg		135	77 - 123	4	23
1,2,4-Trichlorobenzene	40.0	61.5	*	ug/Kg		154	61 - 130	8	22
1,2,4-Trimethylbenzene	40.0	60.1	*	ug/Kg		150	79 - 124	7	18
1,2-Dibromo-3-Chloropropane	40.0	56.7	*	ug/Kg		142	53 - 132	1	27
1,2-Dichlorobenzene	40.0	59.2	*	ug/Kg		148	79 - 117	7	17
1,2-Dichloroethane	40.0	59.3	*	ug/Kg		148	71 - 128	3	18
1,2-Dichloropropane	40.0	65.7	*	ug/Kg		164	76 - 161	9	15
1,3,5-Trimethylbenzene	40.0	59.4	*	ug/Kg		149	80 - 125	10	18
1,3-Dichlorobenzene	40.0	55.6	*	ug/Kg		139	79 - 119	7	17
1,3-Dichloropropane	40.0	59.6	*	ug/Kg		149	77 - 123	4	19
1,4-Dichlorobenzene	40.0	54.7	*	ug/Kg		137	79 - 117	7	18
2,2-Dichloropropane	40.0	57.1		ug/Kg		143	56 - 144	2	21
2-Chlorotoluene	40.0	58.0	*	ug/Kg		145	79 - 122	12	18
4-Chlorotoluene	40.0	58.2	*	ug/Kg		145	80 - 122	10	18
4-Isopropyltoluene	40.0	55.8	*	ug/Kg		139	78 - 126	8	18
Benzene	40.0	58.0	*	ug/Kg		145	70 - 128	4	19
Bromobenzene	40.0	53.8	*	ug/Kg		134	80 - 120	10	19
Bromoform	40.0	60.1	*	ug/Kg		150	50 - 124	11	25
Bromomethane	49.9	48.5		ug/Kg		97	57 - 148	2	29
Carbon tetrachloride	40.0	56.5		ug/Kg		141	59 - 145	1	19
Chlorobenzene	40.0	55.4	*	ug/Kg		138	75 - 120	7	21
Chlorobromomethane	40.0	60.7	*	ug/Kg		152	78 - 123	6	19
Chlorodibromomethane	40.0	61.1	*	ug/Kg		153	42 - 129	6	23
Chloroethane	50.0	52.9		ug/Kg		106	48 - 167	4	53
Chloroform	40.0	55.2	*	ug/Kg		138	78 - 125	5	17
Chloromethane	50.1	53.7		ug/Kg		107	55 - 136	1	26
cis-1,2-Dichloroethene	40.0	57.0	*	ug/Kg		142	70 - 130	8	19
cis-1,3-Dichloropropene	40.0	62.8	*	ug/Kg		157	69 - 129	6	19
Dibromomethane	40.0	65.1	*	ug/Kg		163	78 - 126	5	18
Dichlorobromomethane	40.0	62.7	*	ug/Kg		157	58 - 133	5	19
Dichlorodifluoromethane	49.9	51.1		ug/Kg		102	38 - 150	6	26
Ethylbenzene	40.0	56.7	*	ug/Kg		142	78 - 126	6	23
Ethylene Dibromide	40.0	59.4	*	ug/Kg		149	69 - 126	5	21
Hexachlorobutadiene	40.0	57.6	*	ug/Kg		144	68 - 134	10	21
Isopropylbenzene	40.0	55.0	*	ug/Kg		138	79 - 127	2	20
Methyl tert-butyl ether	40.0	64.4	*	ug/Kg		161	65 - 125	6	30
Methylene Chloride	40.0	58.1		ug/Kg		145	57 - 146	9	21
m-Xylene & p-Xylene	40.0	57.7	*	ug/Kg		144	78 - 126	6	23
Naphthalene	40.0	57.8		ug/Kg		145	14 - 170	7	50
n-Butylbenzene	40.0	58.4	*	ug/Kg		146	78 - 128	8	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-197266/3-A
Matrix: Solid
Analysis Batch: 197353

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 197266

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	57.2	*	ug/Kg		143	81 - 127	11	20
o-Xylene			40.0	56.3	*	ug/Kg		141	77 - 127	5	22
sec-Butylbenzene			40.0	58.2	*	ug/Kg		146	78 - 128	8	17
Styrene			40.0	57.6	*	ug/Kg		144	79 - 127	5	21
tert-Butylbenzene			40.0	58.5	*	ug/Kg		146	71 - 136	7	27
Tetrachloroethene			40.0	53.8		ug/Kg		134	56 - 155	8	27
Toluene			40.0	52.2	*	ug/Kg		130	75 - 126	4	19
trans-1,2-Dichloroethene			40.0	57.8	*	ug/Kg		145	76 - 131	8	18
trans-1,3-Dichloropropene			40.0	62.8	*	ug/Kg		157	72 - 129	5	20
Trichloroethene			40.0	58.6	*	ug/Kg		146	83 - 124	7	17
Trichlorofluoromethane			50.1	53.2		ug/Kg		106	47 - 165	4	54
Vinyl chloride			50.0	50.5		ug/Kg		101	67 - 131	2	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*71 - 136*
4-Bromofluorobenzene (Surr)	*104*		*70 - 120*
Dibromofluoromethane (Surr)	*107*		*75 - 132*
Toluene-d8 (Surr)	*92*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-196778/1-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196778

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2-Chlorophenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2-Methylphenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2-Nitroaniline	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
2-Nitrophenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
3-Nitroaniline	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-196778/1-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196778

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
4-Chloroaniline	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
4-Nitroaniline	ND		100	20	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
4-Nitrophenol	ND		1000	250	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Acenaphthene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Acenaphthylene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Anthracene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzoic acid	ND		2500	750	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Benzyl alcohol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Butyl benzyl phthalate	ND		200	50	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Carbazole	ND		100	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Chrysene	ND		25	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Dibenzofuran	ND		100	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Diethyl phthalate	ND		200	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Fluoranthene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Fluorene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Hexachlorobutadiene	ND		50	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Hexachloroethane	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Isophorone	ND		100	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Naphthalene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Nitrobenzene	ND		100	34	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Pentachlorophenol	ND		200	20	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Phenanthrene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Phenol	ND		100	15	ug/Kg		08/03/15 09:38	08/17/15 15:29	1
Pyrene	ND		20	5.0	ug/Kg		08/03/15 09:38	08/17/15 15:29	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-196778/1-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196778

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	48		28 - 143	08/03/15 09:38	08/17/15 15:29	1
2-Fluorobiphenyl	92		42 - 140	08/03/15 09:38	08/17/15 15:29	1
2-Fluorophenol	84		36 - 145	08/03/15 09:38	08/17/15 15:29	1
Nitrobenzene-d5	100		38 - 141	08/03/15 09:38	08/17/15 15:29	1
Phenol-d5	89		38 - 149	08/03/15 09:38	08/17/15 15:29	1
Terphenyl-d14	130		42 - 151	08/03/15 09:38	08/17/15 15:29	1

Lab Sample ID: LCS 580-196778/2-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	870		ug/Kg		87	66 - 115
1,2-Dichlorobenzene	1000	921		ug/Kg		92	64 - 112
1,3-Dichlorobenzene	1000	874		ug/Kg		87	64 - 111
1,4-Dichlorobenzene	1000	879		ug/Kg		88	65 - 110
1-Methylnaphthalene	1000	920		ug/Kg		92	62 - 118
2,4,5-Trichlorophenol	1000	875		ug/Kg		87	57 - 133
2,4,6-Trichlorophenol	1000	852		ug/Kg		85	62 - 133
2,4-Dichlorophenol	1000	987		ug/Kg		99	68 - 125
2,4-Dimethylphenol	1000	682		ug/Kg		68	54 - 139
2,4-Dinitrophenol	2000	1020		ug/Kg		51	20 - 141
2,4-Dinitrotoluene	1000	935		ug/Kg		93	68 - 121
2,6-Dinitrotoluene	1000	885		ug/Kg		89	66 - 123
2-Chloronaphthalene	1000	906		ug/Kg		91	68 - 112
2-Chlorophenol	1000	956		ug/Kg		96	68 - 117
2-Methylnaphthalene	1000	918		ug/Kg		92	64 - 119
2-Methylphenol	1000	948		ug/Kg		95	71 - 116
2-Nitroaniline	1000	879		ug/Kg		88	64 - 112
2-Nitrophenol	1000	908		ug/Kg		91	67 - 127
3 & 4 Methylphenol	1000	982		ug/Kg		98	70 - 116
3,3'-Dichlorobenzidine	2000	1330		ug/Kg		66	20 - 103
3-Nitroaniline	1000	535		ug/Kg		53	27 - 103
4,6-Dinitro-2-methylphenol	2000	1430		ug/Kg		72	48 - 130
4-Bromophenyl phenyl ether	1000	948		ug/Kg		95	68 - 122
4-Chloro-3-methylphenol	1000	967		ug/Kg		97	69 - 121
4-Chloroaniline	1000	156	*	ug/Kg		16	20 - 103
4-Chlorophenyl phenyl ether	1000	875		ug/Kg		87	75 - 108
4-Nitroaniline	1000	862		ug/Kg		86	58 - 108
4-Nitrophenol	2000	1800		ug/Kg		90	20 - 165
Acenaphthene	1000	917		ug/Kg		92	68 - 116
Acenaphthylene	1000	860		ug/Kg		86	68 - 120
Anthracene	1000	975		ug/Kg		97	73 - 116
Benzo[a]anthracene	1000	1060		ug/Kg		106	76 - 119
Benzo[a]pyrene	1000	911		ug/Kg		91	72 - 117
Benzo[b]fluoranthene	1000	969		ug/Kg		97	63 - 132
Benzo[g,h,i]perylene	1000	996		ug/Kg		100	55 - 139
Benzo[k]fluoranthene	1000	841		ug/Kg		84	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-196778/2-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	ND		ug/Kg		32	29 - 158
Benzyl alcohol	1000	962		ug/Kg		96	55 - 123
bis (2-chloroisopropyl) ether	1000	892		ug/Kg		89	41 - 126
Bis(2-chloroethoxy)methane	1000	959		ug/Kg		96	69 - 107
Bis(2-chloroethyl)ether	1000	870		ug/Kg		87	62 - 110
Bis(2-ethylhexyl) phthalate	1000	1010		ug/Kg		101	62 - 144
Butyl benzyl phthalate	1000	1020		ug/Kg		102	69 - 142
Carbazole	1000	996		ug/Kg		100	76 - 135
Chrysene	1000	881		ug/Kg		88	75 - 114
Dibenz(a,h)anthracene	1000	1090		ug/Kg		109	56 - 134
Dibenzofuran	1000	878		ug/Kg		88	72 - 109
Diethyl phthalate	1000	912		ug/Kg		91	73 - 116
Dimethyl phthalate	1000	940		ug/Kg		94	78 - 117
Di-n-butyl phthalate	1000	1070		ug/Kg		107	66 - 140
Di-n-octyl phthalate	1000	1080		ug/Kg		108	65 - 141
Fluoranthene	1000	1050		ug/Kg		105	73 - 125
Fluorene	1000	910		ug/Kg		91	70 - 121
Hexachlorobenzene	1000	958		ug/Kg		96	66 - 117
Hexachlorobutadiene	1000	882		ug/Kg		88	65 - 116
Hexachlorocyclopentadiene	1000	684		ug/Kg		68	46 - 131
Hexachloroethane	1000	867		ug/Kg		87	62 - 120
Indeno[1,2,3-cd]pyrene	1000	1130		ug/Kg		113	56 - 127
Isophorone	1000	955		ug/Kg		96	67 - 119
Naphthalene	1000	923		ug/Kg		92	62 - 112
Nitrobenzene	1000	930		ug/Kg		93	64 - 118
N-Nitrosodi-n-propylamine	1000	945		ug/Kg		94	62 - 116
N-Nitrosodiphenylamine	2010	1830		ug/Kg		91	73 - 115
Pentachlorophenol	2000	1490		ug/Kg		75	45 - 117
Phenanthrene	1000	882		ug/Kg		88	73 - 106
Phenol	1000	934		ug/Kg		93	63 - 111
Pyrene	1000	1000		ug/Kg		100	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*81*		*28 - 143*
2-Fluorobiphenyl	*86*		*42 - 140*
2-Fluorophenol	*81*		*36 - 145*
Nitrobenzene-d5	*90*		*38 - 141*
Phenol-d5	*86*		*38 - 149*
Terphenyl-d14	*126*		*42 - 151*

Lab Sample ID: LCSD 580-196778/3-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	866		ug/Kg		87	66 - 115	1	28
1,2-Dichlorobenzene	1000	949		ug/Kg		95	64 - 112	3	30
1,3-Dichlorobenzene	1000	897		ug/Kg		90	64 - 111	3	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-196778/3-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	1000	937		ug/Kg		94	65 - 110	6	30
1-Methylnaphthalene	1000	929		ug/Kg		93	62 - 118	1	30
2,4,5-Trichlorophenol	1000	857		ug/Kg		86	57 - 133	2	30
2,4,6-Trichlorophenol	1000	869		ug/Kg		87	62 - 133	2	30
2,4-Dichlorophenol	1000	1000		ug/Kg		100	68 - 125	1	30
2,4-Dimethylphenol	1000	755		ug/Kg		75	54 - 139	10	30
2,4-Dinitrophenol	2000	722	J	ug/Kg		36	20 - 141	34	36
2,4-Dinitrotoluene	1000	908		ug/Kg		91	68 - 121	3	30
2,6-Dinitrotoluene	1000	890		ug/Kg		89	66 - 123	1	30
2-Chloronaphthalene	1000	894		ug/Kg		89	68 - 112	1	25
2-Chlorophenol	1000	975		ug/Kg		98	68 - 117	2	27
2-Methylnaphthalene	1000	919		ug/Kg		92	64 - 119	0	27
2-Methylphenol	1000	1020		ug/Kg		102	71 - 116	7	25
2-Nitroaniline	1000	904		ug/Kg		90	64 - 112	3	22
2-Nitrophenol	1000	917		ug/Kg		92	67 - 127	1	30
3 & 4 Methylphenol	1000	1030		ug/Kg		103	70 - 116	5	27
3,3'-Dichlorobenzidine	2000	1360		ug/Kg		68	20 - 103	3	60
3-Nitroaniline	1000	557		ug/Kg		56	27 - 103	4	33
4,6-Dinitro-2-methylphenol	2000	1090	*	ug/Kg		55	48 - 130	27	22
4-Bromophenyl phenyl ether	1000	952		ug/Kg		95	68 - 122	0	30
4-Chloro-3-methylphenol	1000	988		ug/Kg		99	69 - 121	2	27
4-Chloroaniline	1000	196		ug/Kg		20	20 - 103	23	60
4-Chlorophenyl phenyl ether	1000	895		ug/Kg		89	75 - 108	2	30
4-Nitroaniline	1000	880		ug/Kg		88	58 - 108	2	32
4-Nitrophenol	2000	1790		ug/Kg		90	20 - 165	0	30
Acenaphthene	1000	917		ug/Kg		92	68 - 116	0	27
Acenaphthylene	1000	883		ug/Kg		88	68 - 120	3	28
Anthracene	1000	956		ug/Kg		96	73 - 116	2	27
Benzo[a]anthracene	1000	1090		ug/Kg		109	76 - 119	3	27
Benzo[a]pyrene	1000	943		ug/Kg		94	72 - 117	3	30
Benzo[b]fluoranthene	1000	1020		ug/Kg		102	63 - 132	5	30
Benzo[g,h,i]perylene	1000	1020		ug/Kg		102	55 - 139	2	28
Benzo[k]fluoranthene	1000	890		ug/Kg		89	63 - 119	6	30
Benzoic acid	2010	ND	*	ug/Kg		22	29 - 158	37	28
Benzyl alcohol	1000	1030		ug/Kg		103	55 - 123	7	60
bis (2-chloroisopropyl) ether	1000	936		ug/Kg		94	41 - 126	5	57
Bis(2-chloroethoxy)methane	1000	963		ug/Kg		96	69 - 107	0	30
Bis(2-chloroethyl)ether	1000	903		ug/Kg		90	62 - 110	4	22
Bis(2-ethylhexyl) phthalate	1000	1090		ug/Kg		109	62 - 144	7	30
Butyl benzyl phthalate	1000	1060		ug/Kg		106	69 - 142	4	30
Carbazole	1000	980		ug/Kg		98	76 - 135	2	30
Chrysene	1000	892		ug/Kg		89	75 - 114	1	26
Dibenz(a,h)anthracene	1000	1110		ug/Kg		111	56 - 134	1	30
Dibenzofuran	1000	894		ug/Kg		89	72 - 109	2	30
Diethyl phthalate	1000	915		ug/Kg		91	73 - 116	0	26
Dimethyl phthalate	1000	957		ug/Kg		96	78 - 117	2	30
Di-n-butyl phthalate	1000	1050		ug/Kg		105	66 - 140	2	30
Di-n-octyl phthalate	1000	1120		ug/Kg		112	65 - 141	3	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-196778/3-A
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196778

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	1050		ug/Kg		105	73 - 125	0	30
Fluorene			1000	916		ug/Kg		92	70 - 121	1	30
Hexachlorobenzene			1000	967		ug/Kg		97	66 - 117	1	30
Hexachlorobutadiene			1000	872		ug/Kg		87	65 - 116	1	30
Hexachlorocyclopentadiene			1000	646		ug/Kg		65	46 - 131	6	29
Hexachloroethane			1000	875		ug/Kg		87	62 - 120	1	30
Indeno[1,2,3-cd]pyrene			1000	1180		ug/Kg		118	56 - 127	4	29
Isophorone			1000	947		ug/Kg		95	67 - 119	1	30
Naphthalene			1000	934		ug/Kg		93	62 - 112	1	26
Nitrobenzene			1000	952		ug/Kg		95	64 - 118	2	30
N-Nitrosodi-n-propylamine			1000	1010		ug/Kg		101	62 - 116	7	28
N-Nitrosodiphenylamine			2010	1820		ug/Kg		91	73 - 115	0	30
Pentachlorophenol			2000	1360		ug/Kg		68	45 - 117	9	23
Phenanthrene			1000	872		ug/Kg		87	73 - 106	1	28
Phenol			1000	970		ug/Kg		97	63 - 111	4	26
Pyrene			1000	1000		ug/Kg		100	70 - 120	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*81*		*28 - 143*
2-Fluorobiphenyl	*86*		*42 - 140*
2-Fluorophenol	*86*		*36 - 145*
Nitrobenzene-d5	*94*		*38 - 141*
Phenol-d5	*90*		*38 - 149*
Terphenyl-d14	*124*		*42 - 151*

Lab Sample ID: 590-1569-6 MS
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: LFB-17 (42-43)
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		1050	941		ug/Kg	☼	90	66 - 115
1,2-Dichlorobenzene	ND		1050	1020		ug/Kg	☼	97	64 - 112
1,3-Dichlorobenzene	ND		1050	978		ug/Kg	☼	93	64 - 111
1,4-Dichlorobenzene	ND		1050	963		ug/Kg	☼	92	65 - 110
1-Methylnaphthalene	ND		1050	999		ug/Kg	☼	95	62 - 118
2,4,5-Trichlorophenol	ND		1050	960		ug/Kg	☼	92	57 - 133
2,4,6-Trichlorophenol	ND		1050	973		ug/Kg	☼	93	62 - 133
2,4-Dichlorophenol	ND		1050	1070		ug/Kg	☼	102	68 - 125
2,4-Dimethylphenol	ND		1050	860		ug/Kg	☼	82	54 - 139
2,4-Dinitrophenol	ND		2100	729	J	ug/Kg	☼	35	20 - 141
2,4-Dinitrotoluene	ND		1050	971		ug/Kg	☼	93	68 - 121
2,6-Dinitrotoluene	ND		1050	949		ug/Kg	☼	91	66 - 123
2-Chloronaphthalene	ND		1050	962		ug/Kg	☼	92	68 - 112
2-Chlorophenol	ND		1050	1100		ug/Kg	☼	105	68 - 117
2-Methylnaphthalene	ND		1050	985		ug/Kg	☼	94	64 - 119
2-Methylphenol	ND		1050	1110		ug/Kg	☼	106	71 - 116
2-Nitroaniline	ND		1050	982		ug/Kg	☼	94	64 - 112
2-Nitrophenol	ND		1050	961		ug/Kg	☼	92	67 - 127

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1569-6 MS
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: LFB-17 (42-43)
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	ND		1050	1150		ug/Kg	☼	109	70 - 116
3,3'-Dichlorobenzidine	ND		2100	1560		ug/Kg	☼	74	20 - 103
3-Nitroaniline	ND		1050	520		ug/Kg	☼	50	27 - 103
4,6-Dinitro-2-methylphenol	ND	*	2100	1050		ug/Kg	☼	50	48 - 130
4-Bromophenyl phenyl ether	ND		1050	995		ug/Kg	☼	95	68 - 122
4-Chloro-3-methylphenol	ND		1050	1110		ug/Kg	☼	106	69 - 121
4-Chloroaniline	ND	F1 *	1050	185	F1	ug/Kg	☼	18	20 - 103
4-Chlorophenyl phenyl ether	ND		1050	964		ug/Kg	☼	92	75 - 108
4-Nitroaniline	ND		1050	865		ug/Kg	☼	82	58 - 108
4-Nitrophenol	ND		2100	1990		ug/Kg	☼	95	20 - 165
Acenaphthene	ND		1050	978		ug/Kg	☼	93	68 - 116
Acenaphthylene	ND		1050	936		ug/Kg	☼	89	68 - 120
Anthracene	ND		1050	1010		ug/Kg	☼	97	73 - 116
Benzo[a]anthracene	13	J	1050	1140		ug/Kg	☼	107	76 - 119
Benzo[a]pyrene	31		1050	996		ug/Kg	☼	92	72 - 117
Benzo[b]fluoranthene	27		1050	1080		ug/Kg	☼	101	63 - 132
Benzo[g,h,i]perylene	19	J	1050	837		ug/Kg	☼	78	55 - 139
Benzo[k]fluoranthene	12	J	1050	921		ug/Kg	☼	87	63 - 119
Benzoic acid	ND	*	2100	1270	J	ug/Kg	☼	60	29 - 158
Benzyl alcohol	ND		1050	1130		ug/Kg	☼	108	55 - 123
bis (2-chloroisopropyl) ether	ND		1050	1010		ug/Kg	☼	96	41 - 126
Bis(2-chloroethoxy)methane	ND		1050	1030		ug/Kg	☼	99	69 - 107
Bis(2-chloroethyl)ether	ND		1050	980		ug/Kg	☼	93	62 - 110
Bis(2-ethylhexyl) phthalate	120	J F1 F2	1050	2590	F1	ug/Kg	☼	236	62 - 144
Butyl benzyl phthalate	ND		1050	1140		ug/Kg	☼	108	69 - 142
Carbazole	ND		1050	1070		ug/Kg	☼	102	76 - 135
Chrysene	10	J	1050	956		ug/Kg	☼	90	75 - 114
Dibenz(a,h)anthracene	ND		1050	982		ug/Kg	☼	94	56 - 134
Dibenzofuran	ND		1050	976		ug/Kg	☼	93	72 - 109
Diethyl phthalate	26	J	1050	990		ug/Kg	☼	92	73 - 116
Dimethyl phthalate	ND		1050	1030		ug/Kg	☼	99	78 - 117
Di-n-butyl phthalate	ND		1050	1090		ug/Kg	☼	104	66 - 140
Di-n-octyl phthalate	ND		1050	1220		ug/Kg	☼	116	65 - 141
Fluoranthene	15	J	1050	1140		ug/Kg	☼	108	73 - 125
Fluorene	ND		1050	1000		ug/Kg	☼	96	70 - 121
Hexachlorobenzene	ND		1050	987		ug/Kg	☼	94	66 - 117
Hexachlorobutadiene	ND		1050	974		ug/Kg	☼	93	65 - 116
Hexachlorocyclopentadiene	ND		1050	576		ug/Kg	☼	55	46 - 131
Hexachloroethane	ND		1050	939		ug/Kg	☼	90	62 - 120
Indeno[1,2,3-cd]pyrene	21	J	1050	1050		ug/Kg	☼	98	56 - 127
Isophorone	ND		1050	1030		ug/Kg	☼	98	67 - 119
Naphthalene	ND		1050	1000		ug/Kg	☼	95	62 - 112
Nitrobenzene	ND		1050	1020		ug/Kg	☼	97	64 - 118
N-Nitrosodi-n-propylamine	ND		1050	1100		ug/Kg	☼	105	62 - 116
N-Nitrosodiphenylamine	ND		2100	1920		ug/Kg	☼	91	73 - 115
Pentachlorophenol	ND		2100	975		ug/Kg	☼	47	45 - 117
Phenanthrene	9.8	J	1050	937		ug/Kg	☼	88	73 - 106
Phenol	ND		1050	1060		ug/Kg	☼	101	63 - 111

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1569-6 MS
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: LFB-17 (42-43)
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	16	J	1050	1070		ug/Kg	☼	100	70 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*86*		*28 - 143*
2-Fluorobiphenyl	*89*		*42 - 140*
2-Fluorophenol	*89*		*36 - 145*
Nitrobenzene-d5	*95*		*38 - 141*
Phenol-d5	*92*		*38 - 149*
Terphenyl-d14	*122*		*42 - 151*

Lab Sample ID: 590-1569-6 MSD
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: LFB-17 (42-43)
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		1020	944		ug/Kg	☼	93	66 - 115	0	28
1,2-Dichlorobenzene	ND		1020	981		ug/Kg	☼	96	64 - 112	4	60
1,3-Dichlorobenzene	ND		1020	920		ug/Kg	☼	90	64 - 111	6	60
1,4-Dichlorobenzene	ND		1020	945		ug/Kg	☼	93	65 - 110	2	32
1-Methylnaphthalene	ND		1020	992		ug/Kg	☼	97	62 - 118	1	30
2,4,5-Trichlorophenol	ND		1020	939		ug/Kg	☼	92	57 - 133	2	60
2,4,6-Trichlorophenol	ND		1020	941		ug/Kg	☼	92	62 - 133	3	60
2,4-Dichlorophenol	ND		1020	1060		ug/Kg	☼	104	68 - 125	1	60
2,4-Dimethylphenol	ND		1020	831		ug/Kg	☼	82	54 - 139	3	60
2,4-Dinitrophenol	ND		2040	706	J	ug/Kg	☼	35	20 - 141	3	60
2,4-Dinitrotoluene	ND		1020	981		ug/Kg	☼	96	68 - 121	1	31
2,6-Dinitrotoluene	ND		1020	946		ug/Kg	☼	93	66 - 123	0	60
2-Chloronaphthalene	ND		1020	957		ug/Kg	☼	94	68 - 112	1	25
2-Chlorophenol	ND		1020	1000		ug/Kg	☼	98	68 - 117	9	27
2-Methylnaphthalene	ND		1020	967		ug/Kg	☼	95	64 - 119	2	27
2-Methylphenol	ND		1020	1030		ug/Kg	☼	101	71 - 116	7	25
2-Nitroaniline	ND		1020	999		ug/Kg	☼	98	64 - 112	2	60
2-Nitrophenol	ND		1020	984		ug/Kg	☼	97	67 - 127	2	60
3 & 4 Methylphenol	ND		1020	1040		ug/Kg	☼	102	70 - 116	10	27
3,3'-Dichlorobenzidine	ND		2040	1550		ug/Kg	☼	76	20 - 103	1	60
3-Nitroaniline	ND		1020	566		ug/Kg	☼	56	27 - 103	8	60
4,6-Dinitro-2-methylphenol	ND	*	2040	998	J	ug/Kg	☼	49	48 - 130	5	60
4-Bromophenyl phenyl ether	ND		1020	1040		ug/Kg	☼	102	68 - 122	5	60
4-Chloro-3-methylphenol	ND		1020	1060		ug/Kg	☼	104	69 - 121	5	27
4-Chloroaniline	ND	F1 *	1020	220		ug/Kg	☼	22	20 - 103	18	60
4-Chlorophenyl phenyl ether	ND		1020	951		ug/Kg	☼	93	75 - 108	1	60
4-Nitroaniline	ND		1020	859		ug/Kg	☼	84	58 - 108	1	60
4-Nitrophenol	ND		2040	1950		ug/Kg	☼	96	20 - 165	2	33
Acenaphthene	ND		1020	966		ug/Kg	☼	95	68 - 116	1	27
Acenaphthylene	ND		1020	949		ug/Kg	☼	93	68 - 120	1	28
Anthracene	ND		1020	1020		ug/Kg	☼	100	73 - 116	0	27
Benzo[a]anthracene	13	J	1020	1180		ug/Kg	☼	114	76 - 119	4	27
Benzo[a]pyrene	31		1020	988		ug/Kg	☼	94	72 - 117	1	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 590-1569-6 MSD
Matrix: Solid
Analysis Batch: 198114

Client Sample ID: LFB-17 (42-43)
Prep Type: Total/NA
Prep Batch: 196778

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	27		1020	1020		ug/Kg	☼	98	63 - 132	6	31
Benzo[g,h,i]perylene	19	J	1020	818		ug/Kg	☼	78	55 - 139	2	28
Benzo[k]fluoranthene	12	J	1020	928		ug/Kg	☼	90	63 - 119	1	31
Benzoic acid	ND	*	2040	1080	J	ug/Kg	☼	53	29 - 158	16	60
Benzyl alcohol	ND		1020	1070		ug/Kg	☼	106	55 - 123	5	60
bis (2-chloroisopropyl) ether	ND		1020	942		ug/Kg	☼	93	41 - 126	7	60
Bis(2-chloroethoxy)methane	ND		1020	1010		ug/Kg	☼	99	69 - 107	2	60
Bis(2-chloroethyl)ether	ND		1020	923		ug/Kg	☼	91	62 - 110	6	60
Bis(2-ethylhexyl) phthalate	120	J F1 F2	1020	1260	F2	ug/Kg	☼	112	62 - 144	69	60
Butyl benzyl phthalate	ND		1020	1100		ug/Kg	☼	108	69 - 142	3	60
Carbazole	ND		1020	1050		ug/Kg	☼	103	76 - 135	2	60
Chrysene	10	J	1020	959		ug/Kg	☼	93	75 - 114	0	26
Dibenz(a,h)anthracene	ND		1020	921		ug/Kg	☼	90	56 - 134	6	30
Dibenzofuran	ND		1020	951		ug/Kg	☼	93	72 - 109	3	60
Diethyl phthalate	26	J	1020	981		ug/Kg	☼	94	73 - 116	1	26
Dimethyl phthalate	ND		1020	1010		ug/Kg	☼	100	78 - 117	2	60
Di-n-butyl phthalate	ND		1020	1080		ug/Kg	☼	106	66 - 140	1	60
Di-n-octyl phthalate	ND		1020	1190		ug/Kg	☼	117	65 - 141	2	31
Fluoranthene	15	J	1020	1120		ug/Kg	☼	108	73 - 125	2	36
Fluorene	ND		1020	986		ug/Kg	☼	97	70 - 121	1	31
Hexachlorobenzene	ND		1020	1010		ug/Kg	☼	99	66 - 117	3	60
Hexachlorobutadiene	ND		1020	910		ug/Kg	☼	89	65 - 116	7	60
Hexachlorocyclopentadiene	ND		1020	596		ug/Kg	☼	59	46 - 131	3	60
Hexachloroethane	ND		1020	891		ug/Kg	☼	88	62 - 120	5	60
Indeno[1,2,3-cd]pyrene	21	J	1020	999		ug/Kg	☼	96	56 - 127	5	29
Isophorone	ND		1020	1020		ug/Kg	☼	100	67 - 119	1	60
Naphthalene	ND		1020	987		ug/Kg	☼	97	62 - 112	1	26
Nitrobenzene	ND		1020	990		ug/Kg	☼	97	64 - 118	3	60
N-Nitrosodi-n-propylamine	ND		1020	977		ug/Kg	☼	96	62 - 116	12	28
N-Nitrosodiphenylamine	ND		2040	1930		ug/Kg	☼	94	73 - 115	0	60
Pentachlorophenol	ND		2040	1210		ug/Kg	☼	59	45 - 117	21	68
Phenanthrene	9.8	J	1020	928		ug/Kg	☼	90	73 - 106	1	28
Phenol	ND		1020	1000		ug/Kg	☼	98	63 - 111	6	26
Pyrene	16	J	1020	1070		ug/Kg	☼	103	70 - 120	0	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*88*		*28 - 143*
2-Fluorobiphenyl	*92*		*42 - 140*
2-Fluorophenol	*86*		*36 - 145*
Nitrobenzene-d5	*98*		*38 - 141*
Phenol-d5	*88*		*38 - 149*
Terphenyl-d14	*127*		*42 - 151*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-196777/1-A
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
4,4'-DDE	ND		2.0	0.14	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
4,4'-DDT	ND		2.0	0.15	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Aldrin	ND		1.0	0.22	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
alpha-BHC	ND		1.0	0.28	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
beta-BHC	ND		1.0	0.32	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
delta-BHC	ND		1.0	0.15	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Dieldrin	ND		2.0	0.12	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Endosulfan I	ND		1.0	0.10	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Endosulfan II	ND		2.0	0.17	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Endrin	ND		2.0	0.16	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Endrin ketone	ND		2.0	0.26	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
gamma-Chlordane	ND		1.0	0.13	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Heptachlor	ND		2.0	0.46	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Methoxychlor	ND		10	0.26	ug/Kg		08/03/15 09:26	08/12/15 15:27	1
Toxaphene	ND		100	23	ug/Kg		08/03/15 09:26	08/12/15 15:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*76*		*60 - 128*	*08/03/15 09:26*	*08/12/15 15:27*	*1*
Tetrachloro-m-xylene	*69*		*35 - 129*	*08/03/15 09:26*	*08/12/15 15:27*	*1*

Lab Sample ID: LCS 580-196777/2-A
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	20.0	13.8		ug/Kg		69	48 - 136
4,4'-DDE	20.0	14.1		ug/Kg		71	50 - 138
4,4'-DDT	20.0	14.3		ug/Kg		72	53 - 132
Aldrin	20.0	15.2		ug/Kg		76	59 - 127
alpha-BHC	20.0	13.4		ug/Kg		67	48 - 132
alpha-Chlordane	20.0	14.3		ug/Kg		71	52 - 137
beta-BHC	20.0	12.1		ug/Kg		61	45 - 122
delta-BHC	20.0	13.2		ug/Kg		66	27 - 124
Dieldrin	20.0	14.0		ug/Kg		70	53 - 145
Endosulfan I	20.0	14.4		ug/Kg		72	57 - 140
Endosulfan II	20.0	14.5		ug/Kg		73	58 - 144
Endosulfan sulfate	20.0	13.8		ug/Kg		69	55 - 125
Endrin	20.0	14.9		ug/Kg		75	51 - 143
Endrin aldehyde	20.0	13.5		ug/Kg		68	45 - 130
Endrin ketone	20.0	14.6		ug/Kg		73	53 - 139
gamma-BHC (Lindane)	20.0	13.9		ug/Kg		69	47 - 127
gamma-Chlordane	20.0	14.2		ug/Kg		71	52 - 137

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-196777/2-A
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196777

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Heptachlor			20.0	13.5		ug/Kg		67	43 - 141		
Heptachlor epoxide			20.0	13.7		ug/Kg		68	47 - 143		
Methoxychlor			20.0	15.8		ug/Kg		79	56 - 137		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*89*		*60 - 128*
Tetrachloro-m-xylene	*69*		*35 - 129*

Lab Sample ID: LCSD 580-196777/3-A
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196777

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			20.0	12.1		ug/Kg		61	48 - 136	13	18
4,4'-DDE			20.0	12.3		ug/Kg		62	50 - 138	14	17
4,4'-DDT			20.0	12.9		ug/Kg		64	53 - 132	10	20
Aldrin			20.0	13.3		ug/Kg		66	59 - 127	13	19
alpha-BHC			20.0	11.7		ug/Kg		59	48 - 132	13	17
alpha-Chlordane			20.0	12.6		ug/Kg		63	52 - 137	13	17
beta-BHC			20.0	10.9		ug/Kg		55	45 - 122	11	18
delta-BHC			20.0	11.7		ug/Kg		58	27 - 124	12	19
Dieldrin			20.0	11.9		ug/Kg		60	53 - 145	16	18
Endosulfan I			20.0	12.8		ug/Kg		64	57 - 140	12	19
Endosulfan II			20.0	12.7		ug/Kg		63	58 - 144	14	19
Endosulfan sulfate			20.0	12.3		ug/Kg		62	55 - 125	12	18
Endrin			20.0	13.1		ug/Kg		65	51 - 143	13	18
Endrin aldehyde			20.0	11.5		ug/Kg		57	45 - 130	17	21
Endrin ketone			20.0	13.3		ug/Kg		66	53 - 139	9	17
gamma-BHC (Lindane)			20.0	12.1		ug/Kg		61	47 - 127	13	17
gamma-Chlordane			20.0	12.6		ug/Kg		63	52 - 137	12	17
Heptachlor			20.0	12.0		ug/Kg		60	43 - 141	12	18
Heptachlor epoxide			20.0	12.1		ug/Kg		60	47 - 143	12	17
Methoxychlor			20.0	14.2		ug/Kg		71	56 - 137	10	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*76*		*60 - 128*
Tetrachloro-m-xylene	*59*		*35 - 129*

Lab Sample ID: 590-1569-1 MS
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196777

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		21.0	12.9		ug/Kg	☼	62	48 - 136		
4,4'-DDE	ND		21.0	13.6		ug/Kg	☼	65	50 - 138		
4,4'-DDT	ND		21.0	13.7		ug/Kg	☼	66	53 - 132		
Aldrin	ND		21.0	15.4		ug/Kg	☼	73	59 - 127		
alpha-BHC	ND		21.0	17.0		ug/Kg	☼	81	48 - 132		

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 590-1569-1 MS
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196777

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	ND		21.0	14.0		ug/Kg	☼	67	52 - 137
beta-BHC	ND		21.0	13.1		ug/Kg	☼	63	45 - 122
delta-BHC	ND		21.0	12.8		ug/Kg	☼	61	27 - 124
Dieldrin	ND		21.0	13.5		ug/Kg	☼	64	53 - 145
Endosulfan I	ND		21.0	12.4		ug/Kg	☼	59	57 - 140
Endosulfan II	ND	F1	21.0	11.4	F1	ug/Kg	☼	54	58 - 144
Endosulfan sulfate	ND	F1	21.0	11.3	F1	ug/Kg	☼	54	55 - 125
Endrin	ND		21.0	14.2		ug/Kg	☼	68	51 - 143
Endrin aldehyde	2.0	J F1	21.0	9.91	F1	ug/Kg	☼	38	45 - 130
Endrin ketone	ND		21.0	12.0		ug/Kg	☼	57	53 - 139
gamma-BHC (Lindane)	ND		21.0	14.0		ug/Kg	☼	67	47 - 127
gamma-Chlordane	ND		21.0	12.3		ug/Kg	☼	59	52 - 137
Heptachlor	ND		21.0	14.2		ug/Kg	☼	68	43 - 141
Heptachlor epoxide	ND		21.0	13.2		ug/Kg	☼	63	47 - 143
Methoxychlor	ND		21.0	14.8		ug/Kg	☼	71	56 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*80*		*60 - 128*
Tetrachloro-m-xylene	*67*		*35 - 129*

Lab Sample ID: 590-1569-1 MSD
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196777

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		20.2	12.6		ug/Kg	☼	62	48 - 136	3	18
4,4'-DDE	ND		20.2	13.2		ug/Kg	☼	65	50 - 138	3	17
4,4'-DDT	ND		20.2	13.3		ug/Kg	☼	66	53 - 132	3	20
Aldrin	ND		20.2	14.3		ug/Kg	☼	71	59 - 127	7	19
alpha-BHC	ND		20.2	16.2		ug/Kg	☼	80	48 - 132	4	17
alpha-Chlordane	ND		20.2	13.3		ug/Kg	☼	66	52 - 137	5	17
beta-BHC	ND		20.2	13.8		ug/Kg	☼	68	45 - 122	5	18
delta-BHC	ND		20.2	12.6		ug/Kg	☼	62	27 - 124	2	19
Dieldrin	ND		20.2	13.2		ug/Kg	☼	65	53 - 145	2	18
Endosulfan I	ND		20.2	12.4		ug/Kg	☼	61	57 - 140	0	19
Endosulfan II	ND	F1	20.2	10.8	F1	ug/Kg	☼	53	58 - 144	5	19
Endosulfan sulfate	ND	F1	20.2	11.1		ug/Kg	☼	55	55 - 125	1	18
Endrin	ND		20.2	13.8		ug/Kg	☼	68	51 - 143	3	18
Endrin aldehyde	2.0	J F1	20.2	9.94	F1	ug/Kg	☼	39	45 - 130	0	21
Endrin ketone	ND		20.2	11.7		ug/Kg	☼	58	53 - 139	3	17
gamma-BHC (Lindane)	ND		20.2	13.5		ug/Kg	☼	67	47 - 127	3	17
gamma-Chlordane	ND		20.2	12.9		ug/Kg	☼	64	52 - 137	5	17
Heptachlor	ND		20.2	14.0		ug/Kg	☼	69	43 - 141	2	18
Heptachlor epoxide	ND		20.2	12.9		ug/Kg	☼	64	47 - 143	2	17
Methoxychlor	ND		20.2	14.1		ug/Kg	☼	70	56 - 137	5	17

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 590-1569-1 MSD
Matrix: Solid
Analysis Batch: 197700

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196777

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	72		60 - 128
Tetrachloro-m-xylene	65		35 - 129

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-2817/1-A
Matrix: Solid
Analysis Batch: 2815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1
PCB-1221	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1
PCB-1232	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1
PCB-1242	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1
PCB-1248	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1
PCB-1254	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1
PCB-1260	ND		10	2.2	ug/Kg		08/03/15 10:51	08/03/15 14:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		51.9 - 151	08/03/15 10:51	08/03/15 14:57	1
DCB Decachlorobiphenyl (Surr)	112		73.5 - 164	08/03/15 10:51	08/03/15 14:57	1

Lab Sample ID: LCS 590-2817/2-A
Matrix: Solid
Analysis Batch: 2815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	66.7	60.7		ug/Kg		91	58 - 146
PCB-1260	66.7	59.0		ug/Kg		88	64.2 - 152

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	73		51.9 - 151
DCB Decachlorobiphenyl (Surr)	112		73.5 - 164

Lab Sample ID: 590-1569-1 MS
Matrix: Solid
Analysis Batch: 2815

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 2817

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		69.4	60.7		ug/Kg	☼	87	50.6 - 145
PCB-1260	ND		69.4	52.5		ug/Kg	☼	76	57.6 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	73		51.9 - 151
DCB Decachlorobiphenyl (Surr)	89		73.5 - 164

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 590-1569-1 MSD
Matrix: Solid
Analysis Batch: 2815

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 2817

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		70.4	59.5		ug/Kg	☼	85	50.6 - 145	2	40
PCB-1260	ND		70.4	48.0		ug/Kg	☼	68	57.6 - 120	9	27.4

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*83*		*73.5 - 164*

Method: 8141A - Organophosphorous Pesticides (GC)

Lab Sample ID: MB 280-288926/1-A
Matrix: Solid
Analysis Batch: 289733

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288926

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		66	12	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Bolstar	ND		13	4.2	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Chlorpyrifos	ND		20	6.4	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Coumaphos	ND		13	2.8	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Demeton, Total	ND		38	7.4	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Diazinon	ND		22	7.2	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Dichlorvos	ND		23	7.3	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Dimethoate	ND		22	7.0	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Disulfoton	ND		47	7.6	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
EPN	ND		13	3.6	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Famphur	ND		13	3.2	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Fensulfothion	ND		25	8.0	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Mevinphos	ND		15	4.5	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Methyl parathion	ND		20	6.3	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Merphos	ND		30	5.1	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Malathion	ND		15	4.6	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Fenthion	ND		32	8.6	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Ethyl Parathion	ND		18	5.2	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Phorate	ND		20	5.6	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Ronnel	ND		45	15	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Simazine	ND		66	22	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Sulfotepp	ND		20	6.2	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Thionazin	ND		18	5.5	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Tokuthion	ND		20	3.8	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Trichloronate	ND		20	6.1	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Ethoprop	ND		15	4.8	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Propazine	ND		66	8.5	ug/Kg		08/03/15 17:25	08/08/15 21:01	1
Azinphos-methyl	ND		13	3.4	ug/Kg		08/03/15 17:25	08/08/15 21:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*61*		*42 - 132*	*08/03/15 17:25*	*08/08/15 21:01*	*1*
Triphenylphosphate	*79*		*47 - 161*	*08/03/15 17:25*	*08/08/15 21:01*	*1*

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-288926/2-A
Matrix: Solid
Analysis Batch: 289733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	132	92.9		ug/Kg		70	49 - 115
Chlorpyrifos	132	104		ug/Kg		79	38 - 130
Coumaphos	132	106		ug/Kg		80	50 - 119
Demeton, Total	132	91.8		ug/Kg		69	36 - 115
Diazinon	132	105		ug/Kg		79	53 - 115
Dichlorvos	132	132		ug/Kg		100	43 - 139
Dimethoate	132	107		ug/Kg		81	25 - 138
Disulfoton	132	83.1		ug/Kg		63	29 - 115
EPN	132	118		ug/Kg		89	58 - 131
Famphur	132	120		ug/Kg		90	49 - 140
Fensulfothion	132	120		ug/Kg		90	52 - 121
Mevinphos	132	84.3		ug/Kg		64	10 - 226
Methyl parathion	132	109		ug/Kg		82	46 - 119
Merphos	132	89.8		ug/Kg		68	19 - 115
Malathion	132	92.9		ug/Kg		70	50 - 122
Fenthion	132	99.4		ug/Kg		75	45 - 115
Ethyl Parathion	132	104		ug/Kg		78	24 - 163
Phorate	132	73.8		ug/Kg		56	40 - 115
Ronnel	132	107		ug/Kg		81	43 - 118
Simazine	132	91.7		ug/Kg		69	11 - 179
Sulfotepp	132	108		ug/Kg		82	55 - 115
Thionazin	132	101		ug/Kg		77	46 - 115
Trichloronate	132	98.4		ug/Kg		74	27 - 115
BolstarFamphur	265	223		ug/Kg		84	
Ethoprop	132	112		ug/Kg		84	53 - 115
Azinphos-methyl	132	112		ug/Kg		84	51 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*79*		*42 - 132*
Triphenylphosphate	*87*		*47 - 161*

Lab Sample ID: 590-1569-5 MS
Matrix: Solid
Analysis Batch: 289733

Client Sample ID: LFB-16 (35-37)
Prep Type: Total/NA
Prep Batch: 288926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	ND		140	99.7		ug/Kg	☼	71	49 - 115
Chlorpyrifos	ND		140	115		ug/Kg	☼	82	38 - 130
Coumaphos	ND		140	103		ug/Kg	☼	73	50 - 119
Demeton, Total	ND		140	109		ug/Kg	☼	78	36 - 115
Diazinon	ND		140	112		ug/Kg	☼	80	53 - 115
Dichlorvos	ND		140	139		ug/Kg	☼	100	43 - 139
Dimethoate	ND		140	115		ug/Kg	☼	82	25 - 138
Disulfoton	ND		140	101		ug/Kg	☼	72	29 - 115
EPN	ND		140	124		ug/Kg	☼	89	58 - 131
Famphur	ND		140	123		ug/Kg	☼	88	49 - 140
Fensulfothion	ND		140	128		ug/Kg	☼	91	52 - 121
Mevinphos	ND		140	88.3		ug/Kg	☼	63	10 - 226

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: 590-1569-5 MS
Matrix: Solid
Analysis Batch: 289733

Client Sample ID: LFB-16 (35-37)
Prep Type: Total/NA
Prep Batch: 288926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl parathion	ND		140	121		ug/Kg	☼	86	46 - 119
Merphos	ND		140	93.1		ug/Kg	☼	67	19 - 115
Malathion	ND		140	103		ug/Kg	☼	74	50 - 122
Fenthion	ND		140	112		ug/Kg	☼	80	45 - 115
Ethyl Parathion	ND		140	114		ug/Kg	☼	81	24 - 163
Phorate	ND		140	80.7		ug/Kg	☼	58	40 - 115
Ronnel	ND		140	119		ug/Kg	☼	85	43 - 118
Simazine	ND		140	98.1		ug/Kg	☼	70	11 - 179
Sulfotepp	ND		140	116		ug/Kg	☼	83	55 - 115
Thionazin	ND		140	107		ug/Kg	☼	77	46 - 115
Trichloronate	ND		140	109		ug/Kg	☼	78	27 - 115
BolstarFamphur	ND		280	234		ug/Kg	☼	84	
Ethoprop	ND		140	117		ug/Kg	☼	84	53 - 115
Azinphos-methyl	ND		140	108		ug/Kg	☼	77	51 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Chlormefos	*77*		*42 - 132*
Triphenylphosphate	*86*		*47 - 161*

Lab Sample ID: 590-1569-5 MSD
Matrix: Solid
Analysis Batch: 289733

Client Sample ID: LFB-16 (35-37)
Prep Type: Total/NA
Prep Batch: 288926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	ND		135	91.9		ug/Kg	☼	68	49 - 115	8	50
Chlorpyrifos	ND		135	116		ug/Kg	☼	86	38 - 130	1	37
Coumaphos	ND		135	92.5		ug/Kg	☼	69	50 - 119	10	27
Demeton, Total	ND		135	107		ug/Kg	☼	79	36 - 115	3	47
Diazinon	ND		135	104		ug/Kg	☼	77	53 - 115	8	40
Dichlorvos	ND		135	146		ug/Kg	☼	108	43 - 139	4	77
Dimethoate	ND		135	110		ug/Kg	☼	81	25 - 138	5	98
Disulfoton	ND		135	96.1		ug/Kg	☼	71	29 - 115	5	40
EPN	ND		135	115		ug/Kg	☼	85	58 - 131	8	50
Famphur	ND		135	119		ug/Kg	☼	88	49 - 140	3	31
Fensulfothion	ND		135	124		ug/Kg	☼	92	52 - 121	3	49
Mevinphos	ND		135	87.5		ug/Kg	☼	65	10 - 226	1	78
Methyl parathion	ND		135	122		ug/Kg	☼	90	46 - 119	1	53
Merphos	ND		135	93.6		ug/Kg	☼	69	19 - 115	1	50
Malathion	ND		135	106		ug/Kg	☼	78	50 - 122	2	53
Fenthion	ND		135	115		ug/Kg	☼	85	45 - 115	2	43
Ethyl Parathion	ND		135	117		ug/Kg	☼	86	24 - 163	2	47
Phorate	ND		135	77.3		ug/Kg	☼	57	40 - 115	4	40
Ronnel	ND		135	119		ug/Kg	☼	88	43 - 118	0	41
Simazine	ND		135	89.4		ug/Kg	☼	66	11 - 179	9	58
Sulfotepp	ND		135	111		ug/Kg	☼	82	55 - 115	4	40
Thionazin	ND		135	105		ug/Kg	☼	77	46 - 115	3	40
Trichloronate	ND		135	108		ug/Kg	☼	80	27 - 115	0	43
BolstarFamphur	ND		270	228		ug/Kg	☼	84		3	

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: 590-1569-5 MSD
Matrix: Solid
Analysis Batch: 289733

Client Sample ID: LFB-16 (35-37)
Prep Type: Total/NA
Prep Batch: 288926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethoprop	ND		135	113		ug/Kg	☼	84	53 - 115	3	54
Azinphos-methyl	ND		135	99.5		ug/Kg	☼	74	51 - 122	8	43

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Chlormefos	*81*		*42 - 132*
Triphenylphosphate	*89*		*47 - 161*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-288773/1-A
Matrix: Solid
Analysis Batch: 290627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288773

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
2,4-D	ND		80	14	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
2,4-DB	ND		80	7.4	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
Dalapon	ND		40	1.4	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
Dicamba	ND		40	1.4	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
Dichlorprop	ND		80	3.2	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
MCPA	ND		8000	2000	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
MCPP	ND		8000	2000	ug/Kg		08/02/15 13:00	08/14/15 06:16	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg		08/02/15 13:00	08/14/15 06:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*68*		*31 - 105*	*08/02/15 13:00*	*08/14/15 06:16*	*1*

Lab Sample ID: LCS 280-288773/2-A
Matrix: Solid
Analysis Batch: 290627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288773

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	99.6	63.1		ug/Kg		63	53 - 129
2,4-D	99.6	75.2	J	ug/Kg		75	50 - 136
2,4-DB	99.6	73.2	J	ug/Kg		73	29 - 134
Dalapon	99.6	72.2		ug/Kg		72	35 - 105
Dicamba	99.6	64.3		ug/Kg		65	45 - 120
Dichlorprop	99.6	60.8	J	ug/Kg		61	50 - 118
MCPA	9960	4720	J	ug/Kg		47	42 - 123
MCPP	9960	7180	J	ug/Kg		72	40 - 127
Silvex (2,4,5-TP)	99.6	64.7		ug/Kg		65	52 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*67*		*31 - 105*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 590-1569-2 MS
Matrix: Solid
Analysis Batch: 290627

Client Sample ID: LFB-13 (72-73)
Prep Type: Total/NA
Prep Batch: 288773

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		103	55.4		ug/Kg	☼	54	24 - 115
2,4-D	ND		103	69.5	J	ug/Kg	☼	67	32 - 115
2,4-DB	ND		103	64.0	J	ug/Kg	☼	62	37 - 119
Dalapon	ND		103	58.9		ug/Kg	☼	57	11 - 115
Dicamba	ND		103	57.2		ug/Kg	☼	56	11 - 115
Dichlorprop	ND		103	57.7	J	ug/Kg	☼	56	35 - 115
MCPA	ND		10300	4130	J	ug/Kg	☼	40	37 - 115
MCPP	ND		10300	5950	J	ug/Kg	☼	58	48 - 132
Silvex (2,4,5-TP)	ND	F1	103	56.3		ug/Kg	☼	55	53 - 134

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*64*		*31 - 105*

Lab Sample ID: 590-1569-2 MSD
Matrix: Solid
Analysis Batch: 290627

Client Sample ID: LFB-13 (72-73)
Prep Type: Total/NA
Prep Batch: 288773

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		103	46.5		ug/Kg	☼	45	24 - 115	18	40
2,4-D	ND		103	57.8	J	ug/Kg	☼	56	32 - 115	18	40
2,4-DB	ND		103	60.3	J	ug/Kg	☼	59	37 - 119	6	50
Dalapon	ND		103	54.4		ug/Kg	☼	53	11 - 115	8	50
Dicamba	ND		103	46.9		ug/Kg	☼	46	11 - 115	20	50
Dichlorprop	ND		103	43.7	J	ug/Kg	☼	42	35 - 115	28	50
MCPA	ND		10300	3830	J	ug/Kg	☼	37	37 - 115	8	50
MCPP	ND		10300	4910	J	ug/Kg	☼	48	48 - 132	19	50
Silvex (2,4,5-TP)	ND	F1	103	48.4	F1	ug/Kg	☼	47	53 - 134	15	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*53*		*31 - 105*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2831/1-A
Matrix: Solid
Analysis Batch: 2837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2831

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		08/04/15 09:26	08/04/15 14:09	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		08/04/15 09:26	08/04/15 14:09	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		08/04/15 09:26	08/04/15 14:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:09*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*08/04/15 09:26*	*08/04/15 14:09*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Lab Sample ID: 590-1569-1 DU
Matrix: Solid
Analysis Batch: 2837

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 2831

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND			ND		mg/Kg	☼			NC	25
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	25
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*100*		*50 - 150*
n-Triacontane-d62	*106*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-197535/18-A
Matrix: Solid
Analysis Batch: 197648

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 197535

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.042	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Arsenic	ND		0.50	0.18	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Barium	ND		0.50	0.078	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Beryllium	0.0440	J	0.20	0.035	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Cadmium	ND		0.20	0.019	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Chromium	ND		0.50	0.063	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Copper	ND		0.40	0.098	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Iron	ND		40	11	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Lead	ND		0.50	0.048	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Manganese	ND		1.0	0.17	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Nickel	ND		0.50	0.081	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Selenium	ND		1.0	0.20	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Silver	ND		0.20	0.012	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Thallium	ND		0.40	0.13	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Zinc	ND		5.0	1.1	mg/Kg		08/11/15 08:43	08/11/15 13:43	10
Vanadium	ND		2.0	0.47	mg/Kg		08/11/15 08:43	08/11/15 13:43	10

Lab Sample ID: LCS 580-197535/19-A
Matrix: Solid
Analysis Batch: 197648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197535

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			150	145		mg/Kg		97	80 - 120		
Arsenic			200	202		mg/Kg		101	80 - 120		
Barium			200	196		mg/Kg		98	80 - 120		
Beryllium			5.00	4.85		mg/Kg		97	80 - 120		
Cadmium			5.00	5.02		mg/Kg		100	80 - 120		
Chromium			20.0	20.2		mg/Kg		101	80 - 120		
Copper			25.0	25.9		mg/Kg		104	80 - 120		
Iron			1100	1130		mg/Kg		102	80 - 120		

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-197535/19-A
Matrix: Solid
Analysis Batch: 197648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	50.0	46.8		mg/Kg		94	80 - 120
Manganese	50.0	50.0		mg/Kg		100	80 - 120
Nickel	50.0	51.4		mg/Kg		103	80 - 120
Selenium	200	203		mg/Kg		102	80 - 120
Silver	30.0	29.4		mg/Kg		98	80 - 120
Thallium	200	212		mg/Kg		106	80 - 120
Zinc	200	201		mg/Kg		100	80 - 120
Vanadium	50.0	49.0		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 580-197535/20-A
Matrix: Solid
Analysis Batch: 197648

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 197535

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	147		mg/Kg		98	80 - 120	1	20
Arsenic	200	201		mg/Kg		100	80 - 120	1	20
Barium	200	199		mg/Kg		99	80 - 120	1	20
Beryllium	5.00	5.07		mg/Kg		101	80 - 120	4	20
Cadmium	5.00	5.13		mg/Kg		103	80 - 120	2	20
Chromium	20.0	20.5		mg/Kg		102	80 - 120	1	20
Copper	25.0	25.8		mg/Kg		103	80 - 120	1	20
Iron	1100	1140		mg/Kg		104	80 - 120	1	20
Lead	50.0	46.3		mg/Kg		93	80 - 120	1	20
Manganese	50.0	50.6		mg/Kg		101	80 - 120	1	20
Nickel	50.0	51.5		mg/Kg		103	80 - 120	0	20
Selenium	200	201		mg/Kg		100	80 - 120	1	20
Silver	30.0	29.5		mg/Kg		98	80 - 120	1	20
Thallium	200	211		mg/Kg		106	80 - 120	0	20
Zinc	200	198		mg/Kg		99	80 - 120	1	20
Vanadium	50.0	49.5		mg/Kg		99	80 - 120	1	20

Lab Sample ID: LCSSRM 580-197535/21-A
Matrix: Solid
Analysis Batch: 197648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197535

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.8	154		mg/Kg		173.2	22.0 - 259.0
Arsenic	139	140		mg/Kg		101.0	70.4 - 140.3
Barium	203	201		mg/Kg		99.1	73.4 - 127.1
Beryllium	96.1	93.2		mg/Kg		97.0	74.5 - 125.9
Cadmium	96.0	93.7		mg/Kg		97.6	73.2 - 127.1
Chromium	136	143		mg/Kg		105.0	69.9 - 129.4
Copper	168	170		mg/Kg		101.2	75.6 - 125.0

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSSRM 580-197535/21-A
Matrix: Solid
Analysis Batch: 197648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197535

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	14100	18200		mg/Kg		129.2	35.0 - 165.2
Lead	133	125		mg/Kg		93.8	72.9 - 127.8
Manganese	297	299		mg/Kg		100.8	74.4 - 125.6
Nickel	123	127		mg/Kg		103.2	73.1 - 128.5
Selenium	177	180		mg/Kg		101.5	67.8 - 131.6
Silver	40.2	39.4		mg/Kg		98.1	66.2 - 134.1
Thallium	138	132		mg/Kg		95.4	68.1 - 131.9
Zinc	189	189		mg/Kg		99.8	69.8 - 130.7
Vanadium	107	113		mg/Kg		105.4	66.4 - 133.6

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-2862/9-A
Matrix: Solid
Analysis Batch: 2918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2862

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		08/06/15 08:17	08/10/15 13:25	1

Lab Sample ID: LCS 590-2862/8-A
Matrix: Solid
Analysis Batch: 2918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	201		ug/Kg		101	80 - 120

Lab Sample ID: 590-1569-2 MS
Matrix: Solid
Analysis Batch: 2918

Client Sample ID: LFB-13 (72-73)
Prep Type: Total/NA
Prep Batch: 2862

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	1.9	J	159	163		ug/Kg	☼	102	80 - 120

Lab Sample ID: 590-1569-2 MSD
Matrix: Solid
Analysis Batch: 2918

Client Sample ID: LFB-13 (72-73)
Prep Type: Total/NA
Prep Batch: 2862

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	1.9	J	161	172		ug/Kg	☼	106	80 - 120	5	20

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 590-1569-1 DU
Matrix: Solid
Analysis Batch: 2918

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 2862

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Hg	11	J		7.62	J F5	ug/Kg	☼			33	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-196948/1-A
Matrix: Solid
Analysis Batch: 197216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196948

Analyte	MB Result	MB Qualifier	RL		RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0		2.0	mg/Kg		08/04/15 14:08	08/06/15 13:52	1

Lab Sample ID: LCS 580-196948/2-A
Matrix: Solid
Analysis Batch: 197216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196948

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			10.0	8.94		mg/Kg		89	80 - 120		

Lab Sample ID: 590-1569-1 MS
Matrix: Solid
Analysis Batch: 197216

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		10.3	8.56		mg/Kg	☼	83	80 - 120		

Lab Sample ID: 590-1569-1 MSD
Matrix: Solid
Analysis Batch: 197216

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196948

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		10.1	8.95		mg/Kg	☼	88	80 - 120	5	20

Lab Sample ID: 590-1569-1 DU
Matrix: Solid
Analysis Batch: 197216

Client Sample ID: LFB-12 (29-30)
Prep Type: Total/NA
Prep Batch: 196948

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/Kg	☼			NC	20

Client Sample ID: LFB-12 (29-30)

Lab Sample ID: 590-1569-1

Date Collected: 07/27/15 14:00

Matrix: Solid

Date Received: 07/30/15 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2818	08/03/15 10:54	IAB	TAL SPK

Client Sample ID: LFB-12 (29-30)

Lab Sample ID: 590-1569-1

Date Collected: 07/27/15 14:00

Matrix: Solid

Date Received: 07/30/15 09:05

Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.995 g	10 mL	197266	08/07/15 12:14	IWH	TAL SEA
Total/NA	Analysis	8260B		1	5.995 g	10 mL	197353	08/08/15 19:24	D1R	TAL SEA
Total/NA	Prep	3550B			10.264 g	10 mL	196778	08/03/15 09:38	DCV	TAL SEA
Total/NA	Analysis	8270C		1	10.264 g	10 mL	198114	08/17/15 16:46	AHP	TAL SEA
Total/NA	Prep	3550B			10.296 g	10 mL	196777	08/03/15 09:26	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.296 g	10 mL	197700	08/12/15 16:19	EKK	TAL SEA
Total/NA	Prep	3550C			15.41 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.41 g	5 mL	2815	08/03/15 16:22	NMI	TAL SPK
Total/NA	Prep	3540C			32.1 g	2 mL	288926	08/03/15 17:25	EJP	TAL DEN
Total/NA	Analysis	8141A		1	32.1 g	2 mL	289733	08/09/15 01:52	AMP	TAL DEN
Total/NA	Prep	8151A			50.7 g	10 mL	288773	08/02/15 13:00	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	50.7 g	10 mL	290627	08/14/15 11:12	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.49 g	20 mL	2831	08/04/15 09:26	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.49 g	20 mL	2837	08/04/15 14:46	NMI	TAL SPK
Total/NA	Prep	3050B			1.0694 g	50 mL	197535	08/11/15 08:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.0694 g	50 mL	197648	08/11/15 15:14	FCW	TAL SEA
Total/NA	Prep	7471B			0.55 g	50 mL	2862	08/06/15 08:18	JIS	TAL SPK
Total/NA	Analysis	7471B		1	0.55 g	50 mL	2918	08/10/15 13:27	JSP	TAL SPK
Total/NA	Prep	9012A			5.46 g	100 mL	196948	08/04/15 14:08	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.46 g	100 mL	197216	08/06/15 13:52	JLS	TAL SEA

Client Sample ID: LFB-13 (72-73)

Lab Sample ID: 590-1569-2

Date Collected: 07/28/15 09:30

Matrix: Solid

Date Received: 07/30/15 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2818	08/03/15 10:54	IAB	TAL SPK

Client Sample ID: LFB-13 (72-73)

Lab Sample ID: 590-1569-2

Date Collected: 07/28/15 09:30

Matrix: Solid

Date Received: 07/30/15 09:05

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.95 g	10 mL	197266	08/07/15 12:14	IWH	TAL SEA
Total/NA	Analysis	8260B		1	5.95 g	10 mL	197353	08/08/15 19:50	D1R	TAL SEA
Total/NA	Prep	3550B			10.271 g	10 mL	196778	08/03/15 09:38	DCV	TAL SEA

Client Sample ID: LFB-13 (72-73)

Date Collected: 07/28/15 09:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-2

Matrix: Solid
Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		1	10.271 g	10 mL	198114	08/17/15 17:11	AHP	TAL SEA
Total/NA	Prep	3550B			10.178 g	10 mL	196777	08/03/15 09:26	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.178 g	10 mL	197700	08/12/15 17:11	EKK	TAL SEA
Total/NA	Prep	3550C			15.55 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.55 g	5 mL	2815	08/03/15 16:43	NMI	TAL SPK
Total/NA	Prep	3540C			31.0 g	2 mL	288926	08/03/15 17:25	EJP	TAL DEN
Total/NA	Analysis	8141A		1	31.0 g	2 mL	289733	08/09/15 02:21	AMP	TAL DEN
Total/NA	Prep	8151A			51.0 g	10 mL	288773	08/02/15 13:00	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	51.0 g	10 mL	290627	08/14/15 11:38	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.87 g	20 mL	2831	08/04/15 09:26	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.87 g	20 mL	2837	08/04/15 15:05	NMI	TAL SPK
Total/NA	Prep	3050B			1.1251 g	50 mL	197535	08/11/15 08:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.1251 g	50 mL	197648	08/11/15 15:19	FCW	TAL SEA
Total/NA	Prep	7471B			0.70 g	50 mL	2862	08/06/15 08:18	JIS	TAL SPK
Total/NA	Analysis	7471B		1	0.70 g	50 mL	2918	08/10/15 14:19	JSP	TAL SPK
Total/NA	Prep	9012A			5.14 mL	100 mL	196948	08/04/15 14:08	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.14 mL	100 mL	197216	08/06/15 13:52	JLS	TAL SEA

Client Sample ID: LFB-14 (97-98)

Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2818	08/03/15 10:54	IAB	TAL SPK

Client Sample ID: LFB-14 (97-98)

Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3

Matrix: Solid
Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.83 g	10 mL	197266	08/07/15 12:14	IWH	TAL SEA
Total/NA	Analysis	8260B		1	5.83 g	10 mL	197353	08/08/15 20:16	D1R	TAL SEA
Total/NA	Prep	3550B			10.399 g	10 mL	196778	08/03/15 09:38	DCV	TAL SEA
Total/NA	Analysis	8270C		1	10.399 g	10 mL	198114	08/17/15 17:37	AHP	TAL SEA
Total/NA	Prep	3550B			10.238 g	10 mL	196777	08/03/15 09:26	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.238 g	10 mL	197700	08/12/15 17:28	EKK	TAL SEA
Total/NA	Prep	3550C			15.16 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.16 g	5 mL	2815	08/03/15 17:04	NMI	TAL SPK
Total/NA	Prep	3540C			30.0 g	2 mL	288926	08/03/15 17:25	EJP	TAL DEN
Total/NA	Analysis	8141A		1	30.0 g	2 mL	289733	08/09/15 02:50	AMP	TAL DEN
Total/NA	Prep	8151A			50.7 g	10 mL	288773	08/02/15 13:00	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	50.7 g	10 mL	290627	08/14/15 13:03	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.99 g	20 mL	2831	08/04/15 09:26	IAB	TAL SPK

Client Sample ID: LFB-14 (97-98)

Date Collected: 07/28/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-3
Matrix: Solid
Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-HCID		1	10.99 g	20 mL	2838	08/04/15 14:09	NMI	TAL SPK
Total/NA	Prep	3050B			1.2090 g	50 mL	197535	08/11/15 08:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.2090 g	50 mL	197648	08/11/15 15:41	FCW	TAL SEA
Total/NA	Prep	7471B			0.93 g	50 mL	2862	08/06/15 08:18	JIS	TAL SPK
Total/NA	Analysis	7471B		1	0.93 g	50 mL	2918	08/10/15 13:39	JSP	TAL SPK
Total/NA	Prep	9012A			5.27 mL	100 mL	196948	08/04/15 14:08	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.27 mL	100 mL	197216	08/06/15 13:52	JLS	TAL SEA

Client Sample ID: LFB-15 (35-37)

Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2818	08/03/15 10:54	IAB	TAL SPK

Client Sample ID: LFB-15 (35-37)

Date Collected: 07/29/15 08:50
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-4
Matrix: Solid
Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11.985 g	10 mL	197266	08/07/15 12:14	IWH	TAL SEA
Total/NA	Analysis	8260B		1	11.985 g	10 mL	197353	08/08/15 21:35	D1R	TAL SEA
Total/NA	Prep	3550B			10.158 g	10 mL	196778	08/03/15 09:38	DCV	TAL SEA
Total/NA	Analysis	8270C		1	10.158 g	10 mL	198114	08/17/15 18:03	AHP	TAL SEA
Total/NA	Prep	3550B			10.498 g	10 mL	196777	08/03/15 09:26	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.498 g	10 mL	197700	08/12/15 17:46	EKK	TAL SEA
Total/NA	Prep	3550C			15.15 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.15 g	5 mL	2815	08/03/15 17:25	NMI	TAL SPK
Total/NA	Prep	3550C			15.15 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.15 g	5 mL	2834	08/04/15 13:52	NMI	TAL SPK
Total/NA	Prep	3540C			30.3 g	2 mL	288926	08/03/15 17:25	EJP	TAL DEN
Total/NA	Analysis	8141A		1	30.3 g	2 mL	289733	08/09/15 03:19	AMP	TAL DEN
Total/NA	Prep	8151A			50.3 g	10 mL	288773	08/02/15 13:00	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	50.3 g	10 mL	290627	08/14/15 13:32	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			11.11 g	20 mL	2831	08/04/15 09:26	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	11.11 g	20 mL	2838	08/04/15 14:27	NMI	TAL SPK
Total/NA	Prep	3050B			1.0816 g	50 mL	197535	08/11/15 08:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.0816 g	50 mL	197648	08/11/15 15:46	FCW	TAL SEA
Total/NA	Prep	7471B			0.60 g	50 mL	2862	08/06/15 08:18	JIS	TAL SPK
Total/NA	Analysis	7471B		1	0.60 g	50 mL	2918	08/10/15 14:24	JSP	TAL SPK
Total/NA	Prep	9012A			5.37 mL	100 mL	196948	08/04/15 14:08	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.37 mL	100 mL	197216	08/06/15 13:52	JLS	TAL SEA

Client Sample ID: LFB-16 (35-37)

Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2818	08/03/15 10:54	IAB	TAL SPK

Client Sample ID: LFB-16 (35-37)

Date Collected: 07/29/15 12:00
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-5
Matrix: Solid
Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.034 g	10 mL	197266	08/07/15 12:14	IWH	TAL SEA
Total/NA	Analysis	8260B		1	6.034 g	10 mL	197353	08/08/15 20:43	D1R	TAL SEA
Total/NA	Prep	3550B			10.134 g	10 mL	196778	08/03/15 09:38	DCV	TAL SEA
Total/NA	Analysis	8270C		1	10.134 g	10 mL	198114	08/17/15 18:29	AHP	TAL SEA
Total/NA	Prep	3550B			10.115 g	10 mL	196777	08/03/15 09:26	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.115 g	10 mL	197700	08/12/15 18:03	EKK	TAL SEA
Total/NA	Prep	3550C			15.43 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.43 g	5 mL	2815	08/03/15 17:46	NMI	TAL SPK
Total/NA	Prep	3540C			31.0 g	2 mL	288926	08/03/15 17:25	EJP	TAL DEN
Total/NA	Analysis	8141A		1	31.0 g	2 mL	289733	08/09/15 03:48	AMP	TAL DEN
Total/NA	Prep	8151A			50.5 g	10 mL	288773	08/02/15 13:00	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	50.5 g	10 mL	290627	08/14/15 14:02	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.58 g	20 mL	2831	08/04/15 09:26	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.58 g	20 mL	2838	08/04/15 14:46	NMI	TAL SPK
Total/NA	Prep	3050B			1.1443 g	50 mL	197535	08/11/15 08:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.1443 g	50 mL	197648	08/11/15 15:50	FCW	TAL SEA
Total/NA	Prep	7471B			0.89 g	50 mL	2862	08/06/15 08:18	JIS	TAL SPK
Total/NA	Analysis	7471B		1	0.89 g	50 mL	2918	08/10/15 13:46	JSP	TAL SPK
Total/NA	Prep	9012A			5.17 mL	100 mL	196948	08/04/15 14:08	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.17 mL	100 mL	197216	08/06/15 13:52	JLS	TAL SEA

Client Sample ID: LFB-17 (42-43)

Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2818	08/03/15 10:54	IAB	TAL SPK

Client Sample ID: LFB-17 (42-43)

Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6
Matrix: Solid
Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.713 g	10 mL	197266	08/07/15 12:14	IWH	TAL SEA
Total/NA	Analysis	8260B		1	5.713 g	10 mL	197353	08/08/15 21:08	D1R	TAL SEA
Total/NA	Prep	3550B			10.177 g	10 mL	196778	08/03/15 09:38	DCV	TAL SEA

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Client Sample ID: LFB-17 (42-43)

Date Collected: 07/29/15 15:30
Date Received: 07/30/15 09:05

Lab Sample ID: 590-1569-6

Matrix: Solid
Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		1	10.177 g	10 mL	198114	08/17/15 18:54	AHP	TAL SEA
Total/NA	Prep	3550B			10.007 g	10 mL	196777	08/03/15 09:26	DCV	TAL SEA
Total/NA	Analysis	8081A		1	10.007 g	10 mL	197700	08/12/15 19:12	EKK	TAL SEA
Total/NA	Prep	3550C			15.22 g	5 mL	2817	08/03/15 10:51	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.22 g	5 mL	2815	08/03/15 18:07	NMI	TAL SPK
Total/NA	Prep	3540C			31.6 g	2 mL	288926	08/03/15 17:25	EJP	TAL DEN
Total/NA	Analysis	8141A		1	31.6 g	2 mL	289733	08/09/15 05:15	AMP	TAL DEN
Total/NA	Prep	8151A			50.6 g	10 mL	288773	08/02/15 13:00	DFB1	TAL DEN
Total/NA	Analysis	8151A		1	50.6 g	10 mL	290627	08/14/15 14:32	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.53 g	20 mL	2831	08/04/15 09:26	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.53 g	20 mL	2838	08/04/15 15:05	NMI	TAL SPK
Total/NA	Prep	3050B			1.1884 g	50 mL	197535	08/11/15 08:43	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.1884 g	50 mL	197648	08/11/15 15:55	FCW	TAL SEA
Total/NA	Prep	7471B			0.94 g	50 mL	2862	08/06/15 08:18	JIS	TAL SPK
Total/NA	Analysis	7471B		1	0.94 g	50 mL	2954	08/12/15 12:02	JSP	TAL SPK
Total/NA	Prep	9012A			5.32 mL	100 mL	196948	08/04/15 14:08	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.32 mL	100 mL	197216	08/06/15 13:52	JLS	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-16
Arizona	State Program	9	AZ0713	12-19-15
Arkansas DEQ	State Program	6	88-0687	06-01-16
California	State Program	9	2513	08-31-16
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-15 *
Georgia	State Program	4	N/A	01-09-15 *
Illinois	NELAP	5	200017	04-30-16
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	09-30-15
Louisiana	NELAP	6	02096	06-30-16
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-15
Nevada	State Program	9	CO0026	07-31-16
New Hampshire	NELAP	1	205310	04-28-16
New Jersey	NELAP	2	CO004	09-30-15
New York	NELAP	2	11964	04-01-16
North Carolina (WW/SW)	State Program	4	358	12-31-15
North Dakota	State Program	8	R-034	01-09-16
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-16
Pennsylvania	NELAP	3	68-00664	08-30-15
South Carolina	State Program	4	72002001	06-30-15 *
Texas	NELAP	6	T104704183-13-8	09-30-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-16
Virginia	NELAP	3	460232	06-14-16
Washington	State Program	10	C583	08-03-15 *
West Virginia DEP	State Program	3	354	11-30-15
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron

* Certification renewal pending - certification considered valid.

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8081A	3550B	Solid	4,4'-DDD
8081A	3550B	Solid	4,4'-DDE
8081A	3550B	Solid	4,4'-DDT
8081A	3550B	Solid	Aldrin
8081A	3550B	Solid	alpha-BHC
8081A	3550B	Solid	alpha-Chlordane
8081A	3550B	Solid	beta-BHC
8081A	3550B	Solid	delta-BHC
8081A	3550B	Solid	Dieldrin
8081A	3550B	Solid	Endosulfan I
8081A	3550B	Solid	Endosulfan II
8081A	3550B	Solid	Endosulfan sulfate
8081A	3550B	Solid	Endrin
8081A	3550B	Solid	Endrin aldehyde
8081A	3550B	Solid	Endrin ketone
8081A	3550B	Solid	gamma-BHC (Lindane)
8081A	3550B	Solid	gamma-Chlordane
8081A	3550B	Solid	Heptachlor
8081A	3550B	Solid	Heptachlor epoxide
8081A	3550B	Solid	Methoxychlor
8081A	3550B	Solid	Toxaphene
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1569-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8081A	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141A	Organophosphorous Pesticides (GC)	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

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11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

8/19/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers, Inc.
REPORT TO: jhoney@geoengineers.com
ADDRESS: 523 E Second Ave Spokane, WA 99202
PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Marshall Landfill
PROJECT NUMBER: 0504-104-00
SAMPLED BY: JML

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 (STD) | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: X STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME		PRESERVATIVE	REQUESTED ANALYSES: HCID	VOCs 8260	SVOCs 8270	PCBs	Metals	Pesticides	Herbicides	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	LFB-12(29-30)	7/27/15	1400		X	X	X	X	X	X	X				
2	LFB-13(72-73)	7/28/15	0930		↓	↓	↓	↓	↓	↓	↓				
3	LFB-14(97-98)	7/28/15	1530		↓	↓	↓	↓	↓	↓	↓				
4	LFB-15(35-37)	7/29/15	0850		↓	↓	↓	↓	↓	↓	↓				
5	LFB-16(35-37)	7/29/15	1200		↓	↓	↓	↓	↓	↓	↓				
6	LFB-17(42-43)	7/29/15	1530		↓	↓	↓	↓	↓	↓	↓				
7															
8															
9															
10															

RELEASED BY: [signature] PRINT NAME: Josh Lee FIRM: GEI DATE: 7/30/2015 TIME:
RECEIVED BY: [signature] PRINT NAME: Eric Hoede FIRM: GEI DATE: 7/30/15 TIME: 8:30

RELEASED BY: [signature] PRINT NAME: Eric Hoede FIRM: GEI DATE: 7/30/15 TIME: 9:00
RECEIVED BY: Sheila Kratz PRINT NAME: Sheila Kratz FIRM: TA SPOK DATE: 7/30/15 TIME: 9:05

ADDITIONAL REMARKS:

TEMP: 6.1C PAGE 1 OF 1

IRCOC AL-1000 (0714)

590-1569 Chain of Custody

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1569-1

Login Number: 1569
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1569-1

Login Number: 1569
List Number: 3
Creator: Soto, Mayra A

List Source: TestAmerica Denver
List Creation: 07/31/15 03:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1569-1

Login Number: 1569
List Number: 2
Creator: Vance, Diane R

List Source: TestAmerica Seattle
List Creation: 07/31/15 11:24 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1655-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
8/24/2015 12:00:51 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Job ID: 590-1655-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 8/7/2015 9:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.1° C.

Receipt Exceptions

Changed the sample ID of sample 590-1655-1 per the client's request.

GC/MS VOA Method 8260B:
The laboratory control sample (LCS) for 198369 recovered outside control limits for the following analytes: 1,4-Dichlorobenzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The laboratory control sample duplicate (LCSD) for 198369 recovered outside control limits for the following analytes: 1,1,2,2-Tetrachloroethane, 1,2-Dichlorobenzene, 1,2,3-Trichloropropane, 1,2-Dibromo-3-Chloropropane and 1,4-Dichlorobenzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The method blank for 198369 contained Methylene chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The continuing calibration verification (CCV) associated with batch 580-198347 recovered above the upper control limit for Hexachlorocyclopentadiene and 2,4-Dimethylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SB-12 (235-236.5) (590-1655-1), (CCVIS 580-198347/3), (LCS 580-198177/2-A), (LCSD 580-198177/3-A) and (MB 580-198177/1-A).

The method blank for preparation batch 580-198177 and analytical batch 580-198347 contained Diethyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

The following analyte recovered outside control limits for the LCS associated with preparation batch 580-198177 and analytical batch 580-198347: Di-n-octyl phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1655-1	SB-12 (235-236.5)	Solid	08/05/15 10:00	08/07/15 09:15

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Client Sample ID: SB-12 (235-236.5)
Date Collected: 08/05/15 10:00
Date Received: 08/07/15 09:15

Lab Sample ID: 590-1655-1
Matrix: Solid
Percent Solids: 81.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.1	0.26	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,1,1-Trichloroethane	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,1,2,2-Tetrachloroethane	ND	*	4.3	0.96	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,1,2-Trichloroethane	ND		2.1	0.27	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,1-Dichloroethane	ND		1.1	0.20	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,1-Dichloroethene	ND		5.3	0.53	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,1-Dichloropropene	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2,3-Trichlorobenzene	ND		3.2	0.64	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2,3-Trichloropropane	ND	*	2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2,4-Trichlorobenzene	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2,4-Trimethylbenzene	ND		2.1	0.17	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2-Dibromo-3-Chloropropane	ND	*	11	1.7	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2-Dichlorobenzene	ND	*	2.1	0.33	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2-Dichloroethane	ND		1.1	0.16	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,2-Dichloropropane	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,3,5-Trimethylbenzene	ND		5.3	0.18	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,3-Dichlorobenzene	ND		2.1	0.28	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,3-Dichloropropane	ND		2.1	0.25	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
1,4-Dichlorobenzene	ND	*	1.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
2,2-Dichloropropane	ND		5.3	0.96	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
2-Chlorotoluene	ND		2.1	0.18	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
4-Chlorotoluene	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
4-Isopropyltoluene	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Benzene	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Bromobenzene	ND		11	2.5	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Bromoform	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Bromomethane	ND		1.1	0.22	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Carbon tetrachloride	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Chlorobenzene	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Chlorobromomethane	ND		2.1	0.27	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Chlorodibromomethane	ND		2.1	0.29	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Chloroethane	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Chloroform	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Chloromethane	ND		1.1	0.15	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
cis-1,2-Dichloroethene	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
cis-1,3-Dichloropropene	ND		1.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Dibromomethane	ND		1.1	0.18	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Dichlorobromomethane	ND		1.1	0.19	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Dichlorodifluoromethane	ND		2.1	0.52	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Ethylbenzene	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Ethylene Dibromide	ND		1.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Hexachlorobutadiene	ND		3.2	0.64	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Isopropylbenzene	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Methyl tert-butyl ether	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Methylene Chloride	**6.2**	**J B**	16	0.26	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
m-Xylene & p-Xylene	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Naphthalene	ND		11	1.9	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
n-Butylbenzene	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
N-Propylbenzene	ND		2.1	0.34	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1

Client Sample ID: SB-12 (235-236.5)
Date Collected: 08/05/15 10:00
Date Received: 08/07/15 09:15

Lab Sample ID: 590-1655-1
Matrix: Solid
Percent Solids: 81.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		2.1	0.28	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
sec-Butylbenzene	ND		2.1	0.27	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Styrene	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
tert-Butylbenzene	ND		2.1	0.21	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Tetrachloroethene	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Toluene	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
trans-1,2-Dichloroethene	ND		2.1	0.43	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
trans-1,3-Dichloropropene	ND		11	1.5	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Trichloroethene	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Trichlorofluoromethane	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1
Vinyl chloride	ND		2.1	0.32	ug/Kg	☼	08/19/15 10:56	08/19/15 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*71 - 136*	*08/19/15 10:56*	*08/19/15 13:59*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 120*	*08/19/15 10:56*	*08/19/15 13:59*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 132*	*08/19/15 10:56*	*08/19/15 13:59*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*08/19/15 10:56*	*08/19/15 13:59*	*1*
Trifluorotoluene (Surr)	*94*		*65 - 140*	*08/19/15 10:56*	*08/19/15 13:59*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		60	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
1,2-Dichlorobenzene	ND		66	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
1,3-Dichlorobenzene	ND		60	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
1,4-Dichlorobenzene	ND		60	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
1-Methylnaphthalene	ND		36	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,4,5-Trichlorophenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,4,6-Trichlorophenol	ND		180	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,4-Dichlorophenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,4-Dimethylphenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,4-Dinitrophenol	ND		1200	240	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,4-Dinitrotoluene	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2,6-Dinitrotoluene	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2-Chloronaphthalene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2-Chlorophenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2-Methylnaphthalene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2-Methylphenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2-Nitroaniline	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
2-Nitrophenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
3 & 4 Methylphenol	ND		240	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
3,3'-Dichlorobenzidine	ND		240	36	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
3-Nitroaniline	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4,6-Dinitro-2-methylphenol	ND		1200	120	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4-Bromophenyl phenyl ether	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4-Chloro-3-methylphenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4-Chloroaniline	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4-Chlorophenyl phenyl ether	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4-Nitroaniline	ND		120	24	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
4-Nitrophenol	ND		1200	300	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Acenaphthene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1

Client Sample ID: SB-12 (235-236.5)
Date Collected: 08/05/15 10:00
Date Received: 08/07/15 09:15

Lab Sample ID: 590-1655-1
Matrix: Solid
Percent Solids: 81.6

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Anthracene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzo[a]anthracene	**18**	**J**	24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzo[a]pyrene	ND		36	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzo[b]fluoranthene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzo[g,h,i]perylene	ND		30	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzo[k]fluoranthene	ND		30	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzoic acid	ND		3000	900	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Benzyl alcohol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
bis (2-chloroisopropyl) ether	ND		300	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Bis(2-chloroethoxy)methane	ND		120	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Bis(2-chloroethyl)ether	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Bis(2-ethylhexyl) phthalate	**110**	**J**	720	60	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Butyl benzyl phthalate	ND		240	60	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Carbazole	ND		120	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Chrysene	ND		30	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Dibenz(a,h)anthracene	ND		48	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Dibenzofuran	ND		120	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Diethyl phthalate	**200**	**J B**	240	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Dimethyl phthalate	ND		120	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Di-n-butyl phthalate	ND		600	60	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Di-n-octyl phthalate	ND	*	600	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Fluoranthene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Fluorene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Hexachlorobenzene	ND		60	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Hexachlorobutadiene	ND		60	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Hexachlorocyclopentadiene	ND		120	12	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Hexachloroethane	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Indeno[1,2,3-cd]pyrene	ND		48	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Isophorone	ND		120	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Naphthalene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Nitrobenzene	ND		120	41	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
N-Nitrosodi-n-propylamine	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
N-Nitrosodiphenylamine	ND		60	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Pentachlorophenol	ND		240	24	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Phenanthrene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Phenol	ND		120	18	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1
Pyrene	ND		24	6.0	ug/Kg	☼	08/18/15 07:41	08/19/15 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*102*		*28 - 143*	*08/18/15 07:41*	*08/19/15 18:29*	*1*
2-Fluorobiphenyl	*98*		*42 - 140*	*08/18/15 07:41*	*08/19/15 18:29*	*1*
2-Fluorophenol	*109*		*36 - 145*	*08/18/15 07:41*	*08/19/15 18:29*	*1*
Nitrobenzene-d5	*96*		*38 - 141*	*08/18/15 07:41*	*08/19/15 18:29*	*1*
Phenol-d5	*91*		*38 - 149*	*08/18/15 07:41*	*08/19/15 18:29*	*1*
Terphenyl-d14	*94*		*42 - 151*	*08/18/15 07:41*	*08/19/15 18:29*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		47	47	mg/Kg	☼	08/12/15 09:41	08/12/15 13:35	1

Client Sample ID: SB-12 (235-236.5)
Date Collected: 08/05/15 10:00
Date Received: 08/07/15 09:15

Lab Sample ID: 590-1655-1
Matrix: Solid
Percent Solids: 81.6

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		120	120	mg/Kg	☼	08/12/15 09:41	08/12/15 13:35	1
Residual Range Organics (RRO) (C25-C36)	ND		120	120	mg/Kg	☼	08/12/15 09:41	08/12/15 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*08/12/15 09:41*	*08/12/15 13:35*	*1*
n-Triacontane-d62	*98*		*50 - 150*	*08/12/15 09:41*	*08/12/15 13:35*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.50**		0.24	0.051	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Arsenic	**7.3**		0.61	0.22	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Barium	**88**		0.61	0.094	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Beryllium	**0.55**		0.24	0.042	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Cadmium	**0.051**	**J**	0.24	0.023	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Chromium	**14**		0.61	0.076	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Copper	**23**		0.48	0.12	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Iron	**24000**		48	13	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Lead	**10**		0.61	0.058	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Manganese	**440**		1.2	0.21	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Nickel	**13**		0.61	0.098	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Selenium	**0.96**	**J**	1.2	0.24	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Silver	**0.047**	**J**	0.24	0.015	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Thallium	**0.17**	**J**	0.48	0.16	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Zinc	**58**		6.1	1.4	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10
Vanadium	**32**		2.4	0.57	mg/Kg	☼	08/17/15 17:43	08/18/15 21:27	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**19**	**J F2**	26	1.1	ug/Kg	☼	08/19/15 08:57	08/19/15 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.1	2.1	mg/Kg	☼	08/10/15 16:05	08/11/15 10:48	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-198387/1-A
Matrix: Solid
Analysis Batch: 198369

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Benzene	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Bromobenzene	ND		10	2.3	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Bromoform	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Bromomethane	ND		1.0	0.21	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Chloroethane	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Chloroform	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Chloromethane	ND		1.0	0.14	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Dibromomethane	ND		1.0	0.17	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Methylene Chloride	2.16	J	15	0.24	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Naphthalene	ND		10	1.8	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-198387/1-A
Matrix: Solid
Analysis Batch: 198369

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198387

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
o-Xylene	ND		2.0	0.26	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Styrene	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Toluene	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Trichloroethene	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		08/19/15 10:55	08/19/15 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*71 - 136*	*08/19/15 10:55*	*08/19/15 12:28*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*	*08/19/15 10:55*	*08/19/15 12:28*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 132*	*08/19/15 10:55*	*08/19/15 12:28*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*08/19/15 10:55*	*08/19/15 12:28*	*1*
Trifluorotoluene (Surr)	*97*		*65 - 140*	*08/19/15 10:55*	*08/19/15 12:28*	*1*

Lab Sample ID: LCS 580-198387/2-A
Matrix: Solid
Analysis Batch: 198369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	45.1		ug/Kg		113	72 - 123
1,1,1-Trichloroethane	40.0	43.3		ug/Kg		108	63 - 135
1,1,2,2-Tetrachloroethane	40.0	44.8		ug/Kg		112	73 - 125
1,1,2-Trichloroethane	40.0	44.7		ug/Kg		112	77 - 124
1,1-Dichloroethane	40.0	44.2		ug/Kg		110	70 - 128
1,1-Dichloroethene	40.0	43.0		ug/Kg		107	70 - 133
1,1-Dichloropropene	40.0	42.2		ug/Kg		105	77 - 125
1,2,3-Trichlorobenzene	40.0	46.1		ug/Kg		115	61 - 130
1,2,3-Trichloropropane	40.0	46.1		ug/Kg		115	77 - 123
1,2,4-Trichlorobenzene	40.0	46.2		ug/Kg		115	61 - 130
1,2,4-Trimethylbenzene	40.0	47.6		ug/Kg		119	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	44.4		ug/Kg		111	53 - 132
1,2-Dichlorobenzene	40.0	46.7		ug/Kg		117	79 - 117
1,2-Dichloroethane	40.0	46.5		ug/Kg		116	71 - 128
1,2-Dichloropropane	40.0	45.2		ug/Kg		113	76 - 161
1,3,5-Trimethylbenzene	40.0	47.1		ug/Kg		118	80 - 125
1,3-Dichlorobenzene	40.0	45.9		ug/Kg		115	79 - 119
1,3-Dichloropropane	40.0	44.3		ug/Kg		111	77 - 123
1,4-Dichlorobenzene	40.0	49.6	*	ug/Kg		124	79 - 117
2,2-Dichloropropane	40.0	44.3		ug/Kg		111	56 - 144
2-Chlorotoluene	40.0	44.9		ug/Kg		112	79 - 122
4-Chlorotoluene	40.0	44.3		ug/Kg		111	80 - 122
4-Isopropyltoluene	40.0	43.9		ug/Kg		110	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-198387/2-A
Matrix: Solid
Analysis Batch: 198369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	46.3		ug/Kg		116	70 - 128
Bromobenzene	40.0	43.6		ug/Kg		109	80 - 120
Bromoform	40.0	42.3		ug/Kg		106	50 - 124
Bromomethane	49.9	39.5		ug/Kg		79	57 - 148
Carbon tetrachloride	40.0	42.5		ug/Kg		106	59 - 145
Chlorobenzene	40.0	44.7		ug/Kg		112	75 - 120
Chlorobromomethane	40.0	45.5		ug/Kg		114	78 - 123
Chlorodibromomethane	40.0	45.7		ug/Kg		114	42 - 129
Chloroethane	50.0	37.3		ug/Kg		75	48 - 167
Chloroform	40.0	45.9		ug/Kg		115	78 - 125
Chloromethane	50.1	37.7		ug/Kg		75	55 - 136
cis-1,2-Dichloroethene	40.0	43.9		ug/Kg		110	70 - 130
cis-1,3-Dichloropropene	40.0	47.0		ug/Kg		118	69 - 129
Dibromomethane	40.0	47.3		ug/Kg		118	78 - 126
Dichlorobromomethane	40.0	46.8		ug/Kg		117	58 - 133
Dichlorodifluoromethane	49.9	42.7		ug/Kg		86	38 - 150
Ethylbenzene	40.0	41.9		ug/Kg		105	78 - 126
Ethylene Dibromide	40.0	45.9		ug/Kg		115	69 - 126
Hexachlorobutadiene	40.0	43.8		ug/Kg		109	68 - 134
Isopropylbenzene	40.0	43.4		ug/Kg		108	79 - 127
Methyl tert-butyl ether	40.0	47.4		ug/Kg		118	65 - 125
Methylene Chloride	40.0	46.3		ug/Kg		116	57 - 146
m-Xylene & p-Xylene	40.0	44.8		ug/Kg		112	78 - 126
Naphthalene	40.0	48.7		ug/Kg		122	14 - 170
n-Butylbenzene	40.0	43.3		ug/Kg		108	78 - 128
N-Propylbenzene	40.0	43.6		ug/Kg		109	81 - 127
o-Xylene	40.0	44.4		ug/Kg		111	77 - 127
sec-Butylbenzene	40.0	44.8		ug/Kg		112	78 - 128
Styrene	40.0	45.9		ug/Kg		115	79 - 127
tert-Butylbenzene	40.0	46.8		ug/Kg		117	71 - 136
Tetrachloroethene	40.0	41.2		ug/Kg		103	56 - 155
Toluene	40.0	44.0		ug/Kg		110	75 - 126
trans-1,2-Dichloroethene	40.0	42.8		ug/Kg		107	76 - 131
trans-1,3-Dichloropropene	40.0	46.0		ug/Kg		115	72 - 129
Trichloroethene	40.0	44.3		ug/Kg		111	83 - 124
Trichlorofluoromethane	50.1	39.7		ug/Kg		79	47 - 165
Vinyl chloride	50.0	42.0		ug/Kg		84	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*71 - 136*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*
Dibromofluoromethane (Surr)	*102*		*75 - 132*
Toluene-d8 (Surr)	*97*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198387/3-A
Matrix: Solid
Analysis Batch: 198369

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 198387

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	45.3		ug/Kg		113	72 - 123	0	20
1,1,1-Trichloroethane	40.0	42.4		ug/Kg		106	63 - 135	2	20
1,1,2,2-Tetrachloroethane	40.0	51.4	*	ug/Kg		129	73 - 125	14	22
1,1,2-Trichloroethane	40.0	47.9		ug/Kg		120	77 - 124	7	18
1,1-Dichloroethane	40.0	44.6		ug/Kg		112	70 - 128	1	21
1,1-Dichloroethene	40.0	42.9		ug/Kg		107	70 - 133	0	23
1,1-Dichloropropene	40.0	41.5		ug/Kg		104	77 - 125	2	16
1,2,3-Trichlorobenzene	40.0	48.6		ug/Kg		121	61 - 130	5	23
1,2,3-Trichloropropane	40.0	50.7	*	ug/Kg		127	77 - 123	10	23
1,2,4-Trichlorobenzene	40.0	47.7		ug/Kg		119	61 - 130	3	22
1,2,4-Trimethylbenzene	40.0	47.8		ug/Kg		119	79 - 124	0	18
1,2-Dibromo-3-Chloropropane	40.0	55.2	*	ug/Kg		138	53 - 132	22	27
1,2-Dichlorobenzene	40.0	47.0	*	ug/Kg		118	79 - 117	1	17
1,2-Dichloroethane	40.0	48.2		ug/Kg		121	71 - 128	4	18
1,2-Dichloropropane	40.0	44.9		ug/Kg		112	76 - 161	1	15
1,3,5-Trimethylbenzene	40.0	47.0		ug/Kg		117	80 - 125	0	18
1,3-Dichlorobenzene	40.0	46.7		ug/Kg		117	79 - 119	2	17
1,3-Dichloropropane	40.0	48.0		ug/Kg		120	77 - 123	8	19
1,4-Dichlorobenzene	40.0	49.7	*	ug/Kg		124	79 - 117	0	18
2,2-Dichloropropane	40.0	41.9		ug/Kg		105	56 - 144	6	21
2-Chlorotoluene	40.0	44.4		ug/Kg		111	79 - 122	1	18
4-Chlorotoluene	40.0	44.1		ug/Kg		110	80 - 122	0	18
4-Isopropyltoluene	40.0	43.8		ug/Kg		110	78 - 126	0	18
Benzene	40.0	46.4		ug/Kg		116	70 - 128	0	19
Bromobenzene	40.0	44.0		ug/Kg		110	80 - 120	1	19
Bromoform	40.0	44.1		ug/Kg		110	50 - 124	4	25
Bromomethane	49.9	39.4		ug/Kg		79	57 - 148	0	29
Carbon tetrachloride	40.0	41.5		ug/Kg		104	59 - 145	2	19
Chlorobenzene	40.0	44.8		ug/Kg		112	75 - 120	0	21
Chlorobromomethane	40.0	48.2		ug/Kg		121	78 - 123	6	19
Chlorodibromomethane	40.0	48.4		ug/Kg		121	42 - 129	6	23
Chloroethane	50.0	35.3		ug/Kg		71	48 - 167	5	53
Chloroform	40.0	46.0		ug/Kg		115	78 - 125	0	17
Chloromethane	50.1	38.5		ug/Kg		77	55 - 136	2	26
cis-1,2-Dichloroethene	40.0	43.0		ug/Kg		108	70 - 130	2	19
cis-1,3-Dichloropropene	40.0	48.3		ug/Kg		121	69 - 129	3	19
Dibromomethane	40.0	49.4		ug/Kg		124	78 - 126	4	18
Dichlorobromomethane	40.0	46.8		ug/Kg		117	58 - 133	0	19
Dichlorodifluoromethane	49.9	42.6		ug/Kg		85	38 - 150	0	26
Ethylbenzene	40.0	41.1		ug/Kg		103	78 - 126	2	23
Ethylene Dibromide	40.0	49.8		ug/Kg		125	69 - 126	8	21
Hexachlorobutadiene	40.0	43.1		ug/Kg		108	68 - 134	1	21
Isopropylbenzene	40.0	42.5		ug/Kg		106	79 - 127	2	20
Methyl tert-butyl ether	40.0	50.2		ug/Kg		125	65 - 125	6	30
Methylene Chloride	40.0	46.8		ug/Kg		117	57 - 146	1	21
m-Xylene & p-Xylene	40.0	43.6		ug/Kg		109	78 - 126	3	23
Naphthalene	40.0	55.4		ug/Kg		139	14 - 170	13	50
n-Butylbenzene	40.0	42.4		ug/Kg		106	78 - 128	2	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198387/3-A
Matrix: Solid
Analysis Batch: 198369

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 198387

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	43.5		ug/Kg		109	81 - 127	0	20
o-Xylene			40.0	43.6		ug/Kg		109	77 - 127	2	22
sec-Butylbenzene			40.0	45.3		ug/Kg		113	78 - 128	1	17
Styrene			40.0	45.9		ug/Kg		115	79 - 127	0	21
tert-Butylbenzene			40.0	47.0		ug/Kg		118	71 - 136	1	27
Tetrachloroethene			40.0	40.5		ug/Kg		101	56 - 155	2	27
Toluene			40.0	43.8		ug/Kg		109	75 - 126	1	19
trans-1,2-Dichloroethene			40.0	42.6		ug/Kg		107	76 - 131	0	18
trans-1,3-Dichloropropene			40.0	48.2		ug/Kg		120	72 - 129	5	20
Trichloroethene			40.0	43.0		ug/Kg		108	83 - 124	3	17
Trichlorofluoromethane			50.1	40.4		ug/Kg		81	47 - 165	2	54
Vinyl chloride			50.0	40.5		ug/Kg		81	67 - 131	4	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*71 - 136*
4-Bromofluorobenzene (Surr)	*97*		*70 - 120*
Dibromofluoromethane (Surr)	*103*		*75 - 132*
Toluene-d8 (Surr)	*97*		*80 - 120*
Trifluorotoluene (Surr)	*93*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-198177/1-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2-Chlorophenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2-Methylphenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2-Nitroaniline	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
2-Nitrophenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
3-Nitroaniline	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-198177/1-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
4-Chloroaniline	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
4-Nitroaniline	ND		100	20	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
4-Nitrophenol	ND		1000	250	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Acenaphthene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Acenaphthylene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Anthracene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzoic acid	ND		2500	750	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Benzyl alcohol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Butyl benzyl phthalate	ND		200	50	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Carbazole	ND		100	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Chrysene	ND		25	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Dibenzofuran	ND		100	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Diethyl phthalate	157	J	200	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Fluoranthene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Fluorene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Hexachlorobutadiene	ND		50	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Hexachloroethane	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Isophorone	ND		100	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Naphthalene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Nitrobenzene	ND		100	34	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Pentachlorophenol	ND		200	20	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Phenanthrene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Phenol	ND		100	15	ug/Kg		08/18/15 07:41	08/19/15 12:56	1
Pyrene	ND		20	5.0	ug/Kg		08/18/15 07:41	08/19/15 12:56	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-198177/1-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198177

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	69		28 - 143	08/18/15 07:41	08/19/15 12:56	1
2-Fluorobiphenyl	107		42 - 140	08/18/15 07:41	08/19/15 12:56	1
2-Fluorophenol	110		36 - 145	08/18/15 07:41	08/19/15 12:56	1
Nitrobenzene-d5	99		38 - 141	08/18/15 07:41	08/19/15 12:56	1
Phenol-d5	92		38 - 149	08/18/15 07:41	08/19/15 12:56	1
Terphenyl-d14	97		42 - 151	08/18/15 07:41	08/19/15 12:56	1

Lab Sample ID: LCS 580-198177/2-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	882		ug/Kg		88	66 - 115
1,2-Dichlorobenzene	1000	870		ug/Kg		87	64 - 112
1,3-Dichlorobenzene	1000	866		ug/Kg		87	64 - 111
1,4-Dichlorobenzene	1000	852		ug/Kg		85	65 - 110
1-Methylnaphthalene	1000	933		ug/Kg		93	62 - 118
2,4,5-Trichlorophenol	1000	895		ug/Kg		90	57 - 133
2,4,6-Trichlorophenol	1000	910		ug/Kg		91	62 - 133
2,4-Dichlorophenol	1000	965		ug/Kg		97	68 - 125
2,4-Dimethylphenol	1000	1030		ug/Kg		103	54 - 139
2,4-Dinitrophenol	2000	1320		ug/Kg		66	20 - 141
2,4-Dinitrotoluene	1000	838		ug/Kg		84	68 - 121
2,6-Dinitrotoluene	1000	821		ug/Kg		82	66 - 123
2-Chloronaphthalene	1000	942		ug/Kg		94	68 - 112
2-Chlorophenol	1000	906		ug/Kg		91	68 - 117
2-Methylnaphthalene	1000	944		ug/Kg		94	64 - 119
2-Methylphenol	1000	971		ug/Kg		97	71 - 116
2-Nitroaniline	1000	818		ug/Kg		82	64 - 112
2-Nitrophenol	1000	797		ug/Kg		80	67 - 127
3 & 4 Methylphenol	1000	940		ug/Kg		94	70 - 116
3,3'-Dichlorobenzidine	2000	957		ug/Kg		48	20 - 103
3-Nitroaniline	1000	598		ug/Kg		60	27 - 103
4,6-Dinitro-2-methylphenol	2000	1650		ug/Kg		83	48 - 130
4-Bromophenyl phenyl ether	1000	994		ug/Kg		99	68 - 122
4-Chloro-3-methylphenol	1000	864		ug/Kg		86	69 - 121
4-Chloroaniline	1000	480		ug/Kg		48	20 - 103
4-Chlorophenyl phenyl ether	1000	957		ug/Kg		96	75 - 108
4-Nitroaniline	1000	759		ug/Kg		76	58 - 108
4-Nitrophenol	2000	1540		ug/Kg		77	20 - 165
Acenaphthene	1000	946		ug/Kg		95	68 - 116
Acenaphthylene	1000	940		ug/Kg		94	68 - 120
Anthracene	1000	980		ug/Kg		98	73 - 116
Benzo[a]anthracene	1000	843		ug/Kg		84	76 - 119
Benzo[a]pyrene	1000	731		ug/Kg		73	72 - 117
Benzo[b]fluoranthene	1000	812		ug/Kg		81	63 - 132
Benzo[g,h,i]perylene	1000	747		ug/Kg		75	55 - 139
Benzo[k]fluoranthene	1000	783		ug/Kg		78	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-198177/2-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	1620	J	ug/Kg		81	29 - 158
Benzyl alcohol	1000	862		ug/Kg		86	55 - 123
bis (2-chloroisopropyl) ether	1000	753		ug/Kg		75	41 - 126
Bis(2-chloroethoxy)methane	1000	869		ug/Kg		87	69 - 107
Bis(2-chloroethyl)ether	1000	789		ug/Kg		79	62 - 110
Bis(2-ethylhexyl) phthalate	1000	770		ug/Kg		77	62 - 144
Butyl benzyl phthalate	1000	833		ug/Kg		83	69 - 142
Carbazole	1000	997		ug/Kg		100	76 - 135
Chrysene	1000	918		ug/Kg		92	75 - 114
Dibenz(a,h)anthracene	1000	728		ug/Kg		73	56 - 134
Dibenzofuran	1000	875		ug/Kg		88	72 - 109
Diethyl phthalate	1000	964		ug/Kg		96	73 - 116
Dimethyl phthalate	1000	984		ug/Kg		98	78 - 117
Di-n-butyl phthalate	1000	874		ug/Kg		87	66 - 140
Di-n-octyl phthalate	1000	630	*	ug/Kg		63	65 - 141
Fluoranthene	1000	922		ug/Kg		92	73 - 125
Fluorene	1000	960		ug/Kg		96	70 - 121
Hexachlorobenzene	1000	1000		ug/Kg		100	66 - 117
Hexachlorobutadiene	1000	936		ug/Kg		94	65 - 116
Hexachlorocyclopentadiene	1000	1040		ug/Kg		104	46 - 131
Hexachloroethane	1000	859		ug/Kg		86	62 - 120
Indeno[1,2,3-cd]pyrene	1000	801		ug/Kg		80	56 - 127
Isophorone	1000	884		ug/Kg		88	67 - 119
Naphthalene	1000	905		ug/Kg		91	62 - 112
Nitrobenzene	1000	809		ug/Kg		81	64 - 118
N-Nitrosodi-n-propylamine	1000	857		ug/Kg		86	62 - 116
N-Nitrosodiphenylamine	2010	1850		ug/Kg		92	73 - 115
Pentachlorophenol	2000	1520		ug/Kg		76	45 - 117
Phenanthrene	1000	918		ug/Kg		92	73 - 106
Phenol	1000	835		ug/Kg		83	63 - 111
Pyrene	1000	883		ug/Kg		88	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*112*		*28 - 143*
2-Fluorobiphenyl	*109*		*42 - 140*
2-Fluorophenol	*111*		*36 - 145*
Nitrobenzene-d5	*99*		*38 - 141*
Phenol-d5	*90*		*38 - 149*
Terphenyl-d14	*97*		*42 - 151*

Lab Sample ID: LCSD 580-198177/3-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 198177

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	994		ug/Kg		99	66 - 115	12	28
1,2-Dichlorobenzene	1000	877		ug/Kg		88	64 - 112	1	30
1,3-Dichlorobenzene	1000	861		ug/Kg		86	64 - 111	1	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198177/3-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 198177

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	1000	906		ug/Kg		91	65 - 110	6	30
1-Methylnaphthalene	1000	966		ug/Kg		97	62 - 118	3	30
2,4,5-Trichlorophenol	1000	905		ug/Kg		90	57 - 133	1	30
2,4,6-Trichlorophenol	1000	968		ug/Kg		97	62 - 133	6	30
2,4-Dichlorophenol	1000	981		ug/Kg		98	68 - 125	2	30
2,4-Dimethylphenol	1000	1080		ug/Kg		108	54 - 139	5	30
2,4-Dinitrophenol	2000	1490		ug/Kg		74	20 - 141	12	36
2,4-Dinitrotoluene	1000	906		ug/Kg		91	68 - 121	8	30
2,6-Dinitrotoluene	1000	927		ug/Kg		93	66 - 123	12	30
2-Chloronaphthalene	1000	985		ug/Kg		98	68 - 112	4	25
2-Chlorophenol	1000	980		ug/Kg		98	68 - 117	8	27
2-Methylnaphthalene	1000	953		ug/Kg		95	64 - 119	1	27
2-Methylphenol	1000	1060		ug/Kg		106	71 - 116	9	25
2-Nitroaniline	1000	844		ug/Kg		84	64 - 112	3	22
2-Nitrophenol	1000	874		ug/Kg		87	67 - 127	9	30
3 & 4 Methylphenol	1000	1050		ug/Kg		105	70 - 116	11	27
3,3'-Dichlorobenzidine	2000	1110		ug/Kg		55	20 - 103	14	60
3-Nitroaniline	1000	672		ug/Kg		67	27 - 103	12	33
4,6-Dinitro-2-methylphenol	2000	1810		ug/Kg		90	48 - 130	9	22
4-Bromophenyl phenyl ether	1000	1030		ug/Kg		103	68 - 122	4	30
4-Chloro-3-methylphenol	1000	875		ug/Kg		88	69 - 121	1	27
4-Chloroaniline	1000	531		ug/Kg		53	20 - 103	10	60
4-Chlorophenyl phenyl ether	1000	990		ug/Kg		99	75 - 108	3	30
4-Nitroaniline	1000	781		ug/Kg		78	58 - 108	3	32
4-Nitrophenol	2000	1740		ug/Kg		87	20 - 165	12	30
Acenaphthene	1000	946		ug/Kg		95	68 - 116	0	27
Acenaphthylene	1000	970		ug/Kg		97	68 - 120	3	28
Anthracene	1000	1020		ug/Kg		102	73 - 116	4	27
Benzo[a]anthracene	1000	842		ug/Kg		84	76 - 119	0	27
Benzo[a]pyrene	1000	782		ug/Kg		78	72 - 117	7	30
Benzo[b]fluoranthene	1000	830		ug/Kg		83	63 - 132	2	30
Benzo[g,h,i]perylene	1000	814		ug/Kg		81	55 - 139	9	28
Benzo[k]fluoranthene	1000	712		ug/Kg		71	63 - 119	10	30
Benzoic acid	2010	1600	J	ug/Kg		80	29 - 158	1	28
Benzyl alcohol	1000	978		ug/Kg		98	55 - 123	13	60
bis (2-chloroisopropyl) ether	1000	769		ug/Kg		77	41 - 126	2	57
Bis(2-chloroethoxy)methane	1000	925		ug/Kg		93	69 - 107	6	30
Bis(2-chloroethyl)ether	1000	852		ug/Kg		85	62 - 110	8	22
Bis(2-ethylhexyl) phthalate	1000	796		ug/Kg		80	62 - 144	3	30
Butyl benzyl phthalate	1000	822		ug/Kg		82	69 - 142	1	30
Carbazole	1000	1020		ug/Kg		102	76 - 135	2	30
Chrysene	1000	997		ug/Kg		100	75 - 114	8	26
Dibenz(a,h)anthracene	1000	769		ug/Kg		77	56 - 134	5	30
Dibenzofuran	1000	926		ug/Kg		93	72 - 109	6	30
Diethyl phthalate	1000	1030		ug/Kg		103	73 - 116	7	26
Dimethyl phthalate	1000	992		ug/Kg		99	78 - 117	1	30
Di-n-butyl phthalate	1000	890		ug/Kg		89	66 - 140	2	30
Di-n-octyl phthalate	1000	663		ug/Kg		66	65 - 141	5	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-198177/3-A
Matrix: Solid
Analysis Batch: 198347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 198177

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	939		ug/Kg		94	73 - 125	2	30
Fluorene			1000	982		ug/Kg		98	70 - 121	2	30
Hexachlorobenzene			1000	1110		ug/Kg		111	66 - 117	10	30
Hexachlorobutadiene			1000	989		ug/Kg		99	65 - 116	6	30
Hexachlorocyclopentadiene			1000	1100		ug/Kg		110	46 - 131	6	29
Hexachloroethane			1000	970		ug/Kg		97	62 - 120	12	30
Indeno[1,2,3-cd]pyrene			1000	750		ug/Kg		75	56 - 127	7	29
Isophorone			1000	868		ug/Kg		87	67 - 119	2	30
Naphthalene			1000	923		ug/Kg		92	62 - 112	2	26
Nitrobenzene			1000	913		ug/Kg		91	64 - 118	12	30
N-Nitrosodi-n-propylamine			1000	911		ug/Kg		91	62 - 116	6	28
N-Nitrosodiphenylamine			2010	1810		ug/Kg		90	73 - 115	2	30
Pentachlorophenol			2000	1530		ug/Kg		77	45 - 117	1	23
Phenanthrene			1000	925		ug/Kg		92	73 - 106	1	28
Phenol			1000	918		ug/Kg		92	63 - 111	10	26
Pyrene			1000	937		ug/Kg		94	70 - 120	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*111*		*28 - 143*
2-Fluorobiphenyl	*106*		*42 - 140*
2-Fluorophenol	*115*		*36 - 145*
Nitrobenzene-d5	*102*		*38 - 141*
Phenol-d5	*96*		*38 - 149*
Terphenyl-d14	*98*		*42 - 151*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-2945/1-A
Matrix: Solid
Analysis Batch: 2952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2945

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		08/12/15 09:41	08/12/15 12:56	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		08/12/15 09:41	08/12/15 12:56	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		08/12/15 09:41	08/12/15 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/12/15 09:41*	*08/12/15 12:56*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*08/12/15 09:41*	*08/12/15 12:56*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC) (Continued)

Lab Sample ID: 590-1655-1 DU
Matrix: Solid
Analysis Batch: 2952

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 2945

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND			ND		mg/Kg	☼			NC	25
Diesel Range Organics (DRO) (C10-C25)	ND			ND		mg/Kg	☼			NC	25
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*87*		*50 - 150*
n-Triacontane-d62	*98*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-198160/15-A
Matrix: Solid
Analysis Batch: 198340

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198160

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.10	0.021	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Arsenic	ND		0.25	0.090	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Barium	ND		0.25	0.039	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Beryllium	ND		0.10	0.018	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Cadmium	ND		0.10	0.0095	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Chromium	ND		0.25	0.032	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Copper	ND		0.20	0.049	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Iron	ND		20	5.4	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Lead	ND		0.25	0.024	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Manganese	ND		0.50	0.085	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Nickel	ND		0.25	0.041	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Selenium	ND		0.50	0.10	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Silver	ND		0.10	0.0060	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Thallium	ND		0.20	0.065	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Zinc	ND		2.5	0.56	mg/Kg		08/17/15 17:43	08/18/15 21:13	5
Vanadium	ND		1.0	0.24	mg/Kg		08/17/15 17:43	08/18/15 21:13	5

Lab Sample ID: LCS 580-198160/16-A
Matrix: Solid
Analysis Batch: 198340

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198160

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			150	143		mg/Kg		95	80 - 120		
Arsenic			200	196		mg/Kg		98	80 - 120		
Barium			200	194		mg/Kg		97	80 - 120		
Beryllium			5.00	5.12		mg/Kg		102	80 - 120		
Cadmium			5.00	4.67		mg/Kg		93	80 - 120		
Chromium			20.0	18.8		mg/Kg		94	80 - 120		
Copper			25.0	25.1		mg/Kg		100	80 - 120		
Iron			1100	1060		mg/Kg		96	80 - 120		

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-198160/16-A
Matrix: Solid
Analysis Batch: 198340

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	50.0	48.8		mg/Kg		98	80 - 120
Manganese	50.0	46.5		mg/Kg		93	80 - 120
Nickel	50.0	48.5		mg/Kg		97	80 - 120
Selenium	200	197		mg/Kg		99	80 - 120
Silver	30.0	28.2		mg/Kg		94	80 - 120
Thallium	200	204		mg/Kg		102	80 - 120
Zinc	200	194		mg/Kg		97	80 - 120
Vanadium	50.0	45.5		mg/Kg		91	80 - 120

Lab Sample ID: LCSD 580-198160/17-A
Matrix: Solid
Analysis Batch: 198340

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 198160

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	146		mg/Kg		97	80 - 120	2	20
Arsenic	200	195		mg/Kg		98	80 - 120	1	20
Barium	200	197		mg/Kg		99	80 - 120	2	20
Beryllium	5.00	4.97		mg/Kg		99	80 - 120	3	20
Cadmium	5.00	4.77		mg/Kg		95	80 - 120	2	20
Chromium	20.0	18.8		mg/Kg		94	80 - 120	0	20
Copper	25.0	24.9		mg/Kg		100	80 - 120	1	20
Iron	1100	1070		mg/Kg		97	80 - 120	1	20
Lead	50.0	49.9		mg/Kg		100	80 - 120	2	20
Manganese	50.0	46.7		mg/Kg		93	80 - 120	1	20
Nickel	50.0	48.4		mg/Kg		97	80 - 120	0	20
Selenium	200	196		mg/Kg		98	80 - 120	0	20
Silver	30.0	28.5		mg/Kg		95	80 - 120	1	20
Thallium	200	208		mg/Kg		104	80 - 120	2	20
Zinc	200	192		mg/Kg		96	80 - 120	1	20
Vanadium	50.0	45.8		mg/Kg		92	80 - 120	1	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-3051/10-A
Matrix: Solid
Analysis Batch: 3069

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3051

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		08/19/15 08:57	08/19/15 15:09	1

Lab Sample ID: LCS 590-3051/9-A
Matrix: Solid
Analysis Batch: 3069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3051

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	198		ug/Kg		99	80 - 120

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 590-1655-1 MS
Matrix: Solid
Analysis Batch: 3069

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 3051

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	19	J F2	219	234		ug/Kg	☼	98	80 - 120

Lab Sample ID: 590-1655-1 MSD
Matrix: Solid
Analysis Batch: 3069

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 3051

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	19	J F2	150	170	F2	ug/Kg	☼	101	80 - 120	32	20

Lab Sample ID: 590-1655-1 DU
Matrix: Solid
Analysis Batch: 3069

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 3051

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hg	19	J F2	16.8	J	ug/Kg	☼	13	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-197500/1-A
Matrix: Solid
Analysis Batch: 197554

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 197500

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg		08/10/15 16:05	08/11/15 10:48	1

Lab Sample ID: LCS 580-197500/2-A
Matrix: Solid
Analysis Batch: 197554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 197500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	10.0	10.3		mg/Kg		103	80 - 120

Lab Sample ID: 590-1655-1 MS
Matrix: Solid
Analysis Batch: 197554

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 197500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		10.5	10.6		mg/Kg	☼	101	80 - 120

Lab Sample ID: 590-1655-1 MSD
Matrix: Solid
Analysis Batch: 197554

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 197500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		10.5	10.7		mg/Kg	☼	102	80 - 120	2	20

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 590-1655-1 DU
Matrix: Solid
Analysis Batch: 197554

Client Sample ID: SB-12 (235-236.5)
Prep Type: Total/NA
Prep Batch: 197500

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/Kg	☼			NC	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Client Sample ID: SB-12 (235-236.5)

Date Collected: 08/05/15 10:00
Date Received: 08/07/15 09:15

Lab Sample ID: 590-1655-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			2909	08/10/15 08:55	JIS	TAL SPK

Client Sample ID: SB-12 (235-236.5)

Date Collected: 08/05/15 10:00
Date Received: 08/07/15 09:15

Lab Sample ID: 590-1655-1
Matrix: Solid
Percent Solids: 81.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.755 g	10 mL	198387	08/19/15 10:56	IWH	TAL SEA
Total/NA	Analysis	8260B		1	5.755 g	10 mL	198369	08/19/15 13:59	TL1	TAL SEA
Total/NA	Prep	3550B			10.185 g	10 mL	198177	08/18/15 07:41	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.185 g	10 mL	198347	08/19/15 18:29	AHP	TAL SEA
Total/NA	Prep	NWTPH-HCID			10.35 g	20 mL	2945	08/12/15 09:41	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.35 g	20 mL	2952	08/12/15 13:35	NMI	TAL SPK
Total/NA	Prep	3050B			1.0127 g	50 mL	198160	08/17/15 17:43	PAB	TAL SEA
Total/NA	Analysis	6020A		10	1.0127 g	50 mL	198340	08/18/15 21:27	FCW	TAL SEA
Total/NA	Prep	7471B			1.16 g	50 mL	3051	08/19/15 08:57	JSP	TAL SPK
Total/NA	Analysis	7471B		1	1.16 g	50 mL	3069	08/19/15 15:11	JSP	TAL SPK
Total/NA	Prep	9012A			5.93 g	100 mL	197500	08/10/15 16:05	SPP	TAL SEA
Total/NA	Analysis	9012A		1	5.93 g	100 mL	197554	08/11/15 10:48	JLS	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1655-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

8/24/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers, Inc

REPORT TO: Shelly @ geoengineers.com

ADDRESS: 523 E Second Ave Spokane WA 99202

PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Marshall Landfill

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [X] STD. [7] [5] [4] [3] [2] [1] [<1]

Petroleum Hydrocarbon Analyses: [X] STD. [4] [3] [2] [1] [<1]

[OTHER] Specify:

* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: HCID	Metals	8260 VOCs	EDB	8270 SVOCs	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	MW-14 (235-236.5)	8/5/2015 1006		X	X	X	X	X	S	5		
2												
3												
4												
5												
6												
7												
8												
9												
10												

RELEASED BY:		DATE: 8/7/15	RECEIVED BY: Sheila Kratz	DATE: 8/7/15	
PRINT NAME: Josh M	FIRM: GEI	TIME:	PRINT NAME: Sheila Kratz	FIRM: TA Spok	TIME 9:15
RELEASED BY:		DATE: 8/7/15	RECEIVED BY:	DATE	
PRINT NAME:	FIRM: GEI	TIME:	PRINT NAME:	FIRM:	TIME:

ADDITIONAL REMARKS:

TEMP: 6.1 °C

PAGE 1 OF 1

Iced

TAL-1000 (0714)

590-1655 Chain of Custody

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Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1655-1

Login Number: 1655
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1655-1

Login Number: 1655
List Number: 2
Creator: Daugherty, Nicole M

List Source: TestAmerica Seattle
List Creation: 08/10/15 12:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1807-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
9/16/2015 11:23:05 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-1807-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/24/2015 4:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5º C.

GC/MS VOA Method 8260B:
The continuing calibration verification (CCV) associated with batch 199342 recovered above the upper control limit for Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The method blank for batch 199342 contained Methylene chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Internal standard responses were outside of acceptance limits for the following sample: MW-15A (204-205) (590-1807-2). Matrix interference is suspected. The sample was re-analyzed with the remaining vial, however Chemstation had a random run error on the sample and data was not collected. Therefore matrix affects could not be confirmed. Internal standard responses were below method limits, therefore the data has a high bias associated with the results; all analytes were below the reporting limit. The data has been qualified and reported.

Surrogate recovery for the following sample was outside control limits: MW-15A (204-205) (590-1807-2). Matrix interference is suspected. The sample was re-analyzed with the remaining vial, however Chemstation had a random run error on the sample and data was not collected. Therefore matrix affects could not be confirmed. The data has been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Method 8270C:
The continuing calibration verification (CCV) associated with batch 580-199683 recovered above the upper control limit for 4-Nitrophenol and Indeno(1,2,3-cd)pyrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-7D (169-170.5) (590-1807-1), MW-15A (204-205) (590-1807-2), (CCVIS 580-199683/3), (CCVL 580-199683/4), (LCS 580-199148/2-A), (LCSD 580-199148/3-A), (MB 580-199148/1-A), (580-52631-A-13-J), (580-52631-A-13-K MS) and (580-52631-A-13-L MSD).

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-199683 was outside criteria for N-Nitrosodi-n-propylamine, Nitrobenzene, Isophorone and Bis(2-chloroethoxy)methane. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated. A low level CCV (CCVL) is analyzed to prove sensitivity down to the reporting limit (RL) for all affected targets.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-199148 and analytical batch 580-199683 recovered above control limits for 4-Nitrophenol. This target was biased high in the LCS/LCSD and not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA Method 8141A:
The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with batch 280-293529. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15 %D. The associated samples were ND. Dichlorvos is reported from the primary column.

GC Semi VOA Method NWTPH-HCID:
Surrogate recovery for the following sample was outside the upper control limit: (MB 590-3161/1-A). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Job ID: 590-1807-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described above in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1807-1	MW-7D (169-170.5)	Solid	08/17/15 16:30	08/24/15 16:25
590-1807-2	MW-15A (204-205)	Solid	08/24/15 10:30	08/24/15 16:25

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Client Sample ID: MW-7D (169-170.5)
Date Collected: 08/17/15 16:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-1
Matrix: Solid
Percent Solids: 72.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.7	0.41	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,1,1-Trichloroethane	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,1,2,2-Tetrachloroethane	ND		6.8	1.5	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,1,2-Trichloroethane	ND		3.4	0.43	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,1-Dichloroethane	ND		1.7	0.32	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,1-Dichloroethene	ND		8.5	0.85	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,1-Dichloropropene	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2,3-Trichlorobenzene	ND		5.1	1.0	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2,3-Trichloropropane	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2,4-Trichlorobenzene	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2,4-Trimethylbenzene	ND		3.4	0.27	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2-Dibromo-3-Chloropropane	ND		17	2.7	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2-Dichlorobenzene	ND		3.4	0.53	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2-Dichloroethane	ND		1.7	0.26	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,2-Dichloropropane	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,3,5-Trimethylbenzene	ND		8.5	0.29	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,3-Dichlorobenzene	ND		3.4	0.44	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,3-Dichloropropane	ND		3.4	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
1,4-Dichlorobenzene	ND		1.7	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
2,2-Dichloropropane	ND		8.5	1.5	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
2-Chlorotoluene	ND		3.4	0.29	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
4-Chlorotoluene	ND		3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
4-Isopropyltoluene	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Benzene	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Bromobenzene	ND		17	3.9	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Bromoform	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Bromomethane	ND		1.7	0.36	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Carbon tetrachloride	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Chlorobenzene	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Chlorobromomethane	ND		3.4	0.43	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Chlorodibromomethane	ND		3.4	0.46	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Chloroethane	ND		3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Chloroform	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Chloromethane	ND		1.7	0.24	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
cis-1,2-Dichloroethene	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
cis-1,3-Dichloropropene	ND		1.7	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Dibromomethane	ND		1.7	0.29	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Dichlorobromomethane	ND		1.7	0.31	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Dichlorodifluoromethane	ND		3.4	0.84	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Ethylbenzene	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Ethylene Dibromide	ND		1.7	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Hexachlorobutadiene	ND		5.1	1.0	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Isopropylbenzene	ND		3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Methyl tert-butyl ether	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Methylene Chloride	**13**	**J B**	26	0.41	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
m-Xylene & p-Xylene	ND		3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Naphthalene	ND		17	3.1	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
n-Butylbenzene	**0.36**	**J**	3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
N-Propylbenzene	ND		3.4	0.55	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1

Client Sample ID: MW-7D (169-170.5)
Date Collected: 08/17/15 16:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-1
Matrix: Solid
Percent Solids: 72.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		3.4	0.44	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
sec-Butylbenzene	ND		3.4	0.43	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Styrene	ND		3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
tert-Butylbenzene	ND		3.4	0.34	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Tetrachloroethene	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Toluene	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
trans-1,2-Dichloroethene	ND		3.4	0.68	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
trans-1,3-Dichloropropene	ND		17	2.4	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Trichloroethene	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Trichlorofluoromethane	ND		3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1
Vinyl chloride	**1.9**	**J**	3.4	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*71 - 136*	*08/28/15 13:24*	*08/28/15 19:48*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 120*	*08/28/15 13:24*	*08/28/15 19:48*	*1*
Dibromofluoromethane (Surr)	*87*		*75 - 132*	*08/28/15 13:24*	*08/28/15 19:48*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*08/28/15 13:24*	*08/28/15 19:48*	*1*
Trifluorotoluene (Surr)	*100*		*65 - 140*	*08/28/15 13:24*	*08/28/15 19:48*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		69	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
1,2-Dichlorobenzene	ND		76	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
1,3-Dichlorobenzene	ND		69	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
1,4-Dichlorobenzene	ND		69	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
1-Methylnaphthalene	ND		41	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,4,5-Trichlorophenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,4,6-Trichlorophenol	ND		210	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,4-Dichlorophenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,4-Dimethylphenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,4-Dinitrophenol	ND		1400	280	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,4-Dinitrotoluene	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2,6-Dinitrotoluene	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2-Chloronaphthalene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2-Chlorophenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2-Methylnaphthalene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2-Methylphenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2-Nitroaniline	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
2-Nitrophenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
3 & 4 Methylphenol	ND		280	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
3,3'-Dichlorobenzidine	ND		280	41	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
3-Nitroaniline	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4,6-Dinitro-2-methylphenol	ND		1400	140	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4-Bromophenyl phenyl ether	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4-Chloro-3-methylphenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4-Chloroaniline	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4-Chlorophenyl phenyl ether	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4-Nitroaniline	ND		140	28	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
4-Nitrophenol	ND	*	1400	340	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Acenaphthene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1

Client Sample ID: MW-7D (169-170.5)
Date Collected: 08/17/15 16:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-1
Matrix: Solid
Percent Solids: 72.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Anthracene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzo[a]anthracene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzo[a]pyrene	ND		41	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzo[b]fluoranthene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzo[g,h,i]perylene	ND		34	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzo[k]fluoranthene	ND		34	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzoic acid	ND		3400	1000	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Benzyl alcohol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
bis (2-chloroisopropyl) ether	ND		340	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Bis(2-chloroethoxy)methane	ND		140	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Bis(2-chloroethyl)ether	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Bis(2-ethylhexyl) phthalate	**290**	**J**	830	69	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Butyl benzyl phthalate	ND		280	69	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Carbazole	ND		140	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Chrysene	ND		34	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Dibenz(a,h)anthracene	ND		55	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Dibenzofuran	ND		140	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Diethyl phthalate	ND		280	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Dimethyl phthalate	ND		140	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Di-n-butyl phthalate	ND		690	69	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Di-n-octyl phthalate	**140**	**J**	690	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Fluoranthene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Fluorene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Hexachlorobenzene	ND		69	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Hexachlorobutadiene	ND		69	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Hexachlorocyclopentadiene	ND		140	14	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Hexachloroethane	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Indeno[1,2,3-cd]pyrene	ND		55	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Isophorone	ND		140	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Naphthalene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Nitrobenzene	ND		140	47	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
N-Nitrosodi-n-propylamine	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
N-Nitrosodiphenylamine	ND		69	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Pentachlorophenol	ND		280	28	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Phenanthrene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Phenol	ND		140	21	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1
Pyrene	ND		28	6.9	ug/Kg	☼	08/27/15 08:16	09/02/15 09:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*28 - 143*	*08/27/15 08:16*	*09/02/15 09:24*	*1*
2-Fluorobiphenyl	*74*		*42 - 140*	*08/27/15 08:16*	*09/02/15 09:24*	*1*
2-Fluorophenol	*85*		*36 - 145*	*08/27/15 08:16*	*09/02/15 09:24*	*1*
Nitrobenzene-d5	*76*		*38 - 141*	*08/27/15 08:16*	*09/02/15 09:24*	*1*
Phenol-d5	*89*		*38 - 149*	*08/27/15 08:16*	*09/02/15 09:24*	*1*
Terphenyl-d14	*108*		*42 - 151*	*08/27/15 08:16*	*09/02/15 09:24*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.6	0.19	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1

Client Sample ID: MW-7D (169-170.5)
Date Collected: 08/17/15 16:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-1
Matrix: Solid
Percent Solids: 72.2

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		2.6	0.19	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
4,4'-DDT	ND		2.6	0.20	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Aldrin	ND		1.3	0.29	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
alpha-BHC	ND		1.3	0.37	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
alpha-Chlordane	ND		1.3	0.18	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
beta-BHC	ND		1.3	0.43	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
delta-BHC	ND		1.3	0.20	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Dieldrin	ND		2.6	0.16	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Endosulfan I	ND		1.3	0.13	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Endosulfan II	ND		2.6	0.23	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Endosulfan sulfate	ND		2.6	0.24	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Endrin	ND		2.6	0.22	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Endrin aldehyde	ND		2.6	0.26	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Endrin ketone	ND		2.6	0.34	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
gamma-BHC (Lindane)	ND		1.3	0.40	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
gamma-Chlordane	ND		1.3	0.18	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Heptachlor	ND		2.6	0.61	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Heptachlor epoxide	ND		1.3	0.0040	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Methoxychlor	ND		13	0.34	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1
Toxaphene	ND		130	30	ug/Kg	☼	08/28/15 14:48	09/15/15 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*74*		*60 - 128*	*08/28/15 14:48*	*09/15/15 15:14*	*1*
Tetrachloro-m-xylene	*81*		*35 - 129*	*08/28/15 14:48*	*09/15/15 15:14*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1
PCB-1221	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1
PCB-1232	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1
PCB-1242	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1
PCB-1248	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1
PCB-1254	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1
PCB-1260	ND		14	3.0	ug/Kg	☼	08/28/15 10:11	08/28/15 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*51.9 - 151*	*08/28/15 10:11*	*08/28/15 13:07*	*1*
DCB Decachlorobiphenyl (Surr)	*88*	*p*	*73.5 - 164*	*08/28/15 10:11*	*08/28/15 13:07*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		88	16	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Bolstar	ND		17	5.6	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Chlorpyrifos	ND		26	8.5	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Coumaphos	ND		17	3.7	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Demeton, Total	ND		51	9.9	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Diazinon	ND		29	9.6	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Dichlorvos	ND		30	9.7	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Dimethoate	ND		29	9.3	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Disulfoton	ND		63	10	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1

Client Sample ID: MW-7D (169-170.5)
Date Collected: 08/17/15 16:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-1
Matrix: Solid
Percent Solids: 72.2

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EPN	ND		17	4.8	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Famphur	ND		17	4.2	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Fensulfothion	ND		33	11	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Mevinphos	ND		20	6.1	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Methyl parathion	ND		26	8.4	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Merphos	ND		39	6.8	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Malathion	ND		20	6.1	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Fenthion	ND		43	11	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Ethyl Parathion	ND		24	7.0	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Phorate	ND		26	7.5	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Ronnel	ND		60	20	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Simazine	ND		88	29	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Sulfotepp	ND		26	8.2	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Thionazin	ND		24	7.3	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Tokuthion	ND		26	5.1	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Trichloronate	ND		26	8.2	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Ethoprop	ND		20	6.5	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Propazine	ND		88	11	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1
Azinphos-methyl	ND		17	4.6	ug/Kg	☼	08/26/15 18:11	09/03/15 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*48*		*42 - 132*	*08/26/15 18:11*	*09/03/15 23:27*	*1*
Triphenylphosphate	*60*		*47 - 161*	*08/26/15 18:11*	*09/03/15 23:27*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		27	3.1	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
2,4-D	ND		110	19	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
2,4-DB	ND		110	10	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
Dalapon	ND		54	1.9	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
Dicamba	ND		54	1.9	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
Dichlorprop	ND		110	4.3	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
MCPA	ND		11000	2700	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
MCPP	ND		11000	2700	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1
Silvex (2,4,5-TP)	ND		27	1.9	ug/Kg	☼	08/31/15 20:47	09/04/15 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*85*		*31 - 105*	*08/31/15 20:47*	*09/04/15 04:10*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		55	55	mg/Kg	☼	08/25/15 15:21	08/26/15 13:16	1
Diesel Range Organics (DRO) (C10-C25)	ND		140	140	mg/Kg	☼	08/25/15 15:21	08/26/15 13:16	1
Residual Range Organics (RRO) (C25-C36)	ND		140	140	mg/Kg	☼	08/25/15 15:21	08/26/15 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*08/25/15 15:21*	*08/26/15 13:16*	*1*
n-Triacontane-d62	*131*		*50 - 150*	*08/25/15 15:21*	*08/26/15 13:16*	*1*

Client Sample ID: MW-7D (169-170.5)

Lab Sample ID: 590-1807-1
Date Collected: 08/17/15 16:30
Matrix: Solid
Date Received: 08/24/15 16:25
Percent Solids: 72.2

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.45		0.25	0.053	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Arsenic	6.4		0.63	0.23	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Barium	100		0.63	0.098	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Beryllium	0.87		0.25	0.044	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Cadmium	0.072	J	0.25	0.024	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Chromium	17		0.63	0.079	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Copper	19	B	0.50	0.12	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Iron	29000		50	13	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Lead	10		0.63	0.060	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Manganese	380		1.3	0.21	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Nickel	15		0.63	0.10	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Selenium	1.0	J	1.3	0.25	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Silver	ND		0.25	0.015	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Thallium	0.24	J	0.50	0.16	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Zinc	61		6.3	1.4	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10
Vanadium	53		2.5	0.59	mg/Kg	☼	09/01/15 11:03	09/02/15 16:37	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	7.6	J	47	1.9	ug/Kg	☼	09/02/15 09:07	09/02/15 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.6	2.6	mg/Kg	☼	08/28/15 17:00	08/31/15 14:55	1

Client Sample ID: MW-15A (204-205)

Lab Sample ID: 590-1807-2
Date Collected: 08/24/15 10:30
Matrix: Solid
Date Received: 08/24/15 16:25
Percent Solids: 79.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	2.0	0.47	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,1,1-Trichloroethane	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,1,2,2-Tetrachloroethane	ND	*	7.9	1.8	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,1,2-Trichloroethane	ND	*	3.9	0.49	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,1-Dichloroethane	ND	*	2.0	0.37	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,1-Dichloroethene	ND	*	9.8	0.98	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,1-Dichloropropene	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2,3-Trichlorobenzene	ND	*	5.9	1.2	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2,3-Trichloropropane	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2,4-Trichlorobenzene	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2,4-Trimethylbenzene	ND	*	3.9	0.32	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2-Dibromo-3-Chloropropane	ND	*	20	3.2	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2-Dichlorobenzene	ND	*	3.9	0.61	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2-Dichloroethane	ND	*	2.0	0.30	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,2-Dichloropropane	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,3,5-Trimethylbenzene	ND	*	9.8	0.33	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,3-Dichlorobenzene	ND	*	3.9	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,3-Dichloropropane	ND	*	3.9	0.45	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
1,4-Dichlorobenzene	ND	*	2.0	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1

Client Sample ID: MW-15A (204-205)
Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2
Matrix: Solid
Percent Solids: 79.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND	*	9.8	1.8	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
2-Chlorotoluene	ND	*	3.9	0.33	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
4-Chlorotoluene	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
4-Isopropyltoluene	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Benzene	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Bromobenzene	ND	*	20	4.5	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Bromoform	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Bromomethane	ND	*	2.0	0.41	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Carbon tetrachloride	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Chlorobenzene	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Chlorobromomethane	ND	*	3.9	0.49	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Chlorodibromomethane	ND	*	3.9	0.53	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Chloroethane	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Chloroform	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Chloromethane	ND	*	2.0	0.28	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
cis-1,2-Dichloroethene	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
cis-1,3-Dichloropropene	ND	*	2.0	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Dibromomethane	ND	*	2.0	0.33	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Dichlorobromomethane	ND	*	2.0	0.35	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Dichlorodifluoromethane	ND	*	3.9	0.97	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Ethylbenzene	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Ethylene Dibromide	ND	*	2.0	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Hexachlorobutadiene	ND	*	5.9	1.2	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Isopropylbenzene	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Methyl tert-butyl ether	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Methylene Chloride	**9.6**	**J B ***	30	0.47	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
m-Xylene & p-Xylene	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Naphthalene	ND	*	20	3.5	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
n-Butylbenzene	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
N-Propylbenzene	ND	*	3.9	0.63	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
o-Xylene	ND	*	3.9	0.51	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
sec-Butylbenzene	ND	*	3.9	0.49	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Styrene	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
tert-Butylbenzene	ND	*	3.9	0.39	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Tetrachloroethene	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Toluene	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
trans-1,2-Dichloroethene	ND	*	3.9	0.79	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
trans-1,3-Dichloropropene	ND	*	20	2.8	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Trichloroethene	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Trichlorofluoromethane	ND	*	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1
Vinyl chloride	**3.3**	**J ***	3.9	0.59	ug/Kg	☼	08/28/15 13:24	08/28/15 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*52*	*X **	*71 - 136*	*08/28/15 13:24*	*08/28/15 20:14*	*1*
4-Bromofluorobenzene (Surr)	*104*	*	*70 - 120*	*08/28/15 13:24*	*08/28/15 20:14*	*1*
Dibromofluoromethane (Surr)	*68*	*X **	*75 - 132*	*08/28/15 13:24*	*08/28/15 20:14*	*1*
Toluene-d8 (Surr)	*111*	*	*80 - 120*	*08/28/15 13:24*	*08/28/15 20:14*	*1*
Trifluorotoluene (Surr)	*124*	*	*65 - 140*	*08/28/15 13:24*	*08/28/15 20:14*	*1*

Client Sample ID: MW-15A (204-205)
Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2
Matrix: Solid
Percent Solids: 79.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		61	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
1,2-Dichlorobenzene	ND		67	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
1,3-Dichlorobenzene	ND		61	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
1,4-Dichlorobenzene	ND		61	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
1-Methylnaphthalene	ND		37	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,4,5-Trichlorophenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,4,6-Trichlorophenol	ND		180	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,4-Dichlorophenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,4-Dimethylphenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,4-Dinitrophenol	ND		1200	240	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,4-Dinitrotoluene	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2,6-Dinitrotoluene	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2-Chloronaphthalene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2-Chlorophenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2-Methylnaphthalene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2-Methylphenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2-Nitroaniline	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
2-Nitrophenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
3 & 4 Methylphenol	ND		240	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
3,3'-Dichlorobenzidine	ND		240	37	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
3-Nitroaniline	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4,6-Dinitro-2-methylphenol	ND		1200	120	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4-Bromophenyl phenyl ether	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4-Chloro-3-methylphenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4-Chloroaniline	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4-Chlorophenyl phenyl ether	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4-Nitroaniline	ND		120	24	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
4-Nitrophenol	ND	*	1200	300	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Acenaphthene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Acenaphthylene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Anthracene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzo[a]anthracene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzo[a]pyrene	ND		37	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzo[b]fluoranthene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzo[g,h,i]perylene	ND		30	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzo[k]fluoranthene	ND		30	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzoic acid	ND		3000	910	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Benzyl alcohol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
bis (2-chloroisopropyl) ether	ND		300	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Bis(2-chloroethoxy)methane	ND		120	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Bis(2-chloroethyl)ether	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Bis(2-ethylhexyl) phthalate	**61**	**J**	730	61	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Butyl benzyl phthalate	ND		240	61	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Carbazole	ND		120	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Chrysene	ND		30	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Dibenz(a,h)anthracene	ND		49	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Dibenzofuran	ND		120	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Diethyl phthalate	ND		240	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Dimethyl phthalate	**16**	**J**	120	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Client Sample ID: MW-15A (204-205)
Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2
Matrix: Solid
Percent Solids: 79.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		610	61	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Di-n-octyl phthalate	ND		610	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Fluoranthene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Fluorene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Hexachlorobenzene	ND		61	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Hexachlorobutadiene	ND		61	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Hexachlorocyclopentadiene	ND		120	12	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Hexachloroethane	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Indeno[1,2,3-cd]pyrene	ND		49	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Isophorone	ND		120	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Naphthalene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Nitrobenzene	ND		120	41	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
N-Nitrosodi-n-propylamine	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
N-Nitrosodiphenylamine	ND		61	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Pentachlorophenol	ND		240	24	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Phenanthrene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Phenol	ND		120	18	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1
Pyrene	ND		24	6.1	ug/Kg	☼	08/27/15 08:16	09/02/15 09:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*79*		*28 - 143*	*08/27/15 08:16*	*09/02/15 09:49*	*1*
2-Fluorobiphenyl	*80*		*42 - 140*	*08/27/15 08:16*	*09/02/15 09:49*	*1*
2-Fluorophenol	*85*		*36 - 145*	*08/27/15 08:16*	*09/02/15 09:49*	*1*
Nitrobenzene-d5	*78*		*38 - 141*	*08/27/15 08:16*	*09/02/15 09:49*	*1*
Phenol-d5	*85*		*38 - 149*	*08/27/15 08:16*	*09/02/15 09:49*	*1*
Terphenyl-d14	*115*		*42 - 151*	*08/27/15 08:16*	*09/02/15 09:49*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.4	0.18	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
4,4'-DDE	ND		2.4	0.17	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
4,4'-DDT	ND		2.4	0.19	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Aldrin	ND		1.2	0.27	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
alpha-BHC	ND		1.2	0.34	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
alpha-Chlordane	ND		1.2	0.16	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
beta-BHC	ND		1.2	0.40	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
delta-BHC	ND		1.2	0.18	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Dieldrin	ND		2.4	0.14	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Endosulfan I	ND		1.2	0.12	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Endosulfan II	ND		2.4	0.21	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Endosulfan sulfate	ND		2.4	0.23	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Endrin	ND		2.4	0.20	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Endrin aldehyde	ND		2.4	0.24	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Endrin ketone	ND		2.4	0.32	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
gamma-BHC (Lindane)	ND		1.2	0.37	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
gamma-Chlordane	ND		1.2	0.16	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Heptachlor	ND		2.4	0.57	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Heptachlor epoxide	ND		1.2	0.0037	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Methoxychlor	ND		12	0.32	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1
Toxaphene	ND		120	28	ug/Kg	☼	08/28/15 14:48	09/15/15 16:06	1

Client Sample ID: MW-15A (204-205)

Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2

Matrix: Solid
Percent Solids: 79.7

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*60 - 128*	*08/28/15 14:48*	*09/15/15 16:06*	*1*
DCB Decachlorobiphenyl	*95*		*60 - 128*	*08/28/15 14:48*	*09/15/15 16:06*	*1*
Tetrachloro-m-xylene	*77*		*35 - 129*	*08/28/15 14:48*	*09/15/15 16:06*	*1*
Tetrachloro-m-xylene	*76*		*35 - 129*	*08/28/15 14:48*	*09/15/15 16:06*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1
PCB-1221	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1
PCB-1232	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1
PCB-1242	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1
PCB-1248	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1
PCB-1254	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1
PCB-1260	ND		12	2.7	ug/Kg	☼	08/28/15 10:11	08/28/15 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*51.9 - 151*	*08/28/15 10:11*	*08/28/15 15:30*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*73.5 - 164*	*08/28/15 10:11*	*08/28/15 15:30*	*1*

Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		82	15	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Bolstar	ND		16	5.2	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Chlorpyrifos	ND		24	7.9	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Coumaphos	ND		16	3.4	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Demeton, Total	ND		48	9.2	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Diazinon	ND		27	8.9	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Dichlorvos	ND		28	9.0	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Dimethoate	ND		27	8.6	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Disulfoton	ND		58	9.4	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
EPN	ND		16	4.5	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Famphur	ND		16	3.9	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Fensulfothion	ND		30	9.9	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Mevinphos	ND		18	5.6	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Methyl parathion	ND		24	7.8	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Merphos	ND		37	6.3	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Malathion	ND		18	5.7	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Fenthion	ND		40	11	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Ethyl Parathion	ND		22	6.4	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Phorate	ND		24	6.9	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Ronnel	ND		56	19	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Simazine	ND		82	27	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Sulfotepp	ND		24	7.6	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Thionazin	ND		22	6.8	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Tokuthion	ND		24	4.8	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Trichloronate	ND		24	7.6	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Ethoprop	ND		18	6.0	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Propazine	ND		82	11	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1
Azinphos-methyl	ND		16	4.3	ug/Kg	☼	08/26/15 18:11	09/04/15 00:54	1

Client Sample ID: MW-15A (204-205)

Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2

Matrix: Solid
Percent Solids: 79.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	*63*		*42 - 132*	*08/26/15 18:11*	*09/04/15 00:54*	*1*
Triphenylphosphate	*70*		*47 - 161*	*08/26/15 18:11*	*09/04/15 00:54*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		25	2.9	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
2,4-D	ND		100	18	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
2,4-DB	ND		100	9.3	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
Dalapon	ND		50	1.8	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
Dicamba	ND		50	1.8	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
Dichlorprop	ND		100	4.0	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
MCPA	ND		10000	2500	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
MCPP	ND		10000	2500	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1
Silvex (2,4,5-TP)	ND		25	1.8	ug/Kg	☼	08/31/15 20:47	09/04/15 04:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	*79*		*31 - 105*	*08/31/15 20:47*	*09/04/15 04:33*	*1*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		49	49	mg/Kg	☼	08/25/15 15:22	08/26/15 13:36	1
Diesel Range Organics (DRO) (C10-C25)	ND		120	120	mg/Kg	☼	08/25/15 15:22	08/26/15 13:36	1
Residual Range Organics (RRO) (C25-C36)	ND		120	120	mg/Kg	☼	08/25/15 15:22	08/26/15 13:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*103*		*50 - 150*	*08/25/15 15:22*	*08/26/15 13:36*	*1*
n-Triacontane-d62	*131*		*50 - 150*	*08/25/15 15:22*	*08/26/15 13:36*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.36**		0.22	0.047	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Arsenic	**5.0**		0.56	0.20	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Barium	**68**		0.56	0.088	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Beryllium	**0.68**		0.22	0.039	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Cadmium	**0.059**	**J**	0.22	0.021	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Chromium	**15**		0.56	0.071	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Copper	**15**	**B**	0.45	0.11	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Iron	**22000**		45	12	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Lead	**9.6**		0.56	0.054	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Manganese	**310**		1.1	0.19	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Nickel	**13**		0.56	0.091	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Selenium	**0.91**	**J**	1.1	0.23	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Silver	ND		0.22	0.013	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Thallium	**0.23**	**J**	0.45	0.15	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Zinc	**47**		5.6	1.3	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10
Vanadium	**35**		2.2	0.53	mg/Kg	☼	09/01/15 11:03	09/02/15 16:41	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**9.3**	**J**	45	1.8	ug/Kg	☼	09/02/15 09:07	09/02/15 14:55	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Client Sample ID: MW-15A (204-205)
Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2
Matrix: Solid
Percent Solids: 79.7

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.4	2.4	mg/Kg	☼	08/28/15 17:00	08/31/15 14:55	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-199328/1-A
Matrix: Solid
Analysis Batch: 199342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199328

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.24	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,1-Dichloroethane	ND		1.0	0.19	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,1-Dichloroethene	ND		5.0	0.50	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2,3-Trichloropropane	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.16	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2-Dichlorobenzene	ND		2.0	0.31	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2-Dichloroethane	ND		1.0	0.15	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,3,5-Trimethylbenzene	ND		5.0	0.17	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
2,2-Dichloropropane	ND		5.0	0.90	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
2-Chlorotoluene	ND		2.0	0.17	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
4-Chlorotoluene	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Benzene	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Bromobenzene	ND		10	2.3	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Bromoform	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Bromomethane	ND		1.0	0.21	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Chlorobenzene	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Chlorobromomethane	ND		2.0	0.25	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Chlorodibromomethane	ND		2.0	0.27	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Chloroethane	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Chloroform	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Chloromethane	ND		1.0	0.14	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
cis-1,2-Dichloroethene	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Dibromomethane	ND		1.0	0.17	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Dichlorobromomethane	ND		1.0	0.18	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Ethylbenzene	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Ethylene Dibromide	ND		1.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Methylene Chloride	0.609	J	15	0.24	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Naphthalene	ND		10	1.8	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-199328/1-A
Matrix: Solid
Analysis Batch: 199342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199328

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.0	0.32	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
o-Xylene	ND		2.0	0.26	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
sec-Butylbenzene	ND		2.0	0.25	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Styrene	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Tetrachloroethene	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Toluene	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
trans-1,3-Dichloropropene	ND		10	1.4	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Trichloroethene	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		08/28/15 13:24	08/28/15 18:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*71 - 136*	*08/28/15 13:24*	*08/28/15 18:30*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 120*	*08/28/15 13:24*	*08/28/15 18:30*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 132*	*08/28/15 13:24*	*08/28/15 18:30*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*08/28/15 13:24*	*08/28/15 18:30*	*1*
Trifluorotoluene (Surr)	*91*		*65 - 140*	*08/28/15 13:24*	*08/28/15 18:30*	*1*

Lab Sample ID: LCS 580-199328/2-A
Matrix: Solid
Analysis Batch: 199342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	40.0	41.5		ug/Kg		104	72 - 123
1,1,1-Trichloroethane	40.0	35.9		ug/Kg		90	63 - 135
1,1,2,2-Tetrachloroethane	40.0	45.0		ug/Kg		112	73 - 125
1,1,2-Trichloroethane	40.0	42.9		ug/Kg		107	77 - 124
1,1-Dichloroethane	40.0	37.6		ug/Kg		94	70 - 128
1,1-Dichloroethene	40.0	36.9		ug/Kg		92	70 - 133
1,1-Dichloropropene	40.0	37.0		ug/Kg		92	77 - 125
1,2,3-Trichlorobenzene	40.0	45.3		ug/Kg		113	61 - 130
1,2,3-Trichloropropane	40.0	43.5		ug/Kg		109	77 - 123
1,2,4-Trichlorobenzene	40.0	42.6		ug/Kg		106	61 - 130
1,2,4-Trimethylbenzene	40.0	38.9		ug/Kg		97	79 - 124
1,2-Dibromo-3-Chloropropane	40.0	43.3		ug/Kg		108	53 - 132
1,2-Dichlorobenzene	40.0	41.0		ug/Kg		103	79 - 117
1,2-Dichloroethane	40.0	40.8		ug/Kg		102	71 - 128
1,2-Dichloropropane	40.0	43.1		ug/Kg		108	76 - 161
1,3,5-Trimethylbenzene	40.0	38.0		ug/Kg		95	80 - 125
1,3-Dichlorobenzene	40.0	40.2		ug/Kg		100	79 - 119
1,3-Dichloropropane	40.0	41.3		ug/Kg		103	77 - 123
1,4-Dichlorobenzene	40.0	39.3		ug/Kg		98	79 - 117
2,2-Dichloropropane	40.0	37.1		ug/Kg		93	56 - 144
2-Chlorotoluene	40.0	39.4		ug/Kg		98	79 - 122
4-Chlorotoluene	40.0	38.1		ug/Kg		95	80 - 122
4-Isopropyltoluene	40.0	35.9		ug/Kg		90	78 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-199328/2-A
Matrix: Solid
Analysis Batch: 199342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	40.7		ug/Kg		102	70 - 128
Bromobenzene	40.0	38.6		ug/Kg		96	80 - 120
Bromoform	40.0	38.8		ug/Kg		97	50 - 124
Bromomethane	49.9	48.1		ug/Kg		96	57 - 148
Carbon tetrachloride	40.0	35.2		ug/Kg		88	59 - 145
Chlorobenzene	40.0	39.1		ug/Kg		98	75 - 120
Chlorobromomethane	40.0	42.2		ug/Kg		105	78 - 123
Chlorodibromomethane	40.0	40.5		ug/Kg		101	42 - 129
Chloroethane	50.0	45.4		ug/Kg		91	48 - 167
Chloroform	40.0	39.7		ug/Kg		99	78 - 125
Chloromethane	50.1	51.2		ug/Kg		102	55 - 136
cis-1,2-Dichloroethene	40.0	40.9		ug/Kg		102	70 - 130
cis-1,3-Dichloropropene	40.0	44.3		ug/Kg		111	69 - 129
Dibromomethane	40.0	42.7		ug/Kg		107	78 - 126
Dichlorobromomethane	40.0	41.6		ug/Kg		104	58 - 133
Dichlorodifluoromethane	49.9	53.3		ug/Kg		107	38 - 150
Ethylbenzene	40.0	37.7		ug/Kg		94	78 - 126
Ethylene Dibromide	40.0	41.4		ug/Kg		103	69 - 126
Hexachlorobutadiene	40.0	37.0		ug/Kg		93	68 - 134
Isopropylbenzene	40.0	39.8		ug/Kg		99	79 - 127
Methyl tert-butyl ether	40.0	43.3		ug/Kg		108	65 - 125
Methylene Chloride	40.0	37.8		ug/Kg		94	57 - 146
m-Xylene & p-Xylene	40.0	38.9		ug/Kg		97	78 - 126
Naphthalene	40.0	45.3		ug/Kg		113	14 - 170
n-Butylbenzene	40.0	37.5		ug/Kg		94	78 - 128
N-Propylbenzene	40.0	37.7		ug/Kg		94	81 - 127
o-Xylene	40.0	41.1		ug/Kg		103	77 - 127
sec-Butylbenzene	40.0	37.8		ug/Kg		95	78 - 128
Styrene	40.0	41.6		ug/Kg		104	79 - 127
tert-Butylbenzene	40.0	37.9		ug/Kg		95	71 - 136
Tetrachloroethene	40.0	37.0		ug/Kg		93	56 - 155
Toluene	40.0	38.1		ug/Kg		95	75 - 126
trans-1,2-Dichloroethene	40.0	35.8		ug/Kg		90	76 - 131
trans-1,3-Dichloropropene	40.0	41.1		ug/Kg		103	72 - 129
Trichloroethene	40.0	39.0		ug/Kg		98	83 - 124
Trichlorofluoromethane	50.1	41.0		ug/Kg		82	47 - 165
Vinyl chloride	50.0	45.8		ug/Kg		92	67 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 136*
4-Bromofluorobenzene (Surr)	*98*		*70 - 120*
Dibromofluoromethane (Surr)	*102*		*75 - 132*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*65 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-199328/3-A
Matrix: Solid
Analysis Batch: 199342

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199328

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	40.0	40.1		ug/Kg		100	72 - 123	4	20
1,1,1-Trichloroethane	40.0	37.2		ug/Kg		93	63 - 135	3	20
1,1,2,2-Tetrachloroethane	40.0	40.5		ug/Kg		101	73 - 125	10	22
1,1,2-Trichloroethane	40.0	42.9		ug/Kg		107	77 - 124	0	18
1,1-Dichloroethane	40.0	38.0		ug/Kg		95	70 - 128	1	21
1,1-Dichloroethene	40.0	38.1		ug/Kg		95	70 - 133	3	23
1,1-Dichloropropene	40.0	38.2		ug/Kg		96	77 - 125	3	16
1,2,3-Trichlorobenzene	40.0	40.2		ug/Kg		100	61 - 130	12	23
1,2,3-Trichloropropane	40.0	39.6		ug/Kg		99	77 - 123	9	23
1,2,4-Trichlorobenzene	40.0	39.1		ug/Kg		98	61 - 130	9	22
1,2,4-Trimethylbenzene	40.0	39.1		ug/Kg		98	79 - 124	1	18
1,2-Dibromo-3-Chloropropane	40.0	37.3		ug/Kg		93	53 - 132	15	27
1,2-Dichlorobenzene	40.0	40.4		ug/Kg		101	79 - 117	1	17
1,2-Dichloroethane	40.0	38.7		ug/Kg		97	71 - 128	5	18
1,2-Dichloropropane	40.0	43.5		ug/Kg		109	76 - 161	1	15
1,3,5-Trimethylbenzene	40.0	38.5		ug/Kg		96	80 - 125	1	18
1,3-Dichlorobenzene	40.0	40.2		ug/Kg		101	79 - 119	0	17
1,3-Dichloropropane	40.0	39.5		ug/Kg		99	77 - 123	4	19
1,4-Dichlorobenzene	40.0	39.9		ug/Kg		100	79 - 117	1	18
2,2-Dichloropropane	40.0	38.7		ug/Kg		97	56 - 144	4	21
2-Chlorotoluene	40.0	40.4		ug/Kg		101	79 - 122	3	18
4-Chlorotoluene	40.0	39.6		ug/Kg		99	80 - 122	4	18
4-Isopropyltoluene	40.0	36.3		ug/Kg		91	78 - 126	1	18
Benzene	40.0	41.4		ug/Kg		103	70 - 128	2	19
Bromobenzene	40.0	40.8		ug/Kg		102	80 - 120	6	19
Bromoform	40.0	36.7		ug/Kg		92	50 - 124	6	25
Bromomethane	49.9	44.6		ug/Kg		89	57 - 148	7	29
Carbon tetrachloride	40.0	36.2		ug/Kg		91	59 - 145	3	19
Chlorobenzene	40.0	39.4		ug/Kg		98	75 - 120	1	21
Chlorobromomethane	40.0	41.5		ug/Kg		104	78 - 123	2	19
Chlorodibromomethane	40.0	39.0		ug/Kg		98	42 - 129	4	23
Chloroethane	50.0	42.9		ug/Kg		86	48 - 167	6	53
Chloroform	40.0	39.6		ug/Kg		99	78 - 125	0	17
Chloromethane	50.1	48.3		ug/Kg		96	55 - 136	6	26
cis-1,2-Dichloroethene	40.0	41.6		ug/Kg		104	70 - 130	2	19
cis-1,3-Dichloropropene	40.0	43.5		ug/Kg		109	69 - 129	2	19
Dibromomethane	40.0	40.6		ug/Kg		102	78 - 126	5	18
Dichlorobromomethane	40.0	41.0		ug/Kg		102	58 - 133	1	19
Dichlorodifluoromethane	49.9	49.3		ug/Kg		99	38 - 150	8	26
Ethylbenzene	40.0	39.5		ug/Kg		99	78 - 126	5	23
Ethylene Dibromide	40.0	40.5		ug/Kg		101	69 - 126	2	21
Hexachlorobutadiene	40.0	34.9		ug/Kg		87	68 - 134	6	21
Isopropylbenzene	40.0	40.0		ug/Kg		100	79 - 127	0	20
Methyl tert-butyl ether	40.0	40.7		ug/Kg		102	65 - 125	6	30
Methylene Chloride	40.0	37.9		ug/Kg		95	57 - 146	0	21
m-Xylene & p-Xylene	40.0	39.7		ug/Kg		99	78 - 126	2	23
Naphthalene	40.0	39.1		ug/Kg		98	14 - 170	15	50
n-Butylbenzene	40.0	37.9		ug/Kg		95	78 - 128	1	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-199328/3-A
Matrix: Solid
Analysis Batch: 199342

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199328

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			40.0	39.2		ug/Kg		98	81 - 127	4	20
o-Xylene			40.0	41.2		ug/Kg		103	77 - 127	0	22
sec-Butylbenzene			40.0	38.4		ug/Kg		96	78 - 128	2	17
Styrene			40.0	42.7		ug/Kg		107	79 - 127	2	21
tert-Butylbenzene			40.0	38.3		ug/Kg		96	71 - 136	1	27
Tetrachloroethene			40.0	37.1		ug/Kg		93	56 - 155	0	27
Toluene			40.0	39.1		ug/Kg		98	75 - 126	3	19
trans-1,2-Dichloroethene			40.0	37.0		ug/Kg		93	76 - 131	3	18
trans-1,3-Dichloropropene			40.0	40.3		ug/Kg		101	72 - 129	2	20
Trichloroethene			40.0	39.7		ug/Kg		99	83 - 124	2	17
Trichlorofluoromethane			50.1	38.4		ug/Kg		77	47 - 165	7	54
Vinyl chloride			50.0	43.2		ug/Kg		86	67 - 131	6	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*71 - 136*
4-Bromofluorobenzene (Surr)	*100*		*70 - 120*
Dibromofluoromethane (Surr)	*98*		*75 - 132*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*65 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-199148/1-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
1,2-Dichlorobenzene	ND		55	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
1,3-Dichlorobenzene	ND		50	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
1,4-Dichlorobenzene	ND		50	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,4,5-Trichlorophenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,4,6-Trichlorophenol	ND		150	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,4-Dinitrophenol	ND		1000	200	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,4-Dinitrotoluene	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2,6-Dinitrotoluene	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2-Chloronaphthalene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2-Chlorophenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2-Methylnaphthalene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2-Methylphenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2-Nitroaniline	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
2-Nitrophenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
3,3'-Dichlorobenzidine	ND		200	30	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
3-Nitroaniline	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-199148/1-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
4-Bromophenyl phenyl ether	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
4-Chloro-3-methylphenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
4-Chloroaniline	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
4-Chlorophenyl phenyl ether	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
4-Nitroaniline	ND		100	20	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
4-Nitrophenol	ND		1000	250	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Acenaphthene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Acenaphthylene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Anthracene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzo[a]anthracene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzo[a]pyrene	ND		30	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzo[b]fluoranthene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzo[g,h,i]perylene	ND		25	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzo[k]fluoranthene	ND		25	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzoic acid	ND		2500	750	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Benzyl alcohol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
bis (2-chloroisopropyl) ether	ND		250	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Bis(2-chloroethoxy)methane	ND		100	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Bis(2-chloroethyl)ether	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Bis(2-ethylhexyl) phthalate	ND		600	50	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Butyl benzyl phthalate	ND		200	50	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Carbazole	ND		100	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Chrysene	ND		25	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Dibenz(a,h)anthracene	ND		40	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Dibenzofuran	ND		100	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Diethyl phthalate	ND		200	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Dimethyl phthalate	ND		100	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Di-n-butyl phthalate	ND		500	50	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Di-n-octyl phthalate	ND		500	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Fluoranthene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Fluorene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Hexachlorobenzene	ND		50	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Hexachlorobutadiene	ND		50	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Hexachlorocyclopentadiene	ND		100	10	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Hexachloroethane	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Isophorone	ND		100	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Naphthalene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Nitrobenzene	ND		100	34	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
N-Nitrosodi-n-propylamine	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
N-Nitrosodiphenylamine	ND		50	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Pentachlorophenol	ND		200	20	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Phenanthrene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Phenol	ND		100	15	ug/Kg		08/27/15 08:16	09/02/15 08:06	1
Pyrene	ND		20	5.0	ug/Kg		08/27/15 08:16	09/02/15 08:06	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-199148/1-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199148

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	63		28 - 143	08/27/15 08:16	09/02/15 08:06	1
2-Fluorobiphenyl	83		42 - 140	08/27/15 08:16	09/02/15 08:06	1
2-Fluorophenol	84		36 - 145	08/27/15 08:16	09/02/15 08:06	1
Nitrobenzene-d5	80		38 - 141	08/27/15 08:16	09/02/15 08:06	1
Phenol-d5	86		38 - 149	08/27/15 08:16	09/02/15 08:06	1
Terphenyl-d14	112		42 - 151	08/27/15 08:16	09/02/15 08:06	1

Lab Sample ID: LCS 580-199148/2-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199148

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1000	913		ug/Kg		91	66 - 115
1,2-Dichlorobenzene	1000	891		ug/Kg		89	64 - 112
1,3-Dichlorobenzene	1000	825		ug/Kg		83	64 - 111
1,4-Dichlorobenzene	1000	836		ug/Kg		84	65 - 110
1-Methylnaphthalene	1000	929		ug/Kg		93	62 - 118
2,4,5-Trichlorophenol	1000	856		ug/Kg		86	57 - 133
2,4,6-Trichlorophenol	1000	868		ug/Kg		87	62 - 133
2,4-Dichlorophenol	1000	927		ug/Kg		93	68 - 125
2,4-Dimethylphenol	1000	781		ug/Kg		78	54 - 139
2,4-Dinitrophenol	2000	1810		ug/Kg		91	20 - 141
2,4-Dinitrotoluene	1000	932		ug/Kg		93	68 - 121
2,6-Dinitrotoluene	1000	949		ug/Kg		95	66 - 123
2-Chloronaphthalene	1000	856		ug/Kg		86	68 - 112
2-Chlorophenol	1000	897		ug/Kg		90	68 - 117
2-Methylnaphthalene	1000	947		ug/Kg		95	64 - 119
2-Methylphenol	1000	916		ug/Kg		92	71 - 116
2-Nitroaniline	1000	795		ug/Kg		79	64 - 112
2-Nitrophenol	1000	933		ug/Kg		93	67 - 127
3 & 4 Methylphenol	1000	960		ug/Kg		96	70 - 116
3,3'-Dichlorobenzidine	2000	1470		ug/Kg		73	20 - 103
3-Nitroaniline	1000	439		ug/Kg		44	27 - 103
4,6-Dinitro-2-methylphenol	2000	1880		ug/Kg		94	48 - 130
4-Bromophenyl phenyl ether	1000	933		ug/Kg		93	68 - 122
4-Chloro-3-methylphenol	1000	914		ug/Kg		91	69 - 121
4-Chloroaniline	1000	291		ug/Kg		29	20 - 103
4-Chlorophenyl phenyl ether	1000	954		ug/Kg		95	75 - 108
4-Nitroaniline	1000	762		ug/Kg		76	58 - 108
4-Nitrophenol	2000	3480	*	ug/Kg		174	20 - 165
Acenaphthene	1000	890		ug/Kg		89	68 - 116
Acenaphthylene	1000	925		ug/Kg		93	68 - 120
Anthracene	1000	912		ug/Kg		91	73 - 116
Benzo[a]anthracene	1000	1020		ug/Kg		102	76 - 119
Benzo[a]pyrene	1000	950		ug/Kg		95	72 - 117
Benzo[b]fluoranthene	1000	958		ug/Kg		96	63 - 132
Benzo[g,h,i]perylene	1000	917		ug/Kg		92	55 - 139
Benzo[k]fluoranthene	1000	931		ug/Kg		93	63 - 119

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-199148/2-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199148

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	2010	1800	J	ug/Kg		90	29 - 158
Benzyl alcohol	1000	643		ug/Kg		64	55 - 123
bis (2-chloroisopropyl) ether	1000	837		ug/Kg		84	41 - 126
Bis(2-chloroethoxy)methane	1000	914		ug/Kg		91	69 - 107
Bis(2-chloroethyl)ether	1000	841		ug/Kg		84	62 - 110
Bis(2-ethylhexyl) phthalate	1000	925		ug/Kg		93	62 - 144
Butyl benzyl phthalate	1000	891		ug/Kg		89	69 - 142
Carbazole	1000	924		ug/Kg		92	76 - 135
Chrysene	1000	861		ug/Kg		86	75 - 114
Dibenz(a,h)anthracene	1000	974		ug/Kg		97	56 - 134
Dibenzofuran	1000	912		ug/Kg		91	72 - 109
Diethyl phthalate	1000	881		ug/Kg		88	73 - 116
Dimethyl phthalate	1000	949		ug/Kg		95	78 - 117
Di-n-butyl phthalate	1000	910		ug/Kg		91	66 - 140
Di-n-octyl phthalate	1000	948		ug/Kg		95	65 - 141
Fluoranthene	1000	998		ug/Kg		100	73 - 125
Fluorene	1000	932		ug/Kg		93	70 - 121
Hexachlorobenzene	1000	941		ug/Kg		94	66 - 117
Hexachlorobutadiene	1000	928		ug/Kg		93	65 - 116
Hexachlorocyclopentadiene	1000	878		ug/Kg		88	46 - 131
Hexachloroethane	1000	821		ug/Kg		82	62 - 120
Indeno[1,2,3-cd]pyrene	1000	1030		ug/Kg		103	56 - 127
Isophorone	1000	912		ug/Kg		91	67 - 119
Naphthalene	1000	927		ug/Kg		93	62 - 112
Nitrobenzene	1000	881		ug/Kg		88	64 - 118
N-Nitrosodi-n-propylamine	1000	901		ug/Kg		90	62 - 116
N-Nitrosodiphenylamine	2010	1710		ug/Kg		85	73 - 115
Pentachlorophenol	2000	1210		ug/Kg		60	45 - 117
Phenanthrene	1000	844		ug/Kg		84	73 - 106
Phenol	1000	907		ug/Kg		91	63 - 111
Pyrene	1000	936		ug/Kg		94	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*91*		*28 - 143*
2-Fluorobiphenyl	*87*		*42 - 140*
2-Fluorophenol	*86*		*36 - 145*
Nitrobenzene-d5	*88*		*38 - 141*
Phenol-d5	*86*		*38 - 149*
Terphenyl-d14	*110*		*42 - 151*

Lab Sample ID: LCSD 580-199148/3-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199148

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1000	879		ug/Kg		88	66 - 115	4	28
1,2-Dichlorobenzene	1000	901		ug/Kg		90	64 - 112	1	30
1,3-Dichlorobenzene	1000	860		ug/Kg		86	64 - 111	4	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-199148/3-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199148

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			1000	859		ug/Kg		86	65 - 110	3	30
1-Methylnaphthalene			1000	924		ug/Kg		92	62 - 118	0	30
2,4,5-Trichlorophenol			1000	861		ug/Kg		86	57 - 133	1	30
2,4,6-Trichlorophenol			1000	856		ug/Kg		86	62 - 133	1	30
2,4-Dichlorophenol			1000	919		ug/Kg		92	68 - 125	1	30
2,4-Dimethylphenol			1000	795		ug/Kg		79	54 - 139	2	30
2,4-Dinitrophenol			2000	1760		ug/Kg		88	20 - 141	3	36
2,4-Dinitrotoluene			1000	959		ug/Kg		96	68 - 121	3	30
2,6-Dinitrotoluene			1000	926		ug/Kg		93	66 - 123	2	30
2-Chloronaphthalene			1000	878		ug/Kg		88	68 - 112	3	25
2-Chlorophenol			1000	968		ug/Kg		97	68 - 117	8	27
2-Methylnaphthalene			1000	934		ug/Kg		93	64 - 119	1	27
2-Methylphenol			1000	964		ug/Kg		96	71 - 116	5	25
2-Nitroaniline			1000	865		ug/Kg		86	64 - 112	8	22
2-Nitrophenol			1000	904		ug/Kg		90	67 - 127	3	30
3 & 4 Methylphenol			1000	965		ug/Kg		96	70 - 116	0	27
3,3'-Dichlorobenzidine			2000	1400		ug/Kg		70	20 - 103	4	60
3-Nitroaniline			1000	476		ug/Kg		48	27 - 103	8	33
4,6-Dinitro-2-methylphenol			2000	2010		ug/Kg		101	48 - 130	7	22
4-Bromophenyl phenyl ether			1000	921		ug/Kg		92	68 - 122	1	30
4-Chloro-3-methylphenol			1000	974		ug/Kg		97	69 - 121	6	27
4-Chloroaniline			1000	298		ug/Kg		30	20 - 103	2	60
4-Chlorophenyl phenyl ether			1000	973		ug/Kg		97	75 - 108	2	30
4-Nitroaniline			1000	680		ug/Kg		68	58 - 108	11	32
4-Nitrophenol			2000	3540	*	ug/Kg		177	20 - 165	2	30
Acenaphthene			1000	898		ug/Kg		90	68 - 116	1	27
Acenaphthylene			1000	937		ug/Kg		94	68 - 120	1	28
Anthracene			1000	919		ug/Kg		92	73 - 116	1	27
Benzo[a]anthracene			1000	1000		ug/Kg		100	76 - 119	2	27
Benzo[a]pyrene			1000	944		ug/Kg		94	72 - 117	1	30
Benzo[b]fluoranthene			1000	992		ug/Kg		99	63 - 132	3	30
Benzo[g,h,i]perylene			1000	956		ug/Kg		96	55 - 139	4	28
Benzo[k]fluoranthene			1000	973		ug/Kg		97	63 - 119	4	30
Benzoic acid			2010	1770	J	ug/Kg		88	29 - 158	2	28
Benzyl alcohol			1000	551		ug/Kg		55	55 - 123	15	60
bis (2-chloroisopropyl) ether			1000	839		ug/Kg		84	41 - 126	0	57
Bis(2-chloroethoxy)methane			1000	903		ug/Kg		90	69 - 107	1	30
Bis(2-chloroethyl)ether			1000	858		ug/Kg		86	62 - 110	2	22
Bis(2-ethylhexyl) phthalate			1000	908		ug/Kg		91	62 - 144	2	30
Butyl benzyl phthalate			1000	938		ug/Kg		94	69 - 142	5	30
Carbazole			1000	914		ug/Kg		91	76 - 135	1	30
Chrysene			1000	886		ug/Kg		89	75 - 114	3	26
Dibenz(a,h)anthracene			1000	980		ug/Kg		98	56 - 134	1	30
Dibenzofuran			1000	916		ug/Kg		92	72 - 109	0	30
Diethyl phthalate			1000	876		ug/Kg		88	73 - 116	1	26
Dimethyl phthalate			1000	963		ug/Kg		96	78 - 117	1	30
Di-n-butyl phthalate			1000	914		ug/Kg		91	66 - 140	0	30
Di-n-octyl phthalate			1000	987		ug/Kg		99	65 - 141	4	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-199148/3-A
Matrix: Solid
Analysis Batch: 199683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199148

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene			1000	1010		ug/Kg		101	73 - 125	1	30
Fluorene			1000	931		ug/Kg		93	70 - 121	0	30
Hexachlorobenzene			1000	916		ug/Kg		92	66 - 117	3	30
Hexachlorobutadiene			1000	899		ug/Kg		90	65 - 116	3	30
Hexachlorocyclopentadiene			1000	898		ug/Kg		90	46 - 131	2	29
Hexachloroethane			1000	821		ug/Kg		82	62 - 120	0	30
Indeno[1,2,3-cd]pyrene			1000	1160		ug/Kg		116	56 - 127	12	29
Isophorone			1000	933		ug/Kg		93	67 - 119	2	30
Naphthalene			1000	896		ug/Kg		90	62 - 112	3	26
Nitrobenzene			1000	916		ug/Kg		92	64 - 118	4	30
N-Nitrosodi-n-propylamine			1000	914		ug/Kg		91	62 - 116	1	28
N-Nitrosodiphenylamine			2010	1790		ug/Kg		89	73 - 115	5	30
Pentachlorophenol			2000	1280		ug/Kg		64	45 - 117	6	23
Phenanthrene			1000	859		ug/Kg		86	73 - 106	2	28
Phenol			1000	883		ug/Kg		88	63 - 111	3	26
Pyrene			1000	957		ug/Kg		96	70 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*90*		*28 - 143*
2-Fluorobiphenyl	*88*		*42 - 140*
2-Fluorophenol	*91*		*36 - 145*
Nitrobenzene-d5	*87*		*38 - 141*
Phenol-d5	*87*		*38 - 149*
Terphenyl-d14	*116*		*42 - 151*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-199350/1-A
Matrix: Solid
Analysis Batch: 200744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199350

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.15	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
4,4'-DDE	ND		2.0	0.14	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
4,4'-DDT	ND		2.0	0.15	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Aldrin	ND		1.0	0.22	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
alpha-BHC	ND		1.0	0.28	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
alpha-Chlordane	ND		1.0	0.13	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
beta-BHC	ND		1.0	0.32	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
delta-BHC	ND		1.0	0.15	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Dieldrin	ND		2.0	0.12	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Endosulfan I	ND		1.0	0.10	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Endosulfan II	ND		2.0	0.17	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Endosulfan sulfate	ND		2.0	0.19	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Endrin	ND		2.0	0.16	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Endrin aldehyde	ND		2.0	0.20	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Endrin ketone	ND		2.0	0.26	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
gamma-BHC (Lindane)	ND		1.0	0.30	ug/Kg		08/28/15 14:48	09/15/15 14:22	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-199350/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 200744 — **Prep Batch: 199350**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		1.0	0.13	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Heptachlor	ND		2.0	0.46	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Heptachlor epoxide	ND		1.0	0.0030	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Methoxychlor	ND		10	0.26	ug/Kg		08/28/15 14:48	09/15/15 14:22	1
Toxaphene	ND		100	23	ug/Kg		08/28/15 14:48	09/15/15 14:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*99*		*60 - 128*	*08/28/15 14:48*	*09/15/15 14:22*	*1*
Tetrachloro-m-xylene	*81*		*35 - 129*	*08/28/15 14:48*	*09/15/15 14:22*	*1*

Lab Sample ID: LCS 580-199350/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 200744 — **Prep Batch: 199350**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	20.0	15.6		ug/Kg		78	48 - 136
4,4'-DDE	20.0	15.5		ug/Kg		77	50 - 138
4,4'-DDT	20.0	16.1		ug/Kg		80	53 - 132
Aldrin	20.0	16.0		ug/Kg		80	59 - 127
alpha-BHC	20.0	16.2		ug/Kg		81	48 - 132
alpha-Chlordane	20.0	16.5		ug/Kg		82	52 - 137
beta-BHC	20.0	14.1		ug/Kg		70	45 - 122
delta-BHC	20.0	15.6		ug/Kg		78	27 - 124
Dieldrin	20.0	16.4		ug/Kg		82	53 - 145
Endosulfan I	20.0	16.1		ug/Kg		81	57 - 140
Endosulfan II	20.0	15.1		ug/Kg		75	58 - 144
Endosulfan sulfate	20.0	16.5		ug/Kg		82	55 - 125
Endrin	20.0	15.0		ug/Kg		75	51 - 143
Endrin aldehyde	20.0	15.1		ug/Kg		75	45 - 130
Endrin ketone	20.0	17.0		ug/Kg		85	53 - 139
gamma-BHC (Lindane)	20.0	15.3		ug/Kg		76	47 - 127
gamma-Chlordane	20.0	16.5		ug/Kg		83	52 - 137
Heptachlor	20.0	17.4		ug/Kg		87	43 - 141
Heptachlor epoxide	20.0	16.2		ug/Kg		81	47 - 143
Methoxychlor	20.0	15.3		ug/Kg		76	56 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*97*		*60 - 128*
Tetrachloro-m-xylene	*81*		*35 - 129*

Lab Sample ID: LCSD 580-199350/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 200744 — **Prep Batch: 199350**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	20.0	16.0		ug/Kg		80	48 - 136	2	18
4,4'-DDE	20.0	16.0		ug/Kg		80	50 - 138	3	17
4,4'-DDT	20.0	16.6		ug/Kg		83	53 - 132	3	20

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-199350/3-A
Matrix: Solid
Analysis Batch: 200744

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199350

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin			20.0	16.5		ug/Kg		83	59 - 127	3	19
alpha-BHC			20.0	16.9		ug/Kg		85	48 - 132	4	17
alpha-Chlordane			20.0	16.9		ug/Kg		84	52 - 137	2	17
beta-BHC			20.0	14.0		ug/Kg		70	45 - 122	1	18
delta-BHC			20.0	16.2		ug/Kg		81	27 - 124	4	19
Dieldrin			20.0	17.0		ug/Kg		85	53 - 145	3	18
Endosulfan I			20.0	16.7		ug/Kg		84	57 - 140	4	19
Endosulfan II			20.0	15.4		ug/Kg		77	58 - 144	2	19
Endosulfan sulfate			20.0	17.0		ug/Kg		85	55 - 125	3	18
Endrin			20.0	15.4		ug/Kg		77	51 - 143	3	18
Endrin aldehyde			20.0	15.0		ug/Kg		75	45 - 130	0	21
Endrin ketone			20.0	17.8		ug/Kg		89	53 - 139	4	17
gamma-BHC (Lindane)			20.0	15.9		ug/Kg		79	47 - 127	4	17
gamma-Chlordane			20.0	17.2		ug/Kg		86	52 - 137	4	17
Heptachlor			20.0	17.7		ug/Kg		88	43 - 141	2	18
Heptachlor epoxide			20.0	17.0		ug/Kg		85	47 - 143	5	17
Methoxychlor			20.0	16.0		ug/Kg		80	56 - 137	4	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*60 - 128*
Tetrachloro-m-xylene	*82*		*35 - 129*

Lab Sample ID: 590-1807-1 MS
Matrix: Solid
Analysis Batch: 200744

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 199350

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		26.8	19.1		ug/Kg	☼	71	48 - 136
4,4'-DDE	ND		26.8	19.1		ug/Kg	☼	72	50 - 138
4,4'-DDT	ND		26.8	19.5		ug/Kg	☼	73	53 - 132
Aldrin	ND		26.8	19.3		ug/Kg	☼	72	59 - 127
alpha-BHC	ND		26.8	19.9		ug/Kg	☼	74	48 - 132
alpha-Chlordane	ND		26.8	19.8		ug/Kg	☼	74	52 - 137
beta-BHC	ND		26.8	16.8		ug/Kg	☼	63	45 - 122
delta-BHC	ND		26.8	19.2		ug/Kg	☼	72	27 - 124
Dieldrin	ND		26.8	20.1		ug/Kg	☼	75	53 - 145
Endosulfan I	ND		26.8	19.6		ug/Kg	☼	73	57 - 140
Endosulfan II	ND		26.8	18.4		ug/Kg	☼	69	58 - 144
Endosulfan sulfate	ND		26.8	20.1		ug/Kg	☼	75	55 - 125
Endrin	ND		26.8	19.4		ug/Kg	☼	72	51 - 143
Endrin aldehyde	ND		26.8	17.5		ug/Kg	☼	66	45 - 130
Endrin ketone	ND		26.8	20.4		ug/Kg	☼	76	53 - 139
gamma-BHC (Lindane)	ND		26.8	18.9		ug/Kg	☼	71	47 - 127
gamma-Chlordane	ND		26.8	19.1		ug/Kg	☼	71	52 - 137
Heptachlor	ND		26.8	20.2		ug/Kg	☼	75	43 - 141
Heptachlor epoxide	ND		26.8	19.9		ug/Kg	☼	74	47 - 143
Methoxychlor	ND		26.8	18.1		ug/Kg	☼	68	56 - 137

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 590-1807-1 MS
Matrix: Solid
Analysis Batch: 200744

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 199350

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	64		60 - 128
Tetrachloro-m-xylene	67		35 - 129

Lab Sample ID: 590-1807-1 MSD
Matrix: Solid
Analysis Batch: 200744

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 199350

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		26.3	20.8		ug/Kg	☼	79	48 - 136	9	18
4,4'-DDE	ND		26.3	20.5		ug/Kg	☼	78	50 - 138	7	17
4,4'-DDT	ND		26.3	21.7		ug/Kg	☼	83	53 - 132	11	20
Aldrin	ND		26.3	20.5		ug/Kg	☼	78	59 - 127	6	19
alpha-BHC	ND		26.3	21.5		ug/Kg	☼	82	48 - 132	8	17
alpha-Chlordane	ND		26.3	20.7		ug/Kg	☼	79	52 - 137	5	17
beta-BHC	ND		26.3	19.1		ug/Kg	☼	73	45 - 122	13	18
delta-BHC	ND		26.3	20.3		ug/Kg	☼	77	27 - 124	5	19
Dieldrin	ND		26.3	21.5		ug/Kg	☼	82	53 - 145	7	18
Endosulfan I	ND		26.3	21.0		ug/Kg	☼	80	57 - 140	7	19
Endosulfan II	ND		26.3	20.2		ug/Kg	☼	77	58 - 144	9	19
Endosulfan sulfate	ND		26.3	21.8		ug/Kg	☼	83	55 - 125	8	18
Endrin	ND		26.3	20.9		ug/Kg	☼	79	51 - 143	8	18
Endrin aldehyde	ND		26.3	20.6		ug/Kg	☼	78	45 - 130	16	21
Endrin ketone	ND		26.3	22.3		ug/Kg	☼	85	53 - 139	9	17
gamma-BHC (Lindane)	ND		26.3	20.3		ug/Kg	☼	77	47 - 127	7	17
gamma-Chlordane	ND		26.3	20.2		ug/Kg	☼	77	52 - 137	6	17
Heptachlor	ND		26.3	21.4		ug/Kg	☼	81	43 - 141	6	18
Heptachlor epoxide	ND		26.3	21.6		ug/Kg	☼	82	47 - 143	8	17
Methoxychlor	ND		26.3	20.7		ug/Kg	☼	79	56 - 137	13	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	73		60 - 128
Tetrachloro-m-xylene	76		35 - 129

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-3215/1-A
Matrix: Solid
Analysis Batch: 3216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3215

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1
PCB-1221	ND		10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1
PCB-1232	ND		10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1
PCB-1242	ND		10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1
PCB-1248	ND		10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1
PCB-1254	3.46	J	10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1
PCB-1260	ND		10	2.2	ug/Kg		08/28/15 10:11	08/28/15 13:27	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-3215/1-A
Matrix: Solid
Analysis Batch: 3216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3215

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*88*		*51.9 - 151*	*08/28/15 10:11*	*08/28/15 13:27*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*73.5 - 164*	*08/28/15 10:11*	*08/28/15 13:27*	*1*

Lab Sample ID: LCS 590-3215/2-A
Matrix: Solid
Analysis Batch: 3216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3215

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			66.7	64.2		ug/Kg		96	58 - 146		
PCB-1260			66.7	66.5		ug/Kg		100	64.2 - 152		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	*87*		*51.9 - 151*
DCB Decachlorobiphenyl (Surr)	*102*		*73.5 - 164*

Method: 8141A - Organophosphorous Pesticides (GC)

Lab Sample ID: MB 280-292357/1-A
Matrix: Solid
Analysis Batch: 293529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 292357

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		66	12	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Bolstar	ND		13	4.2	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Chlorpyrifos	ND		20	6.3	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Coumaphos	ND		13	2.7	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Demeton, Total	ND		38	7.4	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Diazinon	ND		22	7.1	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Dichlorvos	ND		23	7.3	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Dimethoate	ND		22	6.9	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Disulfoton	ND		47	7.6	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
EPN	ND		13	3.6	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Famphur	ND		13	3.2	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Fensulfothion	ND		25	8.0	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Mevinphos	ND		15	4.5	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Methyl parathion	ND		20	6.2	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Merphos	ND		29	5.0	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Malathion	ND		15	4.5	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Fenthion	ND		32	8.6	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Ethyl Parathion	ND		18	5.2	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Phorate	ND		20	5.6	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Ronnel	ND		45	15	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Simazine	ND		66	22	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Sulfotepp	ND		20	6.1	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Thionazin	ND		18	5.5	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Tokuthion	ND		20	3.8	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Trichloronate	ND		20	6.1	ug/Kg		08/26/15 18:11	09/03/15 20:03	1

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: MB 280-292357/1-A
Matrix: Solid
Analysis Batch: 293529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 292357

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethoprop	ND		15	4.8	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Propazine	ND		66	8.5	ug/Kg		08/26/15 18:11	09/03/15 20:03	1
Azinphos-methyl	ND		13	3.4	ug/Kg		08/26/15 18:11	09/03/15 20:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*61*		*42 - 132*	*08/26/15 18:11*	*09/03/15 20:03*	*1*
Triphenylphosphate	*77*		*47 - 161*	*08/26/15 18:11*	*09/03/15 20:03*	*1*

Lab Sample ID: LCS 280-292357/2-A
Matrix: Solid
Analysis Batch: 293529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 292357

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	129	94.5		ug/Kg		73	49 - 115
Chlorpyrifos	129	87.3		ug/Kg		68	38 - 130
Coumaphos	129	104		ug/Kg		80	50 - 119
Demeton, Total	129	83.3		ug/Kg		65	36 - 115
Diazinon	129	93.8		ug/Kg		73	53 - 115
Dichlorvos	129	118		ug/Kg		91	43 - 139
Dimethoate	129	102		ug/Kg		79	25 - 138
Disulfoton	129	83.9		ug/Kg		65	29 - 115
EPN	129	94.9		ug/Kg		74	58 - 131
Famphur	129	105		ug/Kg		82	49 - 140
Fensulfothion	129	95.4		ug/Kg		74	52 - 121
Mevinphos	129	76.9		ug/Kg		60	10 - 226
Methyl parathion	129	97.2		ug/Kg		75	46 - 119
Merphos	129	70.7		ug/Kg		55	19 - 115
Malathion	129	80.0		ug/Kg		62	50 - 122
Fenthion	129	86.8		ug/Kg		67	45 - 115
Ethyl Parathion	129	92.4		ug/Kg		72	24 - 163
Phorate	129	70.2		ug/Kg		54	40 - 115
Ronnel	129	94.6		ug/Kg		73	43 - 118
Simazine	129	85.2		ug/Kg		66	11 - 179
Sulfotepp	129	97.1		ug/Kg		75	55 - 115
Thionazin	129	97.6		ug/Kg		76	46 - 115
Trichloronate	129	84.2		ug/Kg		65	27 - 115
BolstarFamphur	129	196		ug/Kg		152	
Ethoprop	129	102		ug/Kg		79	53 - 115
Azinphos-methyl	129	103		ug/Kg		80	51 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*68*		*42 - 132*
Triphenylphosphate	*75*		*47 - 161*

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: 590-1807-1 MS
Matrix: Solid
Analysis Batch: 293529

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 292357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	ND		181	123		ug/Kg	☼	68	49 - 115
Chlorpyrifos	ND		181	116		ug/Kg	☼	64	38 - 130
Coumaphos	ND		181	129		ug/Kg	☼	71	50 - 119
Demeton, Total	ND		181	98.9		ug/Kg	☼	55	36 - 115
Diazinon	ND		181	117		ug/Kg	☼	65	53 - 115
Dichlorvos	ND		181	160		ug/Kg	☼	88	43 - 139
Dimethoate	ND		181	135		ug/Kg	☼	75	25 - 138
Disulfoton	ND		181	105		ug/Kg	☼	58	29 - 115
EPN	ND		181	121		ug/Kg	☼	67	58 - 131
Famphur	ND		181	141		ug/Kg	☼	78	49 - 140
Fensulfothion	ND		181	124		ug/Kg	☼	69	52 - 121
Mevinphos	ND		181	105		ug/Kg	☼	58	10 - 226
Methyl parathion	ND		181	127		ug/Kg	☼	70	46 - 119
Merphos	ND		181	94.2		ug/Kg	☼	52	19 - 115
Malathion	ND		181	107		ug/Kg	☼	59	50 - 122
Fenthion	ND		181	117		ug/Kg	☼	65	45 - 115
Ethyl Parathion	ND		181	122		ug/Kg	☼	68	24 - 163
Phorate	ND		181	90.5		ug/Kg	☼	50	40 - 115
Ronnel	ND		181	124		ug/Kg	☼	68	43 - 118
Simazine	ND		181	115		ug/Kg	☼	63	11 - 179
Sulfotepp	ND		181	127		ug/Kg	☼	70	55 - 115
Thionazin	ND		181	128		ug/Kg	☼	71	46 - 115
Trichloronate	ND		181	111		ug/Kg	☼	61	27 - 115
BolstarFamphur	ND		181	255		ug/Kg	☼	141	
Ethoprop	ND		181	131		ug/Kg	☼	72	53 - 115
Azinphos-methyl	ND		181	134		ug/Kg	☼	74	51 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Chlormefos	*69*		*42 - 132*
Triphenylphosphate	*69*		*47 - 161*

Lab Sample ID: 590-1807-1 MSD
Matrix: Solid
Analysis Batch: 293529

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 292357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	ND		182	123		ug/Kg	☼	68	49 - 115	0	50
Chlorpyrifos	ND		182	113		ug/Kg	☼	62	38 - 130	3	37
Coumaphos	ND		182	127		ug/Kg	☼	70	50 - 119	1	27
Demeton, Total	ND		182	98.1		ug/Kg	☼	54	36 - 115	1	47
Diazinon	ND		182	118		ug/Kg	☼	65	53 - 115	1	40
Dichlorvos	ND		182	157		ug/Kg	☼	87	43 - 139	2	77
Dimethoate	ND		182	134		ug/Kg	☼	74	25 - 138	1	98
Disulfoton	ND		182	97.6		ug/Kg	☼	54	29 - 115	8	40
EPN	ND		182	119		ug/Kg	☼	66	58 - 131	1	50
Famphur	ND		182	141		ug/Kg	☼	78	49 - 140	0	31
Fensulfothion	ND		182	125		ug/Kg	☼	69	52 - 121	0	49
Mevinphos	ND		182	100		ug/Kg	☼	55	10 - 226	4	78

Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Lab Sample ID: 590-1807-1 MSD
Matrix: Solid
Analysis Batch: 293529

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 292357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl parathion	ND		182	126		ug/Kg	☼	69	46 - 119	1	53
Merphos	ND		182	91.6		ug/Kg	☼	50	19 - 115	3	50
Malathion	ND		182	104		ug/Kg	☼	57	50 - 122	3	53
Fenthion	ND		182	113		ug/Kg	☼	62	45 - 115	4	43
Ethyl Parathion	ND		182	118		ug/Kg	☼	65	24 - 163	4	47
Phorate	ND		182	88.1		ug/Kg	☼	49	40 - 115	3	40
Ronnel	ND		182	121		ug/Kg	☼	67	43 - 118	2	41
Simazine	ND		182	115		ug/Kg	☼	63	11 - 179	0	58
Sulfotepp	ND		182	123		ug/Kg	☼	68	55 - 115	3	40
Thionazin	ND		182	124		ug/Kg	☼	68	46 - 115	3	40
Trichloronate	ND		182	108		ug/Kg	☼	59	27 - 115	3	43
BolstarFamphur	ND		182	252		ug/Kg	☼	139		1	
Ethoprop	ND		182	131		ug/Kg	☼	72	53 - 115	0	54
Azinphos-methyl	ND		182	132		ug/Kg	☼	73	51 - 122	1	43

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Chlormefos	*68*		*42 - 132*
Triphenylphosphate	*73*		*47 - 161*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-292995/1-A
Matrix: Solid
Analysis Batch: 293587

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 292995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	2.3	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
2,4-D	ND		80	14	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
2,4-DB	ND		80	7.5	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
Dalapon	ND		40	1.4	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
Dicamba	ND		40	1.4	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
Dichlorprop	ND		80	3.2	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
MCPA	ND		8000	2000	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
MCPP	ND		8000	2000	ug/Kg		08/31/15 20:47	09/04/15 03:48	1
Silvex (2,4,5-TP)	ND		20	1.4	ug/Kg		08/31/15 20:47	09/04/15 03:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*77*		*31 - 105*	*08/31/15 20:47*	*09/04/15 03:48*	*1*

Lab Sample ID: LCS 280-292995/2-A
Matrix: Solid
Analysis Batch: 293587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 292995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	99.8	70.5		ug/Kg		71	53 - 129
2,4-D	99.8	84.0		ug/Kg		84	50 - 136
2,4-DB	99.8	67.9	J	ug/Kg		68	29 - 134

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-292995/2-A
Matrix: Solid
Analysis Batch: 293587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 292995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dalapon	99.8	82.8		ug/Kg		83	35 - 105
Dicamba	99.8	75.7		ug/Kg		76	45 - 120
Dichlorprop	99.8	68.6	J	ug/Kg		69	50 - 118
MCPA	9980	5100	J	ug/Kg		51	42 - 123
MCPP	9980	7700	J	ug/Kg		77	40 - 127
Silvex (2,4,5-TP)	99.8	72.6		ug/Kg		73	52 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*76*		*31 - 105*

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 590-3161/1-A
Matrix: Solid
Analysis Batch: 3174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3161

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		40	40	mg/Kg		08/25/15 15:21	08/26/15 12:36	1
Diesel Range Organics (DRO) (C10-C25)	ND		100	100	mg/Kg		08/25/15 15:21	08/26/15 12:36	1
Residual Range Organics (RRO) (C25-C36)	ND		100	100	mg/Kg		08/25/15 15:21	08/26/15 12:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*113*		*50 - 150*	*08/25/15 15:21*	*08/26/15 12:36*	*1*
n-Triacontane-d62	*152*	*X*	*50 - 150*	*08/25/15 15:21*	*08/26/15 12:36*	*1*

Lab Sample ID: 590-1807-1 DU
Matrix: Solid
Analysis Batch: 3174

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 3161

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		ND		mg/Kg	☼	NC	25
Diesel Range Organics (DRO) (C10-C25)	ND		ND		mg/Kg	☼	NC	25
Residual Range Organics (RRO) (C25-C36)	ND		ND		mg/Kg	☼	NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*104*		*50 - 150*
n-Triacontane-d62	*145*		*50 - 150*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-199610/11-A
Matrix: Solid
Analysis Batch: 199868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.042	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Arsenic	ND		0.50	0.18	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Barium	ND		0.50	0.078	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Beryllium	ND		0.20	0.035	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Cadmium	ND		0.20	0.019	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Chromium	ND		0.50	0.063	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Copper	0.352	J	0.40	0.098	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Iron	ND		40	11	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Lead	ND		0.50	0.048	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Manganese	ND		1.0	0.17	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Nickel	ND		0.50	0.081	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Selenium	ND		1.0	0.20	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Silver	ND		0.20	0.012	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Thallium	ND		0.40	0.13	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Zinc	ND		5.0	1.1	mg/Kg		09/01/15 11:03	09/02/15 15:38	10
Vanadium	ND		2.0	0.47	mg/Kg		09/01/15 11:03	09/02/15 15:38	10

Lab Sample ID: LCS 580-199610/12-A
Matrix: Solid
Analysis Batch: 199868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	150	148		mg/Kg		98	80 - 120
Arsenic	200	197		mg/Kg		99	80 - 120
Barium	200	198		mg/Kg		99	80 - 120
Beryllium	5.00	4.92		mg/Kg		98	80 - 120
Cadmium	5.00	4.33		mg/Kg		87	80 - 120
Chromium	20.0	19.7		mg/Kg		99	80 - 120
Copper	25.0	25.6		mg/Kg		102	80 - 120
Iron	1100	1150		mg/Kg		105	80 - 120
Lead	50.0	47.6		mg/Kg		95	80 - 120
Manganese	50.0	50.6		mg/Kg		101	80 - 120
Nickel	50.0	49.3		mg/Kg		99	80 - 120
Selenium	200	199		mg/Kg		99	80 - 120
Silver	30.0	28.3		mg/Kg		94	80 - 120
Thallium	200	197		mg/Kg		99	80 - 120
Zinc	200	195		mg/Kg		97	80 - 120
Vanadium	50.0	49.4		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-199610/13-A
Matrix: Solid
Analysis Batch: 199868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	150	150		mg/Kg		100	80 - 120	2	20
Arsenic	200	200		mg/Kg		100	80 - 120	2	20
Barium	200	202		mg/Kg		101	80 - 120	2	20
Beryllium	5.00	5.16		mg/Kg		103	80 - 120	5	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-199610/13-A
Matrix: Solid
Analysis Batch: 199868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium			5.00	4.58		mg/Kg		92	80 - 120	6	20
Chromium			20.0	20.4		mg/Kg		102	80 - 120	3	20
Copper			25.0	25.7		mg/Kg		103	80 - 120	0	20
Iron			1100	1180		mg/Kg		108	80 - 120	3	20
Lead			50.0	48.6		mg/Kg		97	80 - 120	2	20
Manganese			50.0	51.8		mg/Kg		104	80 - 120	2	20
Nickel			50.0	49.9		mg/Kg		100	80 - 120	1	20
Selenium			200	204		mg/Kg		102	80 - 120	2	20
Silver			30.0	29.0		mg/Kg		97	80 - 120	3	20
Thallium			200	202		mg/Kg		101	80 - 120	2	20
Zinc			200	198		mg/Kg		99	80 - 120	2	20
Vanadium			50.0	50.9		mg/Kg		102	80 - 120	3	20

Lab Sample ID: LCSSRM 580-199610/14-A
Matrix: Solid
Analysis Batch: 199868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199610

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony			88.8	157		mg/Kg		176.3	22.0 - 259.0
Arsenic			139	140		mg/Kg		100.9	70.4 - 140.3
Barium			203	205		mg/Kg		101.2	73.4 - 127.1
Beryllium			96.1	94.4		mg/Kg		98.2	74.5 - 125.9
Cadmium			96.0	92.4		mg/Kg		96.2	73.2 - 127.1
Chromium			136	139		mg/Kg		102.1	69.9 - 129.4
Copper			168	163		mg/Kg		97.1	75.6 - 125.0
Iron			14100	18700		mg/Kg		132.4	35.0 - 165.2
Lead			133	129		mg/Kg		97.0	72.9 - 127.8
Manganese			297	300		mg/Kg		101.0	74.4 - 125.6
Nickel			123	123		mg/Kg		100	73.1 - 128.5
Selenium			177	181		mg/Kg		102.5	67.8 - 131.6
Silver			40.2	38.2		mg/Kg		95.0	66.2 - 134.1
Thallium			138	130		mg/Kg		94.4	68.1 - 131.9
Zinc			189	188		mg/Kg		99.7	69.8 - 130.7
Vanadium			107	113		mg/Kg		105.9	66.4 - 133.6

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-3263/9-A
Matrix: Solid
Analysis Batch: 3277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3263

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50	2.0	ug/Kg		09/02/15 09:07	09/02/15 14:44	1

Lab Sample ID: LCS 590-3263/8-A
Matrix: Solid
Analysis Batch: 3277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3263

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	194		ug/Kg		97	80 - 120

Lab Sample ID: 590-1807-1 MS
Matrix: Solid
Analysis Batch: 3277

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 3263

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	7.6	J	239	242		ug/Kg	☼	98	80 - 120

Lab Sample ID: 590-1807-1 MSD
Matrix: Solid
Analysis Batch: 3277

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 3263

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	7.6	J	227	223		ug/Kg	☼	95	80 - 120	8	20

Lab Sample ID: 590-1807-1 DU
Matrix: Solid
Analysis Batch: 3277

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 3263

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hg	7.6	J	7.33	J	ug/Kg	☼	3	20

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-199357/1-A
Matrix: Solid
Analysis Batch: 199594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199357

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		2.0	2.0	mg/Kg		08/28/15 17:00	08/31/15 14:55	1

Lab Sample ID: LCS 580-199357/2-A
Matrix: Solid
Analysis Batch: 199594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199357

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	10.0	10.3		mg/Kg		103	80 - 120

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 590-1807-1 MS
Matrix: Solid
Analysis Batch: 199594

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 199357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		13.7	13.8		mg/Kg	☼	101	80 - 120

Lab Sample ID: 590-1807-1 MSD
Matrix: Solid
Analysis Batch: 199594

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 199357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		13.2	13.6		mg/Kg	☼	103	80 - 120	1	20

Lab Sample ID: 590-1807-1 DU
Matrix: Solid
Analysis Batch: 199594

Client Sample ID: MW-7D (169-170.5)
Prep Type: Total/NA
Prep Batch: 199357

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	ND		ND		mg/Kg	☼	NC	20

Client Sample ID: MW-7D (169-170.5)

Lab Sample ID: 590-1807-1
Matrix: Solid
Date Collected: 08/17/15 16:30
Date Received: 08/24/15 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			3158	08/25/15 15:06	IAB	TAL SPK

Client Sample ID: MW-7D (169-170.5)

Lab Sample ID: 590-1807-1
Matrix: Solid
Date Collected: 08/17/15 16:30
Percent Solids: 72.2
Date Received: 08/24/15 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.053 g	10 mL	199328	08/28/15 13:24	IWH	TAL SEA
Total/NA	Analysis	8260B		1	4.053 g	10 mL	199342	08/28/15 19:48	D1R	TAL SEA
Total/NA	Prep	3550B			10.033 g	10 mL	199148	08/27/15 08:16	CTT	TAL SEA
Total/NA	Analysis	8270C		1	10.033 g	10 mL	199683	09/02/15 09:24	ERB	TAL SEA
Total/NA	Prep	3550B			10.470 g	10 mL	199350	08/28/15 14:48	CTT	TAL SEA
Total/NA	Analysis	8081A		1	10.470 g	10 mL	200744	09/15/15 15:14	DD	TAL SEA
Total/NA	Prep	3550C			15.03 g	5 mL	3215	08/28/15 10:11	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.03 g	5 mL	3216	08/28/15 13:07	NMI	TAL SPK
Total/NA	Prep	3540C			31.6 g	2 mL	292357	08/26/15 18:11	EJP	TAL DEN
Total/NA	Analysis	8141A		1	31.6 g	2 mL	293529	09/03/15 23:27	AMP	TAL DEN
Total/NA	Prep	8151A			51.0 g	10 mL	292995	08/31/15 20:47	EJP	TAL DEN
Total/NA	Analysis	8151A		1	51.0 g	10 mL	293587	09/04/15 04:10	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.09 g	20 mL	3161	08/25/15 15:21	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.09 g	20 mL	3174	08/26/15 13:16	NMI	TAL SPK
Total/NA	Prep	3050B			1.1058 g	50 mL	199610	09/01/15 11:03	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.1058 g	50 mL	199868	09/02/15 16:37	FCW	TAL SEA
Total/NA	Prep	7471B			0.73 g	50 mL	3263	09/02/15 09:07	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.73 g	50 mL	3277	09/02/15 14:46	JSP	TAL SPK
Total/NA	Prep	9012A			5.32 g	100 mL	199357	08/28/15 17:00	JLS	TAL SEA
Total/NA	Analysis	9012A		1	5.32 g	100 mL	199594	08/31/15 14:55	SPP	TAL SEA

Client Sample ID: MW-15A (204-205)

Lab Sample ID: 590-1807-2
Matrix: Solid
Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			3158	08/25/15 15:06	IAB	TAL SPK

Client Sample ID: MW-15A (204-205)

Lab Sample ID: 590-1807-2
Matrix: Solid
Date Collected: 08/24/15 10:30
Percent Solids: 79.7
Date Received: 08/24/15 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.185 g	10 mL	199328	08/28/15 13:24	IWH	TAL SEA
Total/NA	Analysis	8260B		1	3.185 g	10 mL	199342	08/28/15 20:14	D1R	TAL SEA
Total/NA	Prep	3550B			10.297 g	10 mL	199148	08/27/15 08:16	CTT	TAL SEA

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Client Sample ID: MW-15A (204-205)

Date Collected: 08/24/15 10:30
Date Received: 08/24/15 16:25

Lab Sample ID: 590-1807-2

Matrix: Solid
Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		1	10.297 g	10 mL	199683	09/02/15 09:49	ERB	TAL SEA
Total/NA	Prep	3550B			10.253 g	10 mL	199350	08/28/15 14:48	CTT	TAL SEA
Total/NA	Analysis	8081A		1	10.253 g	10 mL	200744	09/15/15 16:06	DD	TAL SEA
Total/NA	Prep	3550C			15.22 g	5 mL	3215	08/28/15 10:11	IAB	TAL SPK
Total/NA	Analysis	8082A		1	15.22 g	5 mL	3216	08/28/15 15:30	NMI	TAL SPK
Total/NA	Prep	3540C			30.9 g	2 mL	292357	08/26/15 18:11	EJP	TAL DEN
Total/NA	Analysis	8141A		1	30.9 g	2 mL	293529	09/04/15 00:54	AMP	TAL DEN
Total/NA	Prep	8151A			50.1 g	10 mL	292995	08/31/15 20:47	EJP	TAL DEN
Total/NA	Analysis	8151A		1	50.1 g	10 mL	293587	09/04/15 04:33	MPS	TAL DEN
Total/NA	Prep	NWTPH-HCID			10.33 g	20 mL	3161	08/25/15 15:22	IAB	TAL SPK
Total/NA	Analysis	NWTPH-HCID		1	10.33 g	20 mL	3174	08/26/15 13:36	NMI	TAL SPK
Total/NA	Prep	3050B			1.1163 g	50 mL	199610	09/01/15 11:03	MKN	TAL SEA
Total/NA	Analysis	6020A		10	1.1163 g	50 mL	199868	09/02/15 16:41	FCW	TAL SEA
Total/NA	Prep	7471B			0.69 g	50 mL	3263	09/02/15 09:07	JSP	TAL SPK
Total/NA	Analysis	7471B		1	0.69 g	50 mL	3277	09/02/15 14:55	JSP	TAL SPK
Total/NA	Prep	9012A			5.20 g	100 mL	199357	08/28/15 17:00	JLS	TAL SEA
Total/NA	Analysis	9012A		1	5.20 g	100 mL	199594	08/31/15 14:55	SPP	TAL SEA

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-15
Washington	State Program	10	C569	01-06-16

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-16
Arizona	State Program	9	AZ0713	12-19-15
Arkansas DEQ	State Program	6	88-0687	06-01-16
California	State Program	9	2513	08-31-16
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-16
Georgia	State Program	4	N/A	01-09-15 *
Illinois	NELAP	5	200017	04-30-16
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	04-30-16
Louisiana	NELAP	6	02096	06-30-16
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-15
Nevada	State Program	9	CO0026	07-31-16
New Hampshire	NELAP	1	205310	04-28-16
New Jersey	NELAP	2	CO004	09-30-15
New York	NELAP	2	11964	04-01-16
North Carolina (WW/SW)	State Program	4	358	12-31-15
North Dakota	State Program	8	R-034	01-09-16
Oklahoma	State Program	6	8614	08-31-16
Oregon	NELAP	10	4025	01-09-16
Pennsylvania	NELAP	3	68-00664	07-31-16
South Carolina	State Program	4	72002001	06-30-15 *
Texas	NELAP	6	T104704183-15-11	09-30-16
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-16
Virginia	NELAP	3	460232	06-14-16
Washington	State Program	10	C583	08-03-16
West Virginia DEP	State Program	3	354	11-30-15
Wisconsin	State Program	5	999615430	08-31-16
Wyoming (UST)	A2LA	8	2907.01	10-31-15

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3050B	Solid	Iron

* Certification renewal pending - certification considered valid.

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8081A	3550B	Solid	4,4'-DDD
8081A	3550B	Solid	4,4'-DDE
8081A	3550B	Solid	4,4'-DDT
8081A	3550B	Solid	Aldrin
8081A	3550B	Solid	alpha-BHC
8081A	3550B	Solid	alpha-Chlordane
8081A	3550B	Solid	beta-BHC
8081A	3550B	Solid	delta-BHC
8081A	3550B	Solid	Dieldrin
8081A	3550B	Solid	Endosulfan I
8081A	3550B	Solid	Endosulfan II
8081A	3550B	Solid	Endosulfan sulfate
8081A	3550B	Solid	Endrin
8081A	3550B	Solid	Endrin aldehyde
8081A	3550B	Solid	Endrin ketone
8081A	3550B	Solid	gamma-BHC (Lindane)
8081A	3550B	Solid	gamma-Chlordane
8081A	3550B	Solid	Heptachlor
8081A	3550B	Solid	Heptachlor epoxide
8081A	3550B	Solid	Methoxychlor
8081A	3550B	Solid	Toxaphene
8260B	5035	Solid	1,1,1,2-Tetrachloroethane
8260B	5035	Solid	1,1,1-Trichloroethane
8260B	5035	Solid	1,1,2,2-Tetrachloroethane
8260B	5035	Solid	1,1,2-Trichloroethane
8260B	5035	Solid	1,1-Dichloroethane
8260B	5035	Solid	1,1-Dichloroethene
8260B	5035	Solid	1,1-Dichloropropene
8260B	5035	Solid	1,2,3-Trichlorobenzene
8260B	5035	Solid	1,2,3-Trichloropropane
8260B	5035	Solid	1,2,4-Trichlorobenzene
8260B	5035	Solid	1,2,4-Trimethylbenzene
8260B	5035	Solid	1,2-Dibromo-3-Chloropropane
8260B	5035	Solid	1,2-Dichlorobenzene
8260B	5035	Solid	1,2-Dichloroethane
8260B	5035	Solid	1,2-Dichloropropane
8260B	5035	Solid	1,3,5-Trimethylbenzene
8260B	5035	Solid	1,3-Dichlorobenzene
8260B	5035	Solid	1,3-Dichloropropane
8260B	5035	Solid	1,4-Dichlorobenzene
8260B	5035	Solid	2,2-Dichloropropane
8260B	5035	Solid	2-Chlorotoluene
8260B	5035	Solid	4-Chlorotoluene
8260B	5035	Solid	4-Isopropyltoluene
8260B	5035	Solid	Benzene
8260B	5035	Solid	Bromobenzene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Bromoform
8260B	5035	Solid	Bromomethane
8260B	5035	Solid	Carbon tetrachloride
8260B	5035	Solid	Chlorobenzene
8260B	5035	Solid	Chlorobromomethane
8260B	5035	Solid	Chlorodibromomethane
8260B	5035	Solid	Chloroethane
8260B	5035	Solid	Chloroform
8260B	5035	Solid	Chloromethane
8260B	5035	Solid	cis-1,2-Dichloroethene
8260B	5035	Solid	cis-1,3-Dichloropropene
8260B	5035	Solid	Dibromomethane
8260B	5035	Solid	Dichlorobromomethane
8260B	5035	Solid	Dichlorodifluoromethane
8260B	5035	Solid	Ethylbenzene
8260B	5035	Solid	Ethylene Dibromide
8260B	5035	Solid	Hexachlorobutadiene
8260B	5035	Solid	Isopropylbenzene
8260B	5035	Solid	Methyl tert-butyl ether
8260B	5035	Solid	Methylene Chloride
8260B	5035	Solid	m-Xylene & p-Xylene
8260B	5035	Solid	Naphthalene
8260B	5035	Solid	n-Butylbenzene
8260B	5035	Solid	N-Propylbenzene
8260B	5035	Solid	o-Xylene
8260B	5035	Solid	sec-Butylbenzene
8260B	5035	Solid	Styrene
8260B	5035	Solid	tert-Butylbenzene
8260B	5035	Solid	Tetrachloroethene
8260B	5035	Solid	Toluene
8260B	5035	Solid	trans-1,2-Dichloroethene
8260B	5035	Solid	trans-1,3-Dichloropropene
8260B	5035	Solid	Trichloroethene
8260B	5035	Solid	Trichlorofluoromethane
8260B	5035	Solid	Vinyl chloride
8270C	3550B	Solid	1,2,4-Trichlorobenzene
8270C	3550B	Solid	1,2-Dichlorobenzene
8270C	3550B	Solid	1,3-Dichlorobenzene
8270C	3550B	Solid	1,4-Dichlorobenzene
8270C	3550B	Solid	1-Methylnaphthalene
8270C	3550B	Solid	2,4,5-Trichlorophenol
8270C	3550B	Solid	2,4,6-Trichlorophenol
8270C	3550B	Solid	2,4-Dichlorophenol
8270C	3550B	Solid	2,4-Dimethylphenol
8270C	3550B	Solid	2,4-Dinitrophenol
8270C	3550B	Solid	2,4-Dinitrotoluene

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	2,6-Dinitrotoluene
8270C	3550B	Solid	2-Chloronaphthalene
8270C	3550B	Solid	2-Chlorophenol
8270C	3550B	Solid	2-Methylnaphthalene
8270C	3550B	Solid	2-Methylphenol
8270C	3550B	Solid	2-Nitroaniline
8270C	3550B	Solid	2-Nitrophenol
8270C	3550B	Solid	3 & 4 Methylphenol
8270C	3550B	Solid	3,3'-Dichlorobenzidine
8270C	3550B	Solid	3-Nitroaniline
8270C	3550B	Solid	4,6-Dinitro-2-methylphenol
8270C	3550B	Solid	4-Bromophenyl phenyl ether
8270C	3550B	Solid	4-Chloro-3-methylphenol
8270C	3550B	Solid	4-Chloroaniline
8270C	3550B	Solid	4-Chlorophenyl phenyl ether
8270C	3550B	Solid	4-Nitroaniline
8270C	3550B	Solid	4-Nitrophenol
8270C	3550B	Solid	Acenaphthene
8270C	3550B	Solid	Acenaphthylene
8270C	3550B	Solid	Anthracene
8270C	3550B	Solid	Benzo[a]anthracene
8270C	3550B	Solid	Benzo[a]pyrene
8270C	3550B	Solid	Benzo[b]fluoranthene
8270C	3550B	Solid	Benzo[g,h,i]perylene
8270C	3550B	Solid	Benzo[k]fluoranthene
8270C	3550B	Solid	Benzoic acid
8270C	3550B	Solid	Benzyl alcohol
8270C	3550B	Solid	bis (2-chloroisopropyl) ether
8270C	3550B	Solid	Bis(2-chloroethoxy)methane
8270C	3550B	Solid	Bis(2-chloroethyl)ether
8270C	3550B	Solid	Bis(2-ethylhexyl) phthalate
8270C	3550B	Solid	Butyl benzyl phthalate
8270C	3550B	Solid	Carbazole
8270C	3550B	Solid	Chrysene
8270C	3550B	Solid	Dibenz(a,h)anthracene
8270C	3550B	Solid	Dibenzofuran
8270C	3550B	Solid	Diethyl phthalate
8270C	3550B	Solid	Dimethyl phthalate
8270C	3550B	Solid	Di-n-butyl phthalate
8270C	3550B	Solid	Di-n-octyl phthalate
8270C	3550B	Solid	Fluoranthene
8270C	3550B	Solid	Fluorene
8270C	3550B	Solid	Hexachlorobenzene
8270C	3550B	Solid	Hexachlorobutadiene
8270C	3550B	Solid	Hexachlorocyclopentadiene
8270C	3550B	Solid	Hexachloroethane

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Laboratory: TestAmerica Seattle (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C	3550B	Solid	Isophorone
8270C	3550B	Solid	Naphthalene
8270C	3550B	Solid	Nitrobenzene
8270C	3550B	Solid	N-Nitrosodi-n-propylamine
8270C	3550B	Solid	N-Nitrosodiphenylamine
8270C	3550B	Solid	Pentachlorophenol
8270C	3550B	Solid	Phenanthrene
8270C	3550B	Solid	Phenol
8270C	3550B	Solid	Pyrene
9012A	9012A	Solid	Cyanide, Total

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1807-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8081A	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141A	Organophosphorous Pesticides (GC)	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL SPK
6020A	Metals (ICP/MS)	SW846	TAL SEA
7471B	Mercury (CVAA)	SW846	TAL SPK
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290 [X]
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 [ ]
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers

REPORT TO: 523 E. Second Ave ADDRESS: Spokane WA 99019

PHONE: 509-363-3125 FAX: 509-363-3126

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Marshall Landfill

PROJECT NUMBER: 0504-104-00

SAMPLED BY: JML

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: [X] STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: HCID	Metals	8260	EDB	8270	Pesticides	Herbicides	PCBs	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-7D (169-170.5)	8/17/2015 1630		X	X	X	X	X	X	X	X	S	5		
2 MW-15A (204-205)	8/24/2015 1030		X	X	X	X	X	X	X	X	S	5		
3														
4														
5														
6														
7														
8														
9														
10														

RELEASED BY: Josh Lee PRINT NAME: Josh Lee FIRM: GEI DATE: 8/24/2015 TIME: 1025

RECEIVED BY: Matt Sada PRINT NAME: Matt Sada FIRM: TestAmerica Inc DATE: 8-24-15 TIME: 1625

RELEASED BY: PRINT NAME FIRM: DATE: TIME:

RECEIVED BY: PRINT NAME. FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 0.5°C (IR001) PAGE 1 OF 1

590-1807 Chain of Custody

TAL-1000 (0714)

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9/16/2015

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1807-1

Login Number: 1807
List Number: 1
Creator: Arrington, Randee E

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	False	Sample splitting required for subcontract purposes.
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1807-1

Login Number: 1807
List Number: 3
Creator: Soto, Mayra A

List Source: TestAmerica Denver
List Creation: 08/26/15 12:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1807-1

Login Number: 1807
List Number: 2
Creator: Sutek, Nick

List Source: TestAmerica Seattle
List Creation: 08/26/15 10:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-1968-1
Client Project/Site: Marshall 0504-104-00
Revision: 1

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: John Haney

Authorized for release by:
11/16/2016 11:16:36 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Job ID: 590-1968-1

Laboratory: TestAmerica Spokane

Narrative

Revision
Per the client's request the data has been converted and reported in mg/m3 instead of ppb v/v.

Receipt
The samples were received on 9/16/2015 4:20 PM; the samples arrived in good condition.

Air - GC/MS VOA Method(s) TO-15:
The laboratory control sample duplicate (LCSD) for 87541 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 87541 recovered outside control limits for the following analytes: Chloroethane.

Surrogate, 4-Bromofluorobenzene, recovery for the following samples was outside control limits: LFB-3:091615 (590-1968-5) and LFB-4:091615 (590-1968-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Internal standard (ISTD) response for the following sample was outside control limits: LFB-15:091615 (590-1968-7). The samples was re-analyzed with concurring results, and the original set of data has been reported.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 87719 recovered outside control limits for the following analytes: 1,2-Dichloro-1,1,2,2-tetrafluoroethane. The recovery of this analyte in the LCS and LCSD is within acceptance criteria, therefore there is no adverse effect on the data.

Surrogate 1,2-Dichloroethane-d4 (Surr) recovery for the following samples was outside control limits: (LCS 320-87719/26) and (LCSD 320-87719/42). This analyte is not used as a monitoring analyte.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method(s) TO-15: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 87719 recovered outside control limits for the following analytes: 1,2-Dichloro-1,1,2,2-tetrafluoroethane. The recovery of this analyte in the LCS and LCSD is within acceptance criteria, therefore there is no adverse effect on the data.

Method(s) TO-15: Surrogate 1,2-Dichloroethane-d4 (Surr) recovery for the following samples was outside control limits: (LCS 320-87719/26) and (LCSD 320-87719/42). This analyte is not used as a monitoring analyte.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-1968-1	LFB-8:091615	Air	09/16/15 11:15	09/16/15 16:20
590-1968-2	LFB-9:091615	Air	09/16/15 11:41	09/16/15 16:20
590-1968-3	LFB-11:091615	Air	09/16/15 12:05	09/16/15 16:20
590-1968-4	LFB-10:091615	Air	09/16/15 12:29	09/16/15 16:20
590-1968-5	LFB-3:091615	Air	09/16/15 12:52	09/16/15 16:20
590-1968-6	LFB-4:091615	Air	09/16/15 13:14	09/16/15 16:20
590-1968-7	LFB-15:091615	Air	09/16/15 13:36	09/16/15 16:20
590-1968-8	LFB-16:091615	Air	09/16/15 13:56	09/16/15 16:20
590-1968-9	LFB-17:091615	Air	09/16/15 14:15	09/16/15 16:20
590-1968-10	LFB-5:091615	Air	09/16/15 14:46	09/16/15 16:20

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits
E	Result exceeded calibration range.
*	ISTD response or retention time outside acceptable limits
*	RPD of the LCS and LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Client Sample ID: LFB-8:091615
Date Collected: 09/16/15 11:15
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			09/30/15 21:46	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/30/15 21:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0019**	**J**	0.0031	0.0012	mg/m3			09/30/15 21:46	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/30/15 21:46	1
1,1-Dichloroethane	**0.00092**	**J**	0.0012	0.00029	mg/m3			09/30/15 21:46	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/30/15 21:46	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/30/15 21:46	1
1,2,4-Trimethylbenzene	**0.0016**	**J**	0.0039	0.00080	mg/m3			09/30/15 21:46	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/30/15 21:46	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	*	0.0028	0.0011	mg/m3			09/30/15 21:46	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/30/15 21:46	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/30/15 21:46	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/30/15 21:46	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/30/15 21:46	1
1,3-Dichlorobenzene	**0.0018**	**J**	0.0024	0.00066	mg/m3			09/30/15 21:46	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/30/15 21:46	1
2-Butanone (MEK)	**0.0035**		0.0024	0.00059	mg/m3			09/30/15 21:46	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/30/15 21:46	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/30/15 21:46	1
4-Methyl-2-pentanone (MIBK)	**0.0096**		0.0016	0.00055	mg/m3			09/30/15 21:46	1
Acetone	**0.041**		0.012	0.00042	mg/m3			09/30/15 21:46	1
Benzene	ND		0.0013	0.00025	mg/m3			09/30/15 21:46	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/30/15 21:46	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/30/15 21:46	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/30/15 21:46	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/30/15 21:46	1
Carbon disulfide	**0.00066**	**J**	0.0025	0.00024	mg/m3			09/30/15 21:46	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/30/15 21:46	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/30/15 21:46	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/30/15 21:46	1
Chloroform	**0.00097**	**J**	0.0015	0.00046	mg/m3			09/30/15 21:46	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/30/15 21:46	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/30/15 21:46	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/30/15 21:46	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/30/15 21:46	1
Dichlorodifluoromethane	**0.18**		0.0020	0.00072	mg/m3			09/30/15 21:46	1
Ethylbenzene	**0.0011**	**J**	0.0017	0.00027	mg/m3			09/30/15 21:46	1
Gasoline Range Organics (C6-C12)	**0.36**	**J**	0.41	0.16	mg/m3			09/30/15 21:46	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/30/15 21:46	1
m,p-Xylene	**0.0041**		0.0035	0.00043	mg/m3			09/30/15 21:46	1
Methylene Chloride	**0.0013**	**J**	0.0014	0.00025	mg/m3			09/30/15 21:46	1
o-Xylene	**0.0015**	**J**	0.0017	0.00023	mg/m3			09/30/15 21:46	1
Styrene	ND		0.0017	0.00025	mg/m3			09/30/15 21:46	1
Tetrachloroethene	**0.065**		0.0027	0.00035	mg/m3			09/30/15 21:46	1
Toluene	**0.0034**	**B**	0.0015	0.00019	mg/m3			09/30/15 21:46	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/30/15 21:46	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/30/15 21:46	1
Trichloroethene	**0.0040**		0.0021	0.00056	mg/m3			09/30/15 21:46	1

Client Sample ID: LFB-8:091615

Date Collected: 09/16/15 11:15
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**0.033**		0.0022	0.0011	mg/m3			09/30/15 21:46	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/30/15 21:46	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/30/15 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*09/30/15 21:46*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*09/30/15 21:46*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/30/15 21:46*	*1*

Client Sample ID: LFB-9:091615

Date Collected: 09/16/15 11:41
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			09/30/15 22:33	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/30/15 22:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/30/15 22:33	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/30/15 22:33	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			09/30/15 22:33	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/30/15 22:33	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/30/15 22:33	1
1,2,4-Trimethylbenzene	**0.0017**	**J**	0.0039	0.00080	mg/m3			09/30/15 22:33	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/30/15 22:33	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	*	0.0028	0.0011	mg/m3			09/30/15 22:33	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/30/15 22:33	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/30/15 22:33	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/30/15 22:33	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/30/15 22:33	1
1,3-Dichlorobenzene	**0.0022**	**J**	0.0024	0.00066	mg/m3			09/30/15 22:33	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/30/15 22:33	1
2-Butanone (MEK)	**0.0040**		0.0024	0.00059	mg/m3			09/30/15 22:33	1
2-Hexanone	**0.00055**	**J**	0.0016	0.00036	mg/m3			09/30/15 22:33	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/30/15 22:33	1
4-Methyl-2-pentanone (MIBK)	**0.010**		0.0016	0.00055	mg/m3			09/30/15 22:33	1
Acetone	**0.030**		0.012	0.00042	mg/m3			09/30/15 22:33	1
Benzene	ND		0.0013	0.00025	mg/m3			09/30/15 22:33	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/30/15 22:33	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/30/15 22:33	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/30/15 22:33	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/30/15 22:33	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			09/30/15 22:33	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/30/15 22:33	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/30/15 22:33	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/30/15 22:33	1
Chloroform	**0.0066**		0.0015	0.00046	mg/m3			09/30/15 22:33	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/30/15 22:33	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/30/15 22:33	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/30/15 22:33	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/30/15 22:33	1

Client Sample ID: LFB-9:091615

Lab Sample ID: 590-1968-2

Date Collected: 09/16/15 11:41

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.0075		0.0020	0.00072	mg/m3			09/30/15 22:33	1
Ethylbenzene	0.00097	J	0.0017	0.00027	mg/m3			09/30/15 22:33	1
Gasoline Range Organics (C6-C12)	0.24	J	0.41	0.16	mg/m3			09/30/15 22:33	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/30/15 22:33	1
m,p-Xylene	0.0044		0.0035	0.00043	mg/m3			09/30/15 22:33	1
Methylene Chloride	0.00044	J	0.0014	0.00025	mg/m3			09/30/15 22:33	1
o-Xylene	0.0015	J	0.0017	0.00023	mg/m3			09/30/15 22:33	1
Styrene	ND		0.0017	0.00025	mg/m3			09/30/15 22:33	1
Tetrachloroethene	0.0061		0.0027	0.00035	mg/m3			09/30/15 22:33	1
Toluene	0.0028	B	0.0015	0.00019	mg/m3			09/30/15 22:33	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/30/15 22:33	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/30/15 22:33	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/30/15 22:33	1
Trichlorofluoromethane	0.037		0.0022	0.0011	mg/m3			09/30/15 22:33	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/30/15 22:33	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/30/15 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*09/30/15 22:33*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*09/30/15 22:33*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*09/30/15 22:33*	*1*

Client Sample ID: LFB-11:091615

Lab Sample ID: 590-1968-3

Date Collected: 09/16/15 12:05

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.12	0.025	mg/m3			09/30/15 23:15	71
1,1,2,2-Tetrachloroethane	ND		0.19	0.034	mg/m3			09/30/15 23:15	71
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.22	0.089	mg/m3			09/30/15 23:15	71
1,1,2-Trichloroethane	ND		0.15	0.026	mg/m3			09/30/15 23:15	71
1,1-Dichloroethane	0.038	J	0.086	0.021	mg/m3			09/30/15 23:15	71
1,1-Dichloroethene	0.037	J	0.23	0.036	mg/m3			09/30/15 23:15	71
1,2,4-Trichlorobenzene	ND		1.1	0.23	mg/m3			09/30/15 23:15	71
1,2,4-Trimethylbenzene	4.0		0.28	0.057	mg/m3			09/30/15 23:15	71
1,2-Dibromoethane (EDB)	ND		0.44	0.041	mg/m3			09/30/15 23:15	71
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.19	J *	0.20	0.077	mg/m3			09/30/15 23:15	71
1,2-Dichlorobenzene	ND		0.17	0.055	mg/m3			09/30/15 23:15	71
1,2-Dichloroethane	ND		0.23	0.025	mg/m3			09/30/15 23:15	71
1,2-Dichloropropane	ND		0.13	0.079	mg/m3			09/30/15 23:15	71
1,3,5-Trimethylbenzene	0.84		0.14	0.044	mg/m3			09/30/15 23:15	71
1,3-Dichlorobenzene	ND		0.17	0.047	mg/m3			09/30/15 23:15	71
1,4-Dichlorobenzene	0.65		0.17	0.064	mg/m3			09/30/15 23:15	71
2-Butanone (MEK)	0.083	J	0.17	0.042	mg/m3			09/30/15 23:15	71
2-Hexanone	ND		0.12	0.025	mg/m3			09/30/15 23:15	71
4-Ethyltoluene	0.52		0.14	0.065	mg/m3			09/30/15 23:15	71
4-Methyl-2-pentanone (MIBK)	ND		0.12	0.039	mg/m3			09/30/15 23:15	71

Client Sample ID: LFB-11:091615

Lab Sample ID: 590-1968-3

Date Collected: 09/16/15 12:05

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.13**	**J**	0.84	0.030	mg/m3			09/30/15 23:15	71
Benzene	**0.54**		0.091	0.018	mg/m3			09/30/15 23:15	71
Benzyl chloride	ND		0.29	0.060	mg/m3			09/30/15 23:15	71
Bromodichloromethane	ND		0.14	0.031	mg/m3			09/30/15 23:15	71
Bromoform	ND		0.29	0.051	mg/m3			09/30/15 23:15	71
Bromomethane	ND		0.22	0.092	mg/m3			09/30/15 23:15	71
Carbon disulfide	**0.045**	**J**	0.18	0.017	mg/m3			09/30/15 23:15	71
Carbon tetrachloride	ND		0.36	0.029	mg/m3			09/30/15 23:15	71
Chlorobenzene	ND		0.098	0.021	mg/m3			09/30/15 23:15	71
Chloroethane	**6.5**		0.15	0.058	mg/m3			09/30/15 23:15	71
Chloroform	ND		0.10	0.033	mg/m3			09/30/15 23:15	71
Chloromethane	ND		0.12	0.029	mg/m3			09/30/15 23:15	71
cis-1,2-Dichloroethene	**0.36**		0.11	0.025	mg/m3			09/30/15 23:15	71
cis-1,3-Dichloropropene	ND		0.13	0.034	mg/m3			09/30/15 23:15	71
Dibromochloromethane	ND		0.24	0.048	mg/m3			09/30/15 23:15	71
Dichlorodifluoromethane	**0.17**		0.14	0.051	mg/m3			09/30/15 23:15	71
Ethylbenzene	**11**		0.12	0.019	mg/m3			09/30/15 23:15	71
Gasoline Range Organics (C6-C12)	**520**		29	12	mg/m3			09/30/15 23:15	71
Hexachlorobutadiene	ND		1.5	0.33	mg/m3			09/30/15 23:15	71
m,p-Xylene	**2.8**		0.25	0.031	mg/m3			09/30/15 23:15	71
Methylene Chloride	ND		0.099	0.018	mg/m3			09/30/15 23:15	71
o-Xylene	**1.4**		0.12	0.017	mg/m3			09/30/15 23:15	71
Styrene	ND		0.12	0.018	mg/m3			09/30/15 23:15	71
Tetrachloroethene	**0.047**	**J**	0.19	0.025	mg/m3			09/30/15 23:15	71
Toluene	**0.45**	**B**	0.11	0.014	mg/m3			09/30/15 23:15	71
trans-1,2-Dichloroethene	ND		0.11	0.028	mg/m3			09/30/15 23:15	71
trans-1,3-Dichloropropene	ND		0.13	0.028	mg/m3			09/30/15 23:15	71
Trichloroethene	**0.044**	**J**	0.15	0.040	mg/m3			09/30/15 23:15	71
Trichlorofluoromethane	**6.8**		0.16	0.078	mg/m3			09/30/15 23:15	71
Vinyl acetate	ND		0.20	0.036	mg/m3			09/30/15 23:15	71
Vinyl chloride	ND		0.073	0.022	mg/m3			09/30/15 23:15	71

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*		*09/30/15 23:15*	*71*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*09/30/15 23:15*	*71*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/30/15 23:15*	*71*

Client Sample ID: LFB-10:091615

Lab Sample ID: 590-1968-4

Date Collected: 09/16/15 12:29

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0031**		0.0016	0.00035	mg/m3			10/01/15 00:10	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			10/01/15 00:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0027**	**J**	0.0031	0.0012	mg/m3			10/01/15 00:10	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			10/01/15 00:10	1
1,1-Dichloroethane	**0.00073**	**J**	0.0012	0.00029	mg/m3			10/01/15 00:10	1

Client Sample ID: LFB-10:091615
Date Collected: 09/16/15 12:29
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			10/01/15 00:10	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			10/01/15 00:10	1
1,2,4-Trimethylbenzene	**0.0022**	**J**	0.0039	0.00080	mg/m3			10/01/15 00:10	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			10/01/15 00:10	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.011**	*****	0.0028	0.0011	mg/m3			10/01/15 00:10	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			10/01/15 00:10	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			10/01/15 00:10	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			10/01/15 00:10	1
1,3,5-Trimethylbenzene	**0.0011**	**J**	0.0020	0.00061	mg/m3			10/01/15 00:10	1
1,3-Dichlorobenzene	**0.0022**	**J**	0.0024	0.00066	mg/m3			10/01/15 00:10	1
1,4-Dichlorobenzene	**0.0026**		0.0024	0.00090	mg/m3			10/01/15 00:10	1
2-Butanone (MEK)	**0.0029**		0.0024	0.00059	mg/m3			10/01/15 00:10	1
2-Hexanone	**0.00049**	**J**	0.0016	0.00036	mg/m3			10/01/15 00:10	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			10/01/15 00:10	1
4-Methyl-2-pentanone (MIBK)	**0.0067**		0.0016	0.00055	mg/m3			10/01/15 00:10	1
Acetone	**0.019**		0.012	0.00042	mg/m3			10/01/15 00:10	1
Benzene	ND		0.0013	0.00025	mg/m3			10/01/15 00:10	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			10/01/15 00:10	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			10/01/15 00:10	1
Bromoform	ND		0.0041	0.00072	mg/m3			10/01/15 00:10	1
Bromomethane	ND		0.0031	0.0013	mg/m3			10/01/15 00:10	1
Carbon disulfide	**0.00048**	**J**	0.0025	0.00024	mg/m3			10/01/15 00:10	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			10/01/15 00:10	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			10/01/15 00:10	1
Chloroethane	ND		0.0021	0.00081	mg/m3			10/01/15 00:10	1
Chloroform	ND		0.0015	0.00046	mg/m3			10/01/15 00:10	1
Chloromethane	**0.00047**	**J**	0.0017	0.00041	mg/m3			10/01/15 00:10	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			10/01/15 00:10	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			10/01/15 00:10	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			10/01/15 00:10	1
Dichlorodifluoromethane	**0.058**		0.0020	0.00072	mg/m3			10/01/15 00:10	1
Ethylbenzene	**0.0016**	**J**	0.0017	0.00027	mg/m3			10/01/15 00:10	1
Gasoline Range Organics (C6-C12)	**0.54**		0.41	0.16	mg/m3			10/01/15 00:10	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			10/01/15 00:10	1
m,p-Xylene	**0.0035**		0.0035	0.00043	mg/m3			10/01/15 00:10	1
Methylene Chloride	**0.00027**	**J**	0.0014	0.00025	mg/m3			10/01/15 00:10	1
o-Xylene	**0.0012**	**J**	0.0017	0.00023	mg/m3			10/01/15 00:10	1
Styrene	**0.00083**	**J**	0.0017	0.00025	mg/m3			10/01/15 00:10	1
Tetrachloroethene	**0.057**		0.0027	0.00035	mg/m3			10/01/15 00:10	1
Toluene	**0.0019**	**B**	0.0015	0.00019	mg/m3			10/01/15 00:10	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			10/01/15 00:10	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			10/01/15 00:10	1
Trichloroethene	**0.0031**		0.0021	0.00056	mg/m3			10/01/15 00:10	1
Trichlorofluoromethane	**0.028**		0.0022	0.0011	mg/m3			10/01/15 00:10	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			10/01/15 00:10	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			10/01/15 00:10	1

Client Sample ID: LFB-10:091615

Lab Sample ID: 590-1968-4

Date Collected: 09/16/15 12:29

Matrix: Air

Date Received: 09/16/15 16:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*10/01/15 00:10*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*10/01/15 00:10*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/01/15 00:10*	*1*

Client Sample ID: LFB-3:091615

Lab Sample ID: 590-1968-5

Date Collected: 09/16/15 12:52

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	**0.024**		0.0093	0.0036	mg/m3			10/01/15 00:53	4.4
Chloromethane	**0.013**		0.0073	0.0018	mg/m3			10/01/15 00:53	4.4
Gasoline Range Organics (C6-C12)	**280**		1.8	0.72	mg/m3			10/01/15 00:53	4.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*10/01/15 00:53*	*4.4*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*		*10/01/15 00:53*	*4.4*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/01/15 00:53*	*4.4*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.014	0.0031	mg/m3			09/30/15 06:12	8.8
1,1,2,2-Tetrachloroethane	ND		0.024	0.0042	mg/m3			09/30/15 06:12	8.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.027	0.011	mg/m3			09/30/15 06:12	8.8
1,1,2-Trichloroethane	ND		0.019	0.0032	mg/m3			09/30/15 06:12	8.8
1,1-Dichloroethane	**0.015**		0.011	0.0026	mg/m3			09/30/15 06:12	8.8
1,1-Dichloroethene	ND		0.028	0.0045	mg/m3			09/30/15 06:12	8.8
1,2,4-Trichlorobenzene	ND		0.13	0.028	mg/m3			09/30/15 06:12	8.8
1,2,4-Trimethylbenzene	**0.47**		0.035	0.0070	mg/m3			09/30/15 06:12	8.8
1,2-Dibromoethane (EDB)	ND		0.054	0.0051	mg/m3			09/30/15 06:12	8.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.24**		0.025	0.0095	mg/m3			09/30/15 06:12	8.8
1,2-Dichlorobenzene	ND		0.021	0.0069	mg/m3			09/30/15 06:12	8.8
1,2-Dichloroethane	ND		0.028	0.0031	mg/m3			09/30/15 06:12	8.8
1,2-Dichloropropane	ND		0.016	0.0098	mg/m3			09/30/15 06:12	8.8
1,3,5-Trimethylbenzene	**0.24**		0.017	0.0054	mg/m3			09/30/15 06:12	8.8
1,3-Dichlorobenzene	**0.019**	**J**	0.021	0.0058	mg/m3			09/30/15 06:12	8.8
1,4-Dichlorobenzene	**0.11**		0.021	0.0079	mg/m3			09/30/15 06:12	8.8
2-Butanone (MEK)	**0.010**	**J**	0.021	0.0052	mg/m3			09/30/15 06:12	8.8
2-Hexanone	**0.011**	**J**	0.014	0.0031	mg/m3			09/30/15 06:12	8.8
4-Ethyltoluene	**0.079**		0.017	0.0081	mg/m3			09/30/15 06:12	8.8
4-Methyl-2-pentanone (MIBK)	**0.11**		0.014	0.0049	mg/m3			09/30/15 06:12	8.8
Acetone	**0.083**	**J**	0.10	0.0037	mg/m3			09/30/15 06:12	8.8
Benzene	**0.26**		0.011	0.0022	mg/m3			09/30/15 06:12	8.8
Benzyl chloride	**0.026**	**J**	0.036	0.0074	mg/m3			09/30/15 06:12	8.8
Bromodichloromethane	ND		0.018	0.0039	mg/m3			09/30/15 06:12	8.8
Bromoform	ND		0.036	0.0064	mg/m3			09/30/15 06:12	8.8
Bromomethane	ND		0.027	0.011	mg/m3			09/30/15 06:12	8.8
Carbon disulfide	**0.44**		0.022	0.0021	mg/m3			09/30/15 06:12	8.8
Carbon tetrachloride	ND		0.044	0.0035	mg/m3			09/30/15 06:12	8.8

Client Sample ID: LFB-3:091615

Lab Sample ID: 590-1968-5

Date Collected: 09/16/15 12:52

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	**0.70**		0.012	0.0026	mg/m3			09/30/15 06:12	8.8
Chloroform	ND		0.013	0.0041	mg/m3			09/30/15 06:12	8.8
cis-1,2-Dichloroethene	**0.084**		0.014	0.0031	mg/m3			09/30/15 06:12	8.8
cis-1,3-Dichloropropene	ND		0.016	0.0042	mg/m3			09/30/15 06:12	8.8
Dibromochloromethane	ND		0.030	0.0059	mg/m3			09/30/15 06:12	8.8
Dichlorodifluoromethane	**0.19**		0.017	0.0063	mg/m3			09/30/15 06:12	8.8
Ethylbenzene	**0.86**		0.015	0.0024	mg/m3			09/30/15 06:12	8.8
Hexachlorobutadiene	ND		0.19	0.041	mg/m3			09/30/15 06:12	8.8
m,p-Xylene	**0.50**	**B**	0.031	0.0038	mg/m3			09/30/15 06:12	8.8
Methylene Chloride	**0.0044**	**J**	0.012	0.0022	mg/m3			09/30/15 06:12	8.8
o-Xylene	**0.33**	**B**	0.015	0.0021	mg/m3			09/30/15 06:12	8.8
Styrene	ND		0.015	0.0022	mg/m3			09/30/15 06:12	8.8
Tetrachloroethene	**0.018**	**J**	0.024	0.0030	mg/m3			09/30/15 06:12	8.8
Toluene	**0.19**		0.013	0.0017	mg/m3			09/30/15 06:12	8.8
trans-1,2-Dichloroethene	**0.014**		0.014	0.0035	mg/m3			09/30/15 06:12	8.8
trans-1,3-Dichloropropene	ND		0.016	0.0035	mg/m3			09/30/15 06:12	8.8
Trichloroethene	**0.019**		0.019	0.0050	mg/m3			09/30/15 06:12	8.8
Trichlorofluoromethane	**0.015**	**J**	0.020	0.0097	mg/m3			09/30/15 06:12	8.8
Vinyl acetate	ND		0.025	0.0045	mg/m3			09/30/15 06:12	8.8
Vinyl chloride	**1.2**		0.0090	0.0027	mg/m3			09/30/15 06:12	8.8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*		*09/30/15 06:12*	*8.8*
4-Bromofluorobenzene (Surr)	*251*	*X*	*70 - 130*		*09/30/15 06:12*	*8.8*
Toluene-d8 (Surr)	*110*		*70 - 130*		*09/30/15 06:12*	*8.8*

Client Sample ID: LFB-4:091615

Lab Sample ID: 590-1968-6

Date Collected: 09/16/15 13:14

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.014	0.0031	mg/m3			09/30/15 07:03	8.73
1,1,2,2-Tetrachloroethane	ND		0.024	0.0041	mg/m3			09/30/15 07:03	8.73
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.027	0.011	mg/m3			09/30/15 07:03	8.73
1,1,2-Trichloroethane	ND		0.019	0.0032	mg/m3			09/30/15 07:03	8.73
1,1-Dichloroethane	ND		0.011	0.0025	mg/m3			09/30/15 07:03	8.73
1,1-Dichloroethene	**0.0063**	**J**	0.028	0.0045	mg/m3			09/30/15 07:03	8.73
1,2,4-Trichlorobenzene	ND		0.13	0.028	mg/m3			09/30/15 07:03	8.73
1,2,4-Trimethylbenzene	**0.39**		0.034	0.0070	mg/m3			09/30/15 07:03	8.73
1,2-Dibromoethane (EDB)	ND		0.054	0.0050	mg/m3			09/30/15 07:03	8.73
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.75**		0.024	0.0095	mg/m3			09/30/15 07:03	8.73
1,2-Dichlorobenzene	**0.066**		0.021	0.0068	mg/m3			09/30/15 07:03	8.73
1,2-Dichloroethane	ND		0.028	0.0031	mg/m3			09/30/15 07:03	8.73
1,2-Dichloropropane	ND		0.016	0.0097	mg/m3			09/30/15 07:03	8.73
1,3,5-Trimethylbenzene	**0.15**		0.017	0.0054	mg/m3			09/30/15 07:03	8.73
1,3-Dichlorobenzene	**0.011**	**J**	0.021	0.0058	mg/m3			09/30/15 07:03	8.73
1,4-Dichlorobenzene	**1.7**		0.021	0.0078	mg/m3			09/30/15 07:03	8.73
2-Butanone (MEK)	**0.0092**	**J**	0.021	0.0051	mg/m3			09/30/15 07:03	8.73

Client Sample ID: LFB-4:091615

Date Collected: 09/16/15 13:14
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-6

Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.0090	J	0.014	0.0031	mg/m3			09/30/15 07:03	8.73
4-Ethyltoluene	0.027		0.017	0.0080	mg/m3			09/30/15 07:03	8.73
4-Methyl-2-pentanone (MIBK)	0.092		0.014	0.0048	mg/m3			09/30/15 07:03	8.73
Acetone	0.036	J	0.10	0.0037	mg/m3			09/30/15 07:03	8.73
Benzene	0.19		0.011	0.0022	mg/m3			09/30/15 07:03	8.73
Benzyl chloride	ND		0.036	0.0074	mg/m3			09/30/15 07:03	8.73
Bromodichloromethane	ND		0.018	0.0039	mg/m3			09/30/15 07:03	8.73
Bromoform	ND		0.036	0.0063	mg/m3			09/30/15 07:03	8.73
Bromomethane	ND		0.027	0.011	mg/m3			09/30/15 07:03	8.73
Carbon disulfide	0.021	J	0.022	0.0021	mg/m3			09/30/15 07:03	8.73
Carbon tetrachloride	ND		0.044	0.0035	mg/m3			09/30/15 07:03	8.73
Chlorobenzene	0.56		0.012	0.0026	mg/m3			09/30/15 07:03	8.73
Chloroethane	ND		0.018	0.0071	mg/m3			09/30/15 07:03	8.73
Chloroform	ND		0.013	0.0040	mg/m3			09/30/15 07:03	8.73
Chloromethane	ND		0.014	0.0036	mg/m3			09/30/15 07:03	8.73
cis-1,2-Dichloroethene	0.11		0.014	0.0031	mg/m3			09/30/15 07:03	8.73
cis-1,3-Dichloropropene	ND		0.016	0.0041	mg/m3			09/30/15 07:03	8.73
Dibromochloromethane	ND		0.030	0.0059	mg/m3			09/30/15 07:03	8.73
Dichlorodifluoromethane	0.55		0.017	0.0063	mg/m3			09/30/15 07:03	8.73
Ethylbenzene	7.2	E	0.015	0.0024	mg/m3			09/30/15 07:03	8.73
Hexachlorobutadiene	ND		0.19	0.040	mg/m3			09/30/15 07:03	8.73
m,p-Xylene	0.87	B	0.030	0.0038	mg/m3			09/30/15 07:03	8.73
Methylene Chloride	0.0027	J	0.012	0.0022	mg/m3			09/30/15 07:03	8.73
o-Xylene	0.15	B	0.015	0.0020	mg/m3			09/30/15 07:03	8.73
Styrene	0.083	B	0.015	0.0022	mg/m3			09/30/15 07:03	8.73
Tetrachloroethene	0.012	J	0.024	0.0030	mg/m3			09/30/15 07:03	8.73
Toluene	0.18		0.013	0.0017	mg/m3			09/30/15 07:03	8.73
trans-1,2-Dichloroethene	0.0059	J	0.014	0.0035	mg/m3			09/30/15 07:03	8.73
trans-1,3-Dichloropropene	ND		0.016	0.0035	mg/m3			09/30/15 07:03	8.73
Trichloroethene	0.13		0.019	0.0049	mg/m3			09/30/15 07:03	8.73
Trichlorofluoromethane	ND		0.020	0.0096	mg/m3			09/30/15 07:03	8.73
Vinyl acetate	ND		0.025	0.0045	mg/m3			09/30/15 07:03	8.73
Vinyl chloride	0.28		0.0089	0.0027	mg/m3			09/30/15 07:03	8.73

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*09/30/15 07:03*	*8.73*
4-Bromofluorobenzene (Surr)	*319*	*X*	*70 - 130*		*09/30/15 07:03*	*8.73*
Toluene-d8 (Surr)	*106*		*70 - 130*		*09/30/15 07:03*	*8.73*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	690		4.5	1.8	mg/m3			10/01/15 01:35	10.9

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*		*10/01/15 01:35*	*10.9*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*		*10/01/15 01:35*	*10.9*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/01/15 01:35*	*10.9*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Client Sample ID: LFB-15:091615
Date Collected: 09/16/15 13:36
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0016**	*	0.0016	0.00035	mg/m3			10/01/15 02:27	1
1,1,2,2-Tetrachloroethane	ND	*	0.0027	0.00047	mg/m3			10/01/15 02:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	*	0.0031	0.0012	mg/m3			10/01/15 02:27	1
1,1,2-Trichloroethane	ND	*	0.0022	0.00037	mg/m3			10/01/15 02:27	1
1,1-Dichloroethane	ND	*	0.0012	0.00029	mg/m3			10/01/15 02:27	1
1,1-Dichloroethene	ND	*	0.0032	0.00051	mg/m3			10/01/15 02:27	1
1,2,4-Trichlorobenzene	ND	*	0.015	0.0032	mg/m3			10/01/15 02:27	1
1,2,4-Trimethylbenzene	**0.0011**	J *	0.0039	0.00080	mg/m3			10/01/15 02:27	1
1,2-Dibromoethane (EDB)	ND	*	0.0061	0.00058	mg/m3			10/01/15 02:27	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.046**	*	0.0028	0.0011	mg/m3			10/01/15 02:27	1
1,2-Dichlorobenzene	ND	*	0.0024	0.00078	mg/m3			10/01/15 02:27	1
1,2-Dichloroethane	ND	*	0.0032	0.00036	mg/m3			10/01/15 02:27	1
1,2-Dichloropropane	ND	*	0.0018	0.0011	mg/m3			10/01/15 02:27	1
1,3,5-Trimethylbenzene	ND	*	0.0020	0.00061	mg/m3			10/01/15 02:27	1
1,3-Dichlorobenzene	**0.0028**	*	0.0024	0.00066	mg/m3			10/01/15 02:27	1
1,4-Dichlorobenzene	ND	*	0.0024	0.00090	mg/m3			10/01/15 02:27	1
2-Butanone (MEK)	**0.0043**	*	0.0024	0.00059	mg/m3			10/01/15 02:27	1
2-Hexanone	**0.0012**	J *	0.0016	0.00036	mg/m3			10/01/15 02:27	1
4-Ethyltoluene	ND	*	0.0020	0.00092	mg/m3			10/01/15 02:27	1
4-Methyl-2-pentanone (MIBK)	**0.011**	*	0.0016	0.00055	mg/m3			10/01/15 02:27	1
Acetone	**0.029**	*	0.012	0.00042	mg/m3			10/01/15 02:27	1
Benzene	**0.00026**	J *	0.0013	0.00025	mg/m3			10/01/15 02:27	1
Benzyl chloride	ND	*	0.0041	0.00084	mg/m3			10/01/15 02:27	1
Bromodichloromethane	ND	*	0.0020	0.00044	mg/m3			10/01/15 02:27	1
Bromoform	ND	*	0.0041	0.00072	mg/m3			10/01/15 02:27	1
Bromomethane	ND	*	0.0031	0.0013	mg/m3			10/01/15 02:27	1
Carbon disulfide	**0.0016**	J *	0.0025	0.00024	mg/m3			10/01/15 02:27	1
Carbon tetrachloride	ND	*	0.0050	0.00040	mg/m3			10/01/15 02:27	1
Chlorobenzene	ND	*	0.0014	0.00029	mg/m3			10/01/15 02:27	1
Chloroethane	ND	*	0.0021	0.00081	mg/m3			10/01/15 02:27	1
Chloroform	ND	*	0.0015	0.00046	mg/m3			10/01/15 02:27	1
Chloromethane	**0.00044**	J *	0.0017	0.00041	mg/m3			10/01/15 02:27	1
cis-1,2-Dichloroethene	ND	*	0.0016	0.00035	mg/m3			10/01/15 02:27	1
cis-1,3-Dichloropropene	ND	*	0.0018	0.00047	mg/m3			10/01/15 02:27	1
Dibromochloromethane	ND	*	0.0034	0.00067	mg/m3			10/01/15 02:27	1
Dichlorodifluoromethane	**0.067**	*	0.0020	0.00072	mg/m3			10/01/15 02:27	1
Ethylbenzene	**0.0014**	J *	0.0017	0.00027	mg/m3			10/01/15 02:27	1
Gasoline Range Organics (C6-C12)	**1.3**	*	0.41	0.16	mg/m3			10/01/15 02:27	1
Hexachlorobutadiene	ND	*	0.021	0.0046	mg/m3			10/01/15 02:27	1
m,p-Xylene	**0.0031**	J *	0.0035	0.00043	mg/m3			10/01/15 02:27	1
Methylene Chloride	**0.00087**	J *	0.0014	0.00025	mg/m3			10/01/15 02:27	1
o-Xylene	**0.0011**	J *	0.0017	0.00023	mg/m3			10/01/15 02:27	1
Styrene	**0.00027**	J *	0.0017	0.00025	mg/m3			10/01/15 02:27	1
Tetrachloroethene	**0.19**	*	0.0027	0.00035	mg/m3			10/01/15 02:27	1
Toluene	**0.0019**	* B	0.0015	0.00019	mg/m3			10/01/15 02:27	1
trans-1,2-Dichloroethene	ND	*	0.0016	0.00040	mg/m3			10/01/15 02:27	1
trans-1,3-Dichloropropene	ND	*	0.0018	0.00040	mg/m3			10/01/15 02:27	1
Trichloroethene	**0.0029**	*	0.0021	0.00056	mg/m3			10/01/15 02:27	1

Client Sample ID: LFB-15:091615

Lab Sample ID: 590-1968-7

Date Collected: 09/16/15 13:36

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**0.027**	*	0.0022	0.0011	mg/m3			10/01/15 02:27	1
Vinyl acetate	ND	*	0.0028	0.00051	mg/m3			10/01/15 02:27	1
Vinyl chloride	ND	*	0.0010	0.00031	mg/m3			10/01/15 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*	*	*70 - 130*		*10/01/15 02:27*	*1*
4-Bromofluorobenzene (Surr)	*104*	*	*70 - 130*		*10/01/15 02:27*	*1*
Toluene-d8 (Surr)	*99*	*	*70 - 130*		*10/01/15 02:27*	*1*

Client Sample ID: LFB-16:091615

Lab Sample ID: 590-1968-8

Date Collected: 09/16/15 13:56

Matrix: Air

Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0054**		0.0016	0.00035	mg/m3			10/01/15 03:18	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			10/01/15 03:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			10/01/15 03:18	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			10/01/15 03:18	1
1,1-Dichloroethane	**0.00067**	**J**	0.0012	0.00029	mg/m3			10/01/15 03:18	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			10/01/15 03:18	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			10/01/15 03:18	1
1,2,4-Trimethylbenzene	**0.00095**	**J**	0.0039	0.00080	mg/m3			10/01/15 03:18	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			10/01/15 03:18	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.042**	*	0.0028	0.0011	mg/m3			10/01/15 03:18	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			10/01/15 03:18	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			10/01/15 03:18	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			10/01/15 03:18	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			10/01/15 03:18	1
1,3-Dichlorobenzene	**0.0016**	**J**	0.0024	0.00066	mg/m3			10/01/15 03:18	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			10/01/15 03:18	1
2-Butanone (MEK)	**0.0021**	**J**	0.0024	0.00059	mg/m3			10/01/15 03:18	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			10/01/15 03:18	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			10/01/15 03:18	1
4-Methyl-2-pentanone (MIBK)	**0.0042**		0.0016	0.00055	mg/m3			10/01/15 03:18	1
Acetone	**0.014**		0.012	0.00042	mg/m3			10/01/15 03:18	1
Benzene	ND		0.0013	0.00025	mg/m3			10/01/15 03:18	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			10/01/15 03:18	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			10/01/15 03:18	1
Bromoform	ND		0.0041	0.00072	mg/m3			10/01/15 03:18	1
Bromomethane	ND		0.0031	0.0013	mg/m3			10/01/15 03:18	1
Carbon disulfide	**0.00084**	**J**	0.0025	0.00024	mg/m3			10/01/15 03:18	1
Carbon tetrachloride	**0.0068**		0.0050	0.00040	mg/m3			10/01/15 03:18	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			10/01/15 03:18	1
Chloroethane	ND		0.0021	0.00081	mg/m3			10/01/15 03:18	1
Chloroform	ND		0.0015	0.00046	mg/m3			10/01/15 03:18	1
Chloromethane	ND		0.0017	0.00041	mg/m3			10/01/15 03:18	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			10/01/15 03:18	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			10/01/15 03:18	1

Client Sample ID: LFB-16:091615

Lab Sample ID: 590-1968-8
Date Collected: 09/16/15 13:56
Matrix: Air
Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			10/01/15 03:18	1
Dichlorodifluoromethane	**0.024**		0.0020	0.00072	mg/m3			10/01/15 03:18	1
Ethylbenzene	**0.00053**	**J**	0.0017	0.00027	mg/m3			10/01/15 03:18	1
Gasoline Range Organics (C6-C12)	**0.50**		0.41	0.16	mg/m3			10/01/15 03:18	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			10/01/15 03:18	1
m,p-Xylene	**0.0017**	**J**	0.0035	0.00043	mg/m3			10/01/15 03:18	1
Methylene Chloride	**0.00036**	**J**	0.0014	0.00025	mg/m3			10/01/15 03:18	1
o-Xylene	**0.00063**	**J**	0.0017	0.00023	mg/m3			10/01/15 03:18	1
Styrene	ND		0.0017	0.00025	mg/m3			10/01/15 03:18	1
Tetrachloroethene	**0.049**		0.0027	0.00035	mg/m3			10/01/15 03:18	1
Toluene	**0.00097**	**J B**	0.0015	0.00019	mg/m3			10/01/15 03:18	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			10/01/15 03:18	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			10/01/15 03:18	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			10/01/15 03:18	1
Trichlorofluoromethane	**0.013**		0.0022	0.0011	mg/m3			10/01/15 03:18	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			10/01/15 03:18	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			10/01/15 03:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*		*10/01/15 03:18*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*10/01/15 03:18*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/01/15 03:18*	*1*

Client Sample ID: LFB-17:091615

Lab Sample ID: 590-1968-9
Date Collected: 09/16/15 14:15
Matrix: Air
Date Received: 09/16/15 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**25**		0.41	0.16	mg/m3			10/01/15 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*10/01/15 04:13*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*10/01/15 04:13*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/01/15 04:13*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.028	0.0061	mg/m3			09/30/15 08:34	17.3
1,1,2,2-Tetrachloroethane	ND		0.048	0.0082	mg/m3			09/30/15 08:34	17.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.053	0.022	mg/m3			09/30/15 08:34	17.3
1,1,2-Trichloroethane	ND		0.038	0.0063	mg/m3			09/30/15 08:34	17.3
1,1-Dichloroethane	ND		0.021	0.0050	mg/m3			09/30/15 08:34	17.3
1,1-Dichloroethene	ND		0.055	0.0088	mg/m3			09/30/15 08:34	17.3
1,2,4-Trichlorobenzene	ND		0.26	0.056	mg/m3			09/30/15 08:34	17.3
1,2,4-Trimethylbenzene	**0.024**	**J**	0.068	0.014	mg/m3			09/30/15 08:34	17.3
1,2-Dibromoethane (EDB)	ND		0.11	0.010	mg/m3			09/30/15 08:34	17.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.062**		0.048	0.019	mg/m3			09/30/15 08:34	17.3

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Client Sample ID: LFB-17:091615
Date Collected: 09/16/15 14:15
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	**0.016**	**J**	0.042	0.014	mg/m3			09/30/15 08:34	17.3
1,2-Dichloroethane	ND		0.056	0.0062	mg/m3			09/30/15 08:34	17.3
1,2-Dichloropropane	ND		0.032	0.019	mg/m3			09/30/15 08:34	17.3
1,3,5-Trimethylbenzene	ND		0.034	0.011	mg/m3			09/30/15 08:34	17.3
1,3-Dichlorobenzene	ND		0.042	0.011	mg/m3			09/30/15 08:34	17.3
1,4-Dichlorobenzene	**0.18**		0.042	0.015	mg/m3			09/30/15 08:34	17.3
2-Butanone (MEK)	**0.029**	**J**	0.041	0.010	mg/m3			09/30/15 08:34	17.3
2-Hexanone	ND		0.028	0.0062	mg/m3			09/30/15 08:34	17.3
4-Ethyltoluene	**0.018**	**J**	0.034	0.016	mg/m3			09/30/15 08:34	17.3
4-Methyl-2-pentanone (MIBK)	ND		0.028	0.0096	mg/m3			09/30/15 08:34	17.3
Acetone	**0.11**	**J**	0.21	0.0073	mg/m3			09/30/15 08:34	17.3
Benzene	**0.060**		0.022	0.0044	mg/m3			09/30/15 08:34	17.3
Benzyl chloride	ND		0.072	0.015	mg/m3			09/30/15 08:34	17.3
Bromodichloromethane	ND		0.035	0.0077	mg/m3			09/30/15 08:34	17.3
Bromoform	ND		0.072	0.013	mg/m3			09/30/15 08:34	17.3
Bromomethane	ND		0.054	0.023	mg/m3			09/30/15 08:34	17.3
Carbon disulfide	**0.029**	**J**	0.043	0.0042	mg/m3			09/30/15 08:34	17.3
Carbon tetrachloride	ND		0.087	0.0070	mg/m3			09/30/15 08:34	17.3
Chlorobenzene	**0.032**		0.024	0.0051	mg/m3			09/30/15 08:34	17.3
Chloroethane	ND		0.037	0.014	mg/m3			09/30/15 08:34	17.3
Chloroform	ND		0.025	0.0080	mg/m3			09/30/15 08:34	17.3
Chloromethane	ND		0.029	0.0070	mg/m3			09/30/15 08:34	17.3
cis-1,2-Dichloroethene	**0.10**		0.027	0.0061	mg/m3			09/30/15 08:34	17.3
cis-1,3-Dichloropropene	ND		0.031	0.0082	mg/m3			09/30/15 08:34	17.3
Dibromochloromethane	ND		0.059	0.012	mg/m3			09/30/15 08:34	17.3
Dichlorodifluoromethane	**0.13**		0.034	0.012	mg/m3			09/30/15 08:34	17.3
Ethylbenzene	**0.17**		0.030	0.0047	mg/m3			09/30/15 08:34	17.3
Hexachlorobutadiene	ND		0.37	0.080	mg/m3			09/30/15 08:34	17.3
m,p-Xylene	**0.078**	**B**	0.060	0.0075	mg/m3			09/30/15 08:34	17.3
Methylene Chloride	**0.011**	**J**	0.024	0.0043	mg/m3			09/30/15 08:34	17.3
o-Xylene	**0.057**	**B**	0.030	0.0041	mg/m3			09/30/15 08:34	17.3
Styrene	**0.040**	**B**	0.029	0.0043	mg/m3			09/30/15 08:34	17.3
Tetrachloroethene	**0.15**		0.047	0.0060	mg/m3			09/30/15 08:34	17.3
Toluene	**0.071**		0.026	0.0033	mg/m3			09/30/15 08:34	17.3
trans-1,2-Dichloroethene	ND		0.027	0.0069	mg/m3			09/30/15 08:34	17.3
trans-1,3-Dichloropropene	ND		0.031	0.0069	mg/m3			09/30/15 08:34	17.3
Trichloroethene	**0.046**		0.037	0.0098	mg/m3			09/30/15 08:34	17.3
Trichlorofluoromethane	**2.0**		0.039	0.019	mg/m3			09/30/15 08:34	17.3
Vinyl acetate	ND		0.049	0.0088	mg/m3			09/30/15 08:34	17.3
Vinyl chloride	**0.083**		0.018	0.0053	mg/m3			09/30/15 08:34	17.3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*09/30/15 08:34*	*17.3*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*09/30/15 08:34*	*17.3*
Toluene-d8 (Surr)	*108*		*70 - 130*		*09/30/15 08:34*	*17.3*

Client Sample ID: LFB-5:091615
Date Collected: 09/16/15 14:46
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	**0.0080**		0.0029	0.00071	mg/m3			10/01/15 05:04	1.75
Gasoline Range Organics (C6-C12)	**99**		0.72	0.29	mg/m3			10/01/15 05:04	1.75

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*10/01/15 05:04*	*1.75*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*		*10/01/15 05:04*	*1.75*
Toluene-d8 (Surr)	*104*		*70 - 130*		*10/01/15 05:04*	*1.75*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.036	0.0078	mg/m3			09/30/15 09:25	21.9
1,1,2,2-Tetrachloroethane	ND		0.060	0.010	mg/m3			09/30/15 09:25	21.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.067	0.027	mg/m3			09/30/15 09:25	21.9
1,1,2-Trichloroethane	ND		0.048	0.0080	mg/m3			09/30/15 09:25	21.9
1,1-Dichloroethane	ND		0.027	0.0064	mg/m3			09/30/15 09:25	21.9
1,1-Dichloroethene	ND		0.069	0.011	mg/m3			09/30/15 09:25	21.9
1,2,4-Trichlorobenzene	ND		0.33	0.070	mg/m3			09/30/15 09:25	21.9
1,2,4-Trimethylbenzene	**0.060**	**J**	0.086	0.017	mg/m3			09/30/15 09:25	21.9
1,2-Dibromoethane (EDB)	ND		0.13	0.013	mg/m3			09/30/15 09:25	21.9
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.11**		0.061	0.024	mg/m3			09/30/15 09:25	21.9
1,2-Dichlorobenzene	ND		0.053	0.017	mg/m3			09/30/15 09:25	21.9
1,2-Dichloroethane	ND		0.071	0.0078	mg/m3			09/30/15 09:25	21.9
1,2-Dichloropropane	ND		0.040	0.024	mg/m3			09/30/15 09:25	21.9
1,3,5-Trimethylbenzene	**0.020**	**J**	0.043	0.013	mg/m3			09/30/15 09:25	21.9
1,3-Dichlorobenzene	ND		0.053	0.014	mg/m3			09/30/15 09:25	21.9
1,4-Dichlorobenzene	**0.19**		0.053	0.020	mg/m3			09/30/15 09:25	21.9
2-Butanone (MEK)	**0.017**	**J**	0.052	0.013	mg/m3			09/30/15 09:25	21.9
2-Hexanone	ND		0.036	0.0078	mg/m3			09/30/15 09:25	21.9
4-Ethyltoluene	ND		0.043	0.020	mg/m3			09/30/15 09:25	21.9
4-Methyl-2-pentanone (MIBK)	ND		0.036	0.012	mg/m3			09/30/15 09:25	21.9
Acetone	**0.077**	**J**	0.26	0.0093	mg/m3			09/30/15 09:25	21.9
Benzene	**0.17**		0.028	0.0055	mg/m3			09/30/15 09:25	21.9
Benzyl chloride	ND		0.091	0.018	mg/m3			09/30/15 09:25	21.9
Bromodichloromethane	ND		0.044	0.0097	mg/m3			09/30/15 09:25	21.9
Bromoform	ND		0.091	0.016	mg/m3			09/30/15 09:25	21.9
Bromomethane	ND		0.068	0.028	mg/m3			09/30/15 09:25	21.9
Carbon disulfide	**0.025**	**J**	0.055	0.0053	mg/m3			09/30/15 09:25	21.9
Carbon tetrachloride	ND		0.11	0.0088	mg/m3			09/30/15 09:25	21.9
Chlorobenzene	**0.11**		0.030	0.0065	mg/m3			09/30/15 09:25	21.9
Chloroethane	ND		0.046	0.018	mg/m3			09/30/15 09:25	21.9
Chloroform	ND		0.032	0.010	mg/m3			09/30/15 09:25	21.9
cis-1,2-Dichloroethene	**0.23**		0.035	0.0077	mg/m3			09/30/15 09:25	21.9
cis-1,3-Dichloropropene	ND		0.040	0.010	mg/m3			09/30/15 09:25	21.9
Dibromochloromethane	ND		0.075	0.015	mg/m3			09/30/15 09:25	21.9
Dichlorodifluoromethane	**0.15**		0.043	0.016	mg/m3			09/30/15 09:25	21.9
Ethylbenzene	**0.97**		0.038	0.0060	mg/m3			09/30/15 09:25	21.9
Hexachlorobutadiene	ND		0.47	0.10	mg/m3			09/30/15 09:25	21.9
m,p-Xylene	**0.077**	**B**	0.076	0.0095	mg/m3			09/30/15 09:25	21.9

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Client Sample ID: LFB-5:091615
Date Collected: 09/16/15 14:46
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.030	0.0055	mg/m3			09/30/15 09:25	21.9
o-Xylene	**0.038**	**B**	0.038	0.0051	mg/m3			09/30/15 09:25	21.9
Styrene	**0.035**	**J B**	0.037	0.0055	mg/m3			09/30/15 09:25	21.9
Tetrachloroethene	ND		0.059	0.0076	mg/m3			09/30/15 09:25	21.9
Toluene	**0.071**		0.033	0.0042	mg/m3			09/30/15 09:25	21.9
trans-1,2-Dichloroethene	ND		0.035	0.0087	mg/m3			09/30/15 09:25	21.9
trans-1,3-Dichloropropene	ND		0.040	0.0087	mg/m3			09/30/15 09:25	21.9
Trichloroethene	ND		0.047	0.012	mg/m3			09/30/15 09:25	21.9
Trichlorofluoromethane	ND		0.049	0.024	mg/m3			09/30/15 09:25	21.9
Vinyl acetate	ND		0.062	0.011	mg/m3			09/30/15 09:25	21.9
Vinyl chloride	**0.29**		0.022	0.0067	mg/m3			09/30/15 09:25	21.9

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*09/30/15 09:25*	*21.9*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*		*09/30/15 09:25*	*21.9*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/30/15 09:25*	*21.9*

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-87541/10
Matrix: Air
Analysis Batch: 87541

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			09/29/15 22:29	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/29/15 22:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/29/15 22:29	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/29/15 22:29	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			09/29/15 22:29	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/29/15 22:29	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/29/15 22:29	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/29/15 22:29	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/29/15 22:29	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			09/29/15 22:29	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/29/15 22:29	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/29/15 22:29	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/29/15 22:29	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/29/15 22:29	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/29/15 22:29	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/29/15 22:29	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			09/29/15 22:29	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/29/15 22:29	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/29/15 22:29	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/29/15 22:29	1
Acetone	ND		0.012	0.00042	mg/m3			09/29/15 22:29	1
Benzene	ND		0.0013	0.00025	mg/m3			09/29/15 22:29	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/29/15 22:29	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/29/15 22:29	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/29/15 22:29	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/29/15 22:29	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			09/29/15 22:29	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/29/15 22:29	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/29/15 22:29	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/29/15 22:29	1
Chloroform	ND		0.0015	0.00046	mg/m3			09/29/15 22:29	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/29/15 22:29	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/29/15 22:29	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/29/15 22:29	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/29/15 22:29	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			09/29/15 22:29	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			09/29/15 22:29	1
Gasoline Range Organics (C6-C12)	NC		0.41	0.16	mg/m3			09/29/15 22:29	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/29/15 22:29	1
m,p-Xylene	0.000591	J	0.0035	0.00043	mg/m3			09/29/15 22:29	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			09/29/15 22:29	1
o-Xylene	0.000410	J	0.0017	0.00023	mg/m3			09/29/15 22:29	1
Styrene	0.000355	J	0.0017	0.00025	mg/m3			09/29/15 22:29	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			09/29/15 22:29	1
Toluene	ND		0.0015	0.00019	mg/m3			09/29/15 22:29	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/29/15 22:29	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/29/15 22:29	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/29/15 22:29	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-87541/10
Matrix: Air
Analysis Batch: 87541

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			09/29/15 22:29	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/29/15 22:29	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/29/15 22:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*09/29/15 22:29*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/29/15 22:29*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/29/15 22:29*	*1*

Lab Sample ID: LCS 320-87541/7
Matrix: Air
Analysis Batch: 87541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.109	0.0953		mg/m3		87	65 - 124
1,1,2,2-Tetrachloroethane	0.137	0.136		mg/m3		99	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.153	0.131		mg/m3		85	50 - 132
1,1,2-Trichloroethane	0.109	0.0959		mg/m3		88	71 - 131
1,1-Dichloroethane	0.0809	0.0743		mg/m3		92	65 - 125
1,1-Dichloroethene	0.0793	0.0738		mg/m3		93	53 - 128
1,2,4-Trichlorobenzene	0.148	0.161		mg/m3		108	59 - 150
1,2,4-Trimethylbenzene	0.0983	0.101		mg/m3		103	61 - 145
1,2-Dibromoethane (EDB)	0.154	0.146		mg/m3		95	68 - 131
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.140	0.136		mg/m3		98	64 - 124
1,2-Dichlorobenzene	0.120	0.120		mg/m3		99	73 - 143
1,2-Dichloroethane	0.0809	0.0824		mg/m3		102	71 - 131
1,2-Dichloropropane	0.0924	0.0937		mg/m3		101	74 - 128
1,3,5-Trimethylbenzene	0.0983	0.0942		mg/m3		96	65 - 136
1,3-Dichlorobenzene	0.120	0.121		mg/m3		100	77 - 136
1,4-Dichlorobenzene	0.120	0.137		mg/m3		114	73 - 143
2-Butanone (MEK)	0.0590	0.0539		mg/m3		91	71 - 131
2-Hexanone	0.0820	0.0882		mg/m3		108	70 - 128
4-Ethyltoluene	0.0983	0.0978		mg/m3		99	62 - 136
4-Methyl-2-pentanone (MIBK)	0.0819	0.0936		mg/m3		114	73 - 133
Acetone	0.0475	0.0491		mg/m3		103	71 - 131
Benzene	0.0639	0.0582		mg/m3		91	68 - 128
Benzyl chloride	0.104	0.105		mg/m3		102	58 - 120
Bromodichloromethane	0.134	0.126		mg/m3		94	65 - 130
Bromoform	0.207	0.187		mg/m3		90	64 - 144
Bromomethane	0.0777	0.0601		mg/m3		77	70 - 131
Carbon disulfide	0.0623	0.0566		mg/m3		91	63 - 123
Carbon tetrachloride	0.126	0.114		mg/m3		90	67 - 127
Chlorobenzene	0.0921	0.0874		mg/m3		95	70 - 132
Chloroethane	0.0528	0.0572		mg/m3		108	70 - 131
Chloroform	0.0977	0.0899		mg/m3		92	69 - 129
Chloromethane	0.0413	0.0516		mg/m3		125	67 - 127

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-87541/7
Matrix: Air
Analysis Batch: 87541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.0793	0.0683		mg/m3		86	68 - 128
cis-1,3-Dichloropropene	0.0908	0.0955		mg/m3		105	78 - 132
Dibromochloromethane	0.170	0.151		mg/m3		89	68 - 128
Dichlorodifluoromethane	0.0989	0.107		mg/m3		108	69 - 129
Ethylbenzene	0.0868	0.0853		mg/m3		98	76 - 136
Hexachlorobutadiene	0.213	0.165		mg/m3		77	42 - 150
m,p-Xylene	0.174	0.181		mg/m3		104	75 - 138
Methylene Chloride	0.0695	0.0665		mg/m3		96	65 - 125
o-Xylene	0.0868	0.0923		mg/m3		106	77 - 132
Styrene	0.0852	0.0985		mg/m3		116	76 - 144
Tetrachloroethene	0.136	0.109		mg/m3		80	56 - 138
Toluene	0.0754	0.0685		mg/m3		91	71 - 132
trans-1,2-Dichloroethene	0.0793	0.0759		mg/m3		96	70 - 130
trans-1,3-Dichloropropene	0.0908	0.0796		mg/m3		88	56 - 136
Trichloroethene	0.107	0.0949		mg/m3		88	64 - 127
Trichlorofluoromethane	0.112	0.113		mg/m3		101	68 - 128
Vinyl acetate	0.0704	0.0835		mg/m3		119	77 - 134
Vinyl chloride	0.0511	0.0489		mg/m3		96	69 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 130*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 320-87541/8
Matrix: Air
Analysis Batch: 87541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.109	0.0955		mg/m3		88	65 - 124	0	25
1,1,2,2-Tetrachloroethane	0.137	0.131		mg/m3		95	75 - 135	4	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.153	0.132		mg/m3		86	50 - 132	1	25
1,1,2-Trichloroethane	0.109	0.0923		mg/m3		85	71 - 131	4	25
1,1-Dichloroethane	0.0809	0.0759		mg/m3		94	65 - 125	2	25
1,1-Dichloroethene	0.0793	0.0749		mg/m3		94	53 - 128	1	25
1,2,4-Trichlorobenzene	0.148	0.166		mg/m3		112	59 - 150	3	25
1,2,4-Trimethylbenzene	0.0983	0.0962		mg/m3		98	61 - 145	5	25
1,2-Dibromoethane (EDB)	0.154	0.140		mg/m3		91	68 - 131	4	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.140	0.138		mg/m3		99	64 - 124	1	25
1,2-Dichlorobenzene	0.120	0.115		mg/m3		95	73 - 143	4	25
1,2-Dichloroethane	0.0809	0.0796		mg/m3		98	71 - 131	3	25
1,2-Dichloropropane	0.0924	0.0892		mg/m3		97	74 - 128	5	25
1,3,5-Trimethylbenzene	0.0983	0.0923		mg/m3		94	65 - 136	2	25
1,3-Dichlorobenzene	0.120	0.117		mg/m3		97	77 - 136	3	25
1,4-Dichlorobenzene	0.120	0.131		mg/m3		109	73 - 143	4	25
2-Butanone (MEK)	0.0590	0.0533		mg/m3		90	71 - 131	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-87541/8
Matrix: Air
Analysis Batch: 87541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	0.0820	0.0856		mg/m3		104	70 - 128	3	25
4-Ethyltoluene	0.0983	0.0924		mg/m3		94	62 - 136	6	25
4-Methyl-2-pentanone (MIBK)	0.0819	0.0909		mg/m3		111	73 - 133	3	25
Acetone	0.0475	0.0498		mg/m3		105	71 - 131	1	25
Benzene	0.0639	0.0566		mg/m3		89	68 - 128	3	25
Benzyl chloride	0.104	0.101		mg/m3		98	58 - 120	4	25
Bromodichloromethane	0.134	0.123		mg/m3		92	65 - 130	3	25
Bromoform	0.207	0.180		mg/m3		87	64 - 144	4	25
Bromomethane	0.0777	0.0645		mg/m3		83	70 - 131	7	25
Carbon disulfide	0.0623	0.0578		mg/m3		93	63 - 123	2	25
Carbon tetrachloride	0.126	0.110		mg/m3		87	67 - 127	3	25
Chlorobenzene	0.0921	0.0853		mg/m3		93	70 - 132	2	25
Chloroethane	0.0528	0.0409	*	mg/m3		78	70 - 131	33	25
Chloroform	0.0977	0.0910		mg/m3		93	69 - 129	1	25
Chloromethane	0.0413	0.0531	*	mg/m3		129	67 - 127	3	25
cis-1,2-Dichloroethene	0.0793	0.0691		mg/m3		87	68 - 128	1	25
cis-1,3-Dichloropropene	0.0908	0.0928		mg/m3		102	78 - 132	3	25
Dibromochloromethane	0.170	0.143		mg/m3		84	68 - 128	5	25
Dichlorodifluoromethane	0.0989	0.109		mg/m3		110	69 - 129	1	25
Ethylbenzene	0.0868	0.0834		mg/m3		96	76 - 136	2	25
Gasoline Range Organics (C6-C12)	0.0818	NC		mg/m3		NaN	70 - 130	NaN	25
Hexachlorobutadiene	0.213	0.163		mg/m3		76	42 - 150	1	25
m,p-Xylene	0.174	0.174		mg/m3		100	75 - 138	4	25
Methylene Chloride	0.0695	0.0685		mg/m3		99	65 - 125	3	25
o-Xylene	0.0868	0.0893		mg/m3		103	77 - 132	3	25
Styrene	0.0852	0.0962		mg/m3		113	76 - 144	2	25
Tetrachloroethene	0.136	0.105		mg/m3		78	56 - 138	3	25
Toluene	0.0754	0.0668		mg/m3		89	71 - 132	3	25
trans-1,2-Dichloroethene	0.0793	0.0777		mg/m3		98	70 - 130	2	25
trans-1,3-Dichloropropene	0.0908	0.0764		mg/m3		84	56 - 136	4	25
Trichloroethene	0.107	0.0926		mg/m3		86	64 - 127	2	25
Trichlorofluoromethane	0.112	0.115		mg/m3		102	68 - 128	1	25
Vinyl acetate	0.0704	0.0851		mg/m3		121	77 - 134	2	25
Vinyl chloride	0.0511	0.0474		mg/m3		93	69 - 129	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 320-87719/43
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			09/30/15 18:44	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/30/15 18:44	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-87719/43
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/30/15 18:44	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/30/15 18:44	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			09/30/15 18:44	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/30/15 18:44	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/30/15 18:44	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/30/15 18:44	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/30/15 18:44	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			09/30/15 18:44	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/30/15 18:44	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/30/15 18:44	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/30/15 18:44	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/30/15 18:44	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/30/15 18:44	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/30/15 18:44	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			09/30/15 18:44	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/30/15 18:44	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/30/15 18:44	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/30/15 18:44	1
Acetone	ND		0.012	0.00042	mg/m3			09/30/15 18:44	1
Benzene	ND		0.0013	0.00025	mg/m3			09/30/15 18:44	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/30/15 18:44	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/30/15 18:44	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/30/15 18:44	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/30/15 18:44	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			09/30/15 18:44	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/30/15 18:44	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/30/15 18:44	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/30/15 18:44	1
Chloroform	ND		0.0015	0.00046	mg/m3			09/30/15 18:44	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/30/15 18:44	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/30/15 18:44	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/30/15 18:44	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/30/15 18:44	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			09/30/15 18:44	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			09/30/15 18:44	1
Gasoline Range Organics (C6-C12)	ND		0.41	0.16	mg/m3			09/30/15 18:44	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/30/15 18:44	1
m,p-Xylene	ND		0.0035	0.00043	mg/m3			09/30/15 18:44	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			09/30/15 18:44	1
o-Xylene	ND		0.0017	0.00023	mg/m3			09/30/15 18:44	1
Styrene	ND		0.0017	0.00025	mg/m3			09/30/15 18:44	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			09/30/15 18:44	1
Toluene	0.000230	J	0.0015	0.00019	mg/m3			09/30/15 18:44	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/30/15 18:44	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/30/15 18:44	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/30/15 18:44	1
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			09/30/15 18:44	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/30/15 18:44	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-87719/43
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/30/15 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*09/30/15 18:44*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*09/30/15 18:44*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/30/15 18:44*	*1*

Lab Sample ID: LCS 320-87719/15
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.109	0.109		mg/m3		99	65 - 124
1,1,2,2-Tetrachloroethane	0.137	0.162		mg/m3		118	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.153	0.146		mg/m3		95	50 - 132
1,1,2-Trichloroethane	0.109	0.131		mg/m3		120	71 - 131
1,1-Dichloroethane	0.0809	0.0833		mg/m3		103	65 - 125
1,1-Dichloroethene	0.0793	0.0744		mg/m3		94	53 - 128
1,2,4-Trichlorobenzene	0.148	0.181		mg/m3		122	59 - 150
1,2,4-Trimethylbenzene	0.0983	0.104		mg/m3		106	61 - 145
1,2-Dibromoethane (EDB)	0.154	0.177		mg/m3		115	68 - 131
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.140	0.149		mg/m3		106	64 - 124
1,2-Dichlorobenzene	0.120	0.142		mg/m3		118	73 - 143
1,2-Dichloroethane	0.0809	0.0855		mg/m3		106	71 - 131
1,2-Dichloropropane	0.0924	0.104		mg/m3		113	74 - 128
1,3,5-Trimethylbenzene	0.0983	0.111		mg/m3		113	65 - 136
1,3-Dichlorobenzene	0.120	0.145		mg/m3		121	77 - 136
1,4-Dichlorobenzene	0.120	0.144		mg/m3		119	73 - 143
2-Butanone (MEK)	0.0590	0.0599		mg/m3		102	71 - 131
2-Hexanone	0.0820	0.103		mg/m3		126	70 - 128
4-Ethyltoluene	0.0983	0.110		mg/m3		111	62 - 136
4-Methyl-2-pentanone (MIBK)	0.0819	0.0912		mg/m3		111	73 - 133
Acetone	0.0475	0.0420		mg/m3		88	71 - 131
Benzene	0.0639	0.0686		mg/m3		107	68 - 128
Benzyl chloride	0.104	0.0943		mg/m3		91	58 - 120
Bromodichloromethane	0.134	0.144		mg/m3		107	65 - 130
Bromoform	0.207	0.241		mg/m3		117	64 - 144
Bromomethane	0.0777	0.0834		mg/m3		107	70 - 131
Carbon disulfide	0.0623	0.0642		mg/m3		103	63 - 123
Carbon tetrachloride	0.126	0.140		mg/m3		111	67 - 127
Chlorobenzene	0.0921	0.108		mg/m3		117	70 - 132
Chloroethane	0.0528	0.0601		mg/m3		114	70 - 131
Chloroform	0.0977	0.101		mg/m3		103	69 - 129
Chloromethane	0.0413	0.0431		mg/m3		104	67 - 127
cis-1,2-Dichloroethene	0.0793	0.0856		mg/m3		108	68 - 128
cis-1,3-Dichloropropene	0.0908	0.116		mg/m3		128	78 - 132

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-87719/15
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	0.170	0.185		mg/m3		108	68 - 128
Dichlorodifluoromethane	0.0989	0.0981		mg/m3		99	69 - 129
Ethylbenzene	0.0868	0.0973		mg/m3		112	76 - 136
Hexachlorobutadiene	0.213	0.246		mg/m3		116	42 - 150
m,p-Xylene	0.174	0.198		mg/m3		114	75 - 138
Methylene Chloride	0.0695	0.0672		mg/m3		97	65 - 125
o-Xylene	0.0868	0.105		mg/m3		121	77 - 132
Styrene	0.0852	0.107		mg/m3		125	76 - 144
Tetrachloroethene	0.136	0.148		mg/m3		109	56 - 138
Toluene	0.0754	0.0933		mg/m3		124	71 - 132
trans-1,2-Dichloroethene	0.0793	0.0838		mg/m3		106	70 - 130
trans-1,3-Dichloropropene	0.0908	0.0987		mg/m3		109	56 - 136
Trichloroethene	0.107	0.109		mg/m3		102	64 - 127
Trichlorofluoromethane	0.112	0.114		mg/m3		102	68 - 128
Vinyl acetate	0.0704	0.0817		mg/m3		116	77 - 134
Vinyl chloride	0.0511	0.0551		mg/m3		108	69 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCS 320-87719/26
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (C6-C12)	20.4	21.5		mg/m3		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*142*	*X*	*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 320-87719/42
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)	20.4	21.1		mg/m3		103	70 - 130	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*142*	*X*	*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-87719/47
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.109	0.110		mg/m3		101	65 - 124	1	25
1,1,2,2-Tetrachloroethane	0.137	0.175		mg/m3		128	75 - 135	8	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.153	0.149		mg/m3		97	50 - 132	2	25
1,1,2-Trichloroethane	0.109	0.135		mg/m3		123	71 - 131	3	25
1,1-Dichloroethane	0.0809	0.0852		mg/m3		105	65 - 125	2	25
1,1-Dichloroethene	0.0793	0.0751		mg/m3		95	53 - 128	1	25
1,2,4-Trichlorobenzene	0.148	0.183		mg/m3		124	59 - 150	2	25
1,2,4-Trimethylbenzene	0.0983	0.114		mg/m3		116	61 - 145	9	25
1,2-Dibromoethane (EDB)	0.154	0.182		mg/m3		118	68 - 131	2	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.140	0.182	*	mg/m3		130	64 - 124	20	25
1,2-Dichlorobenzene	0.120	0.151		mg/m3		126	73 - 143	6	25
1,2-Dichloroethane	0.0809	0.0844		mg/m3		104	71 - 131	1	25
1,2-Dichloropropane	0.0924	0.104		mg/m3		112	74 - 128	0	25
1,3,5-Trimethylbenzene	0.0983	0.120		mg/m3		122	65 - 136	8	25
1,3-Dichlorobenzene	0.120	0.162		mg/m3		135	77 - 136	11	25
1,4-Dichlorobenzene	0.120	0.162		mg/m3		135	73 - 143	12	25
2-Butanone (MEK)	0.0590	0.0647		mg/m3		110	71 - 131	8	25
2-Hexanone	0.0820	0.105		mg/m3		128	70 - 128	1	25
4-Ethyltoluene	0.0983	0.118		mg/m3		120	62 - 136	7	25
4-Methyl-2-pentanone (MIBK)	0.0819	0.0917		mg/m3		112	73 - 133	1	25
Acetone	0.0475	0.0452		mg/m3		95	71 - 131	7	25
Benzene	0.0639	0.0701		mg/m3		110	68 - 128	2	25
Benzyl chloride	0.104	0.101		mg/m3		98	58 - 120	7	25
Bromodichloromethane	0.134	0.144		mg/m3		108	65 - 130	1	25
Bromoform	0.207	0.250		mg/m3		121	64 - 144	4	25
Bromomethane	0.0777	0.0859		mg/m3		111	70 - 131	3	25
Carbon disulfide	0.0623	0.0650		mg/m3		104	63 - 123	1	25
Carbon tetrachloride	0.126	0.141		mg/m3		112	67 - 127	1	25
Chlorobenzene	0.0921	0.111		mg/m3		120	70 - 132	2	25
Chloroethane	0.0528	0.0623		mg/m3		118	70 - 131	4	25
Chloroform	0.0977	0.102		mg/m3		105	69 - 129	1	25
Chloromethane	0.0413	0.0436		mg/m3		106	67 - 127	1	25
cis-1,2-Dichloroethene	0.0793	0.0883		mg/m3		111	68 - 128	3	25
cis-1,3-Dichloropropene	0.0908	0.119		mg/m3		131	78 - 132	3	25
Dibromochloromethane	0.170	0.187		mg/m3		110	68 - 128	2	25
Dichlorodifluoromethane	0.0989	0.100		mg/m3		101	69 - 129	2	25
Ethylbenzene	0.0868	0.113		mg/m3		131	76 - 136	15	25
Hexachlorobutadiene	0.213	0.261		mg/m3		122	42 - 150	6	25
m,p-Xylene	0.174	0.218		mg/m3		126	75 - 138	10	25
Methylene Chloride	0.0695	0.0679		mg/m3		98	65 - 125	1	25
o-Xylene	0.0868	0.114		mg/m3		131	77 - 132	8	25
Styrene	0.0852	0.120		mg/m3		140	76 - 144	11	25
Tetrachloroethene	0.136	0.153		mg/m3		113	56 - 138	4	25
Toluene	0.0754	0.0947		mg/m3		126	71 - 132	1	25
trans-1,2-Dichloroethene	0.0793	0.0857		mg/m3		108	70 - 130	2	25
trans-1,3-Dichloropropene	0.0908	0.102		mg/m3		112	56 - 136	3	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-87719/47
Matrix: Air
Analysis Batch: 87719

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene			0.107	0.108		mg/m3		100	64 - 127	1	25
Trichlorofluoromethane			0.112	0.115		mg/m3		102	68 - 128	0	25
Vinyl acetate			0.0704	0.0883		mg/m3		125	77 - 134	8	25
Vinyl chloride			0.0511	0.0566		mg/m3		111	69 - 129	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Client Sample ID: LFB-8:091615
Date Collected: 09/16/15 11:15
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-1
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	441 mL	250 mL	87719	09/30/15 21:46	SRS	TAL SAC

Client Sample ID: LFB-9:091615
Date Collected: 09/16/15 11:41
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-2
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	437 mL	250 mL	87719	09/30/15 22:33	SRS	TAL SAC

Client Sample ID: LFB-11:091615
Date Collected: 09/16/15 12:05
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-3
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		71	6 mL	250 mL	87719	09/30/15 23:15	SRS	TAL SAC

Client Sample ID: LFB-10:091615
Date Collected: 09/16/15 12:29
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-4
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	446 mL	250 mL	87719	10/01/15 00:10	SRS	TAL SAC

Client Sample ID: LFB-3:091615
Date Collected: 09/16/15 12:52
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-5
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		4.4	100 mL	250 mL	87719	10/01/15 00:53	SRS	TAL SAC
Total/NA	Analysis	TO-15	DL	8.8	50 mL	250 mL	87541	09/30/15 06:12	AP1	TAL SAC

Client Sample ID: LFB-4:091615
Date Collected: 09/16/15 13:14
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-6
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	DL	10.9	40 mL	250 mL	87719	10/01/15 01:35	SRS	TAL SAC
Total/NA	Analysis	TO-15		8.73	50 mL	250 mL	87541	09/30/15 07:03	AP1	TAL SAC

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Client Sample ID: LFB-15:091615
Date Collected: 09/16/15 13:36
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-7
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	453 mL	250 mL	87719	10/01/15 02:27	SRS	TAL SAC

Client Sample ID: LFB-16:091615
Date Collected: 09/16/15 13:56
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-8
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	444 mL	250 mL	87719	10/01/15 03:18	SRS	TAL SAC

Client Sample ID: LFB-17:091615
Date Collected: 09/16/15 14:15
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-9
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	432 mL	250 mL	87719	10/01/15 04:13	SRS	TAL SAC
Total/NA	Analysis	TO-15	DL	17.3	25 mL	250 mL	87541	09/30/15 08:34	AP1	TAL SAC

Client Sample ID: LFB-5:091615
Date Collected: 09/16/15 14:46
Date Received: 09/16/15 16:20

Lab Sample ID: 590-1968-10
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.75	250 mL	250 mL	87719	10/01/15 05:04	SRS	TAL SAC
Total/NA	Analysis	TO-15	DL	21.9	20 mL	250 mL	87541	09/30/15 09:25	AP1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-1968-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
phone 916.374.4378 fax 916.372.1059

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Information	Project Manager: John Honey	Samples Collected By: (JML) Josh Lee
Company Name: GeoEngineers	Phone: 509-363-3125	COC No: 1 of 1 COCs
Address: 523 E Second Ave	Email: jhoney@geoengineers.com	
City/State/Zip Spokane / WA / 99202	Site Contact:	For Lab Use Only:
Phone: 509-363-3125	TA Contact: Ronder	Walk-in Client:
FAX: 509-363-3126	Analysis Turnaround Time	Lab Sampling:
Project Name: Marshall Landfill	Standard (Specific): X	Job / SDG No.:
Site/Location: Marshall, WA	Rush (Specify):	(See below for Add'l Items)
P O # 0504-104-00		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
LFB-8:091615	9-16-15	1107	1115	-28	0	7682	34001056	X														
LFB-9:091615		1134	1141	-27	0	7315	34008897	X														
LFB-11:091615		1157	1205	-27	0	7781	34001243	X														
LFB-10:091615		1222	1229	-27	0	7312	8523	X														
LFB-3:091615		1245	1252	-28	0	7181	34001618	X														
LFB-4:091615		1306	1314	-28	0	7325	34001630	X														
LFB-15:091615		1329	1336	-27	0	7564	34000604	X														
LFB-16:091615		1349	1356	-28	0	7472	34001138	X														
LFB-17:091615		1408	1415	-27	0	7176	34000601	X														
LFB-5:091615	↓	1438	1446	-29	0	7693	34002173	X														

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

590-1968 Chain of Custody

Special Instructions/QC Requirements & Comments:

22.1 SIE001

Samples Shipped by:	Date / Time:	Samples Received by: Sheela Krat 9/16/15 16:20
Samples Relinquished by:	Date / Time:	Received by:
Relinquished by: Josh Lee	Date / Time: 9/16/2015 1620	Received by:
Lab Use Only: Shipper Name:	Opened by:	Condition:

Form No. CA-C-WI-003, Rev. 1, dated 05/10/2013

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s)	COC No: 590-767 1
Client Contact: Shipping/Receiving	Phone	E-Mail: randee.arrington@testamericainc com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Analysis Requested		Job #: 590-1968-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/28/2015			Preservation Codes:
City: West Sacramento	TAT Requested (days)			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #			Other:
Email	WO #			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site	SSOW#			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15/Air_Pass_Can (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-8"091615 (590-1968-1)	9/16/15	11 15 Pacific		Air			X	1	
LFB-9"091615 (590-1968-2)	9/16/15	11 41 Pacific		Air			X	1	
LFB-11"091615 (590-1968-3)	9/16/15	12 05 Pacific		Air			X	1	
LFB-10"091615 (590-1968-4)	9/16/15	12 29 Pacific		Air			X	1	
LFB-3"091615 (590-1968-5)	9/16/15	12 52 Pacific		Air			X	1	
LFB-4"091615 (590-1968-6)	9/16/15	13 14 Pacific		Air			X	1	
LFB-15"091615 (590-1968-7)	9/16/15	13 36 Pacific		Air			X	1	
LFB-16"091615 (590-1968-8)	9/16/15	13 56 Pacific		Air			X	1	
LFB-17"091615 (590-1968-9)	9/16/15	14 15 Pacific		Air			X	1	
LFB-5"091615 (590-1968-10)	9/16/15	14 46 Pacific		Air			X	1	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Kraft	9/17/15 9:05	TA SPK	[illegible]	9/18/15 930	TAW
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1968-1

Login Number: 1968
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-1968-1

Login Number: 1968
List Number: 2
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 09/18/15 11:54 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica
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CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 1

Client/Project:		VFR ID:		
Canister Serial #:	34001056	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.29	09/21/15	KY
FINAL PRESSURE (PSIA)	23.47	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.77			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.77		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.77 X Load DF = 0.5668934 (LVf (mLs) 250, LVi (mLs) 441) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.001127815

Date	Instr.	File #

Canister DF = 1.77 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

Date	Instr.	File #

Canister DF = 1.77 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 2

Client/Project:		VFR ID:		
Canister Serial #:	34000897	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.51	09/21/15	KY
FINAL PRESSURE (PSIA)	23.68	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.75			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.75		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.75 X Load DF = 0.5720824 (LVf (mLs) 250, LVi (mLs) 437) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.002732106

Date	Instr.	File #

Canister DF = 1.75 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

Date	Instr.	File #

Canister DF = 1.75 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

JOB # 590-1968
Sample # 3

Client/Project:		VFR ID:		
Canister Serial #:	34001243	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.74	09/21/15	KY
FINAL PRESSURE (PSIA)	23.52	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.71			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.71		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.71 X Load DF = 6.9444444 (LVf (mLs) 250, LVi (mLs) 36) X Bag DF = 6 (BVf (mLs) 6, Bvi (mLs) 1) = FINAL DF 71.32459971

Date	Instr.	File #

Canister DF = 1.71 X Load DF = #DIV/0! X Bag DF = 1 = FINAL DF #DIV/0!

Date	Instr.	File #

Canister DF = 1.71 X Load DF = #DIV/0! X Bag DF = 1 = FINAL DF #DIV/0!

JOB # 590-1968
Sample # 4

Client/Project:		VFR ID:		
Canister Serial #:	8523	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.15	09/21/15	KY
FINAL PRESSURE (PSIA)	23.51	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.79			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.79		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.79 X Load DF = 0.5605381 (LVf (mLs) 250, LVi (mLs) 446) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.002148374

Date	Instr.	File #

Canister DF = 1.79 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

Date	Instr.	File #

Canister DF = 1.79 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 5

Client/Project:		VFR ID:		
Canister Serial #:	34001618	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.46	09/21/15	KY
FINAL PRESSURE (PSIA)	23.69	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.76			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.76		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/29/2015	MS7	

Canister DF = 1.76 X Load DF = 5 (LVf (mLs) 250, LVi (mLs) 50) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 8.800148588

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.76 X Load DF = 2.5 (LVf (mLs) 250, LVi (mLs) 100) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 4.400074294

Date	Instr.	File #

Canister DF = 1.76 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 6

Client/Project:		VFR ID:		
Canister Serial #:	34001630	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.38	09/21/15	KY
FINAL PRESSURE (PSIA)	23.35	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.75			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.75		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/29/2015	MS7	

Canister DF = 1.75 X Load DF = 5 (LVf (mLs) 250, LVi (mLs) 50) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 8.725710015

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.75 X Load DF = 6.25 (LVf (mLs) 250, LVi (mLs) 40) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 10.90713752

Date	Instr.	File #

Canister DF = 1.75 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 7

Client/Project:		VFR ID:		
Canister Serial #:	34000604	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	12.93	09/21/15	KY
FINAL PRESSURE (PSIA)	23.48	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.82			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.82		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.82 X Load DF = 0.5518764 (LVf (mLs) 250, LVi (mLs) 453) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.002169945

Date	Instr.	File #
10/1/2015	ATMS2	

Canister DF = 1.82 X Load DF = 0.8333333 (LVf (mLs) 250, LVi (mLs) 300) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.513276618

Date	Instr.	File #

Canister DF = 1.82 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 8

Client/Project:		VFR ID:		
Canister Serial #:	34001138	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.46	09/21/15	KY
FINAL PRESSURE (PSIA)	23.93	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.78			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.78		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.78 X Load DF = 0.5630631 (LVf (mLs) 250, LVi (mLs) 444) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.001047481

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.78 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

Date	Instr.	File #

Canister DF = 1.78 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 9

Client/Project:		VFR ID:		
Canister Serial #:	34000601	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.77	09/21/15	KY
FINAL PRESSURE (PSIA)	23.84	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.73			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.73		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/29/2015	MS7	

Canister DF = 1.73 X Load DF = 10 (LVf (mLs) 250, LVi (mLs) 25) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 17.31299927

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.73 X Load DF = 0.5787037 (LVf (mLs) 250, LVi (mLs) 432) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.00190968

Date	Instr.	File #

Canister DF = 1.73 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CANISTER FIELD DATA RECORD

Sacramento

JOB # 590-1968
Sample # 10

Client/Project:		VFR ID:		
Canister Serial #:	34002173	Duration:		☐ Hrs ☐ Min
Cleaning Job:		Flow:		mL/min
Client ID:		Initials:		
Site Location:				

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY			
READING	PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT
☐ Helium Pre-dilution - Final Pressure (INCHES Hg)			
INITIAL PRESSURE (PSIA)	13.60	09/21/15	KY
FINAL PRESSURE (PSIA)	23.80	09/21/15	KY
Pressurization Gas: ☐ N2 ☐ He	SCREENED ☐	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor = 1.75			

CANISTER REPRESSURIZATION

Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.75		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors

Date	Instr.	File #
9/29/2015	MS7	

Canister DF = 1.75 X Load DF = 12.5 (LVf (mLs) 250, LVi (mLs) 20) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 21.875

Date	Instr.	File #
9/30/2015	ATMS2	

Canister DF = 1.75 X Load DF = 1 (LVf (mLs) 250, LVi (mLs) 250) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF 1.75

Date	Instr.	File #

Canister DF = 1.75 X Load DF = #DIV/0! (LVf (mLs), LVi (mLs)) X Bag DF = 1 (BVf (mLs), Bvi (mLs)) = FINAL DF #DIV/0!

320-14570 Chain of Custody

CANISTER QC CERTIFICATION

TestAmerica

Certification Type: TO-15 SCAN

Date Cleaned/Batch ID: 8/21/15 320-14570

Date of QC: 8/24/15

Data File Number: 150824r21

CANISTER ID NUMBERS

34000601	34002173	
0800	1243	
0939	0604	
1618	0231	
1186 *	1630	
0663	1056	
0897	7743	
1138	8523	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

1st level Reviewed By: _____ Date: 8/25/15

2nd level Reviewed By: _____ Date: 9/8/15

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-14570-1

SDG No.: 1L SCAN batch

Client Sample ID: 34001186 Lab Sample ID: 320-14570-5

Matrix: Air Lab File ID: 15082421.D

Analysis Method: TO-15 Date Collected: 08/21/2015 00:00

Sample wt/vol: 535(mL) Date Analyzed: 08/25/2015 01:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-Volatiles ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83852 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.76	J	5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	ND		0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.11
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-14570-1

SDG No.: 1L SCAN batch

Client Sample ID: 34001186 Lab Sample ID: 320-14570-5

Matrix: Air Lab File ID: 15082421.D

Analysis Method: TO-15 Date Collected: 08/21/2015 00:00

Sample wt/vol: 535(mL) Date Analyzed: 08/25/2015 01:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-Volatiles ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83852 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	ND		0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	ND		0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	ND		0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	ND		0.80	0.079
108-88-3	Toluene	ND		0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-14570-1

SDG No.: 1L SCAN batch

Client Sample ID: 34001186 Lab Sample ID: 320-14570-5

Matrix: Air Lab File ID: 15082421.D

Analysis Method: TO-15 Date Collected: 08/21/2015 00:00

Sample wt/vol: 535(mL) Date Analyzed: 08/25/2015 01:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-Volatiles ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83852 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	ND		0.80	0.10
95-47-6	o-Xylene	ND		0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS2\20150824-24442.b\15082421.D
Lims ID: 320-14570-A-5 Lab Sample ID: 320-14570-5
Client ID: 34001186
Sample Type: Client
Inject. Date: 25-Aug-2015 01:50:30 ALS Bottle#: 14 Worklist Smp#: 39
Purge Vol: 250.000 mL Dil. Factor: 1.0000
Sample Info: 320-14570-A-5
Misc. Info.: 500mL
Operator ID: SRS Instrument ID: ATMS2

Method: \\ChromNA\Sacramento\ChromData\ATMS2\20150824-24442.b\TO15_ATMS2N.m
Limit Group: MSA - TO15 - ICAL
Last Update: 25-Aug-2015 16:53:56 Calib Date: 12-Aug-2015 00:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS2\20150811-24141.b\15081111.D

Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
Process Host: XAWRK035

First Level Reviewer: ortizam Date: 25-Aug-2015 16:53:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	10.224	10.224	0.000	98	53016	4.00	
* 2 1,4-Difluorobenzene	114	11.569	11.569	0.000	95	219845	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.876	15.876	0.000	87	180784	4.00	
$ 4 1,2-Dichloroethane-d4 (Sur	65	10.985	10.985	0.000	98	77103	4.48	
$ 5 Toluene-d8 (Surr)	100	13.741	13.741	0.000	97	124614	3.79	
$ 6 4-Bromofluorobenzene (Surr	174	17.628	17.628	0.000	94	106614	4.02	
31 Acetone	43	6.933	6.890	0.043	97	13816	0.7631	

Reagents:

VASUISIM_00198 Amount Added: 50.00 Units: mL Run Reagent

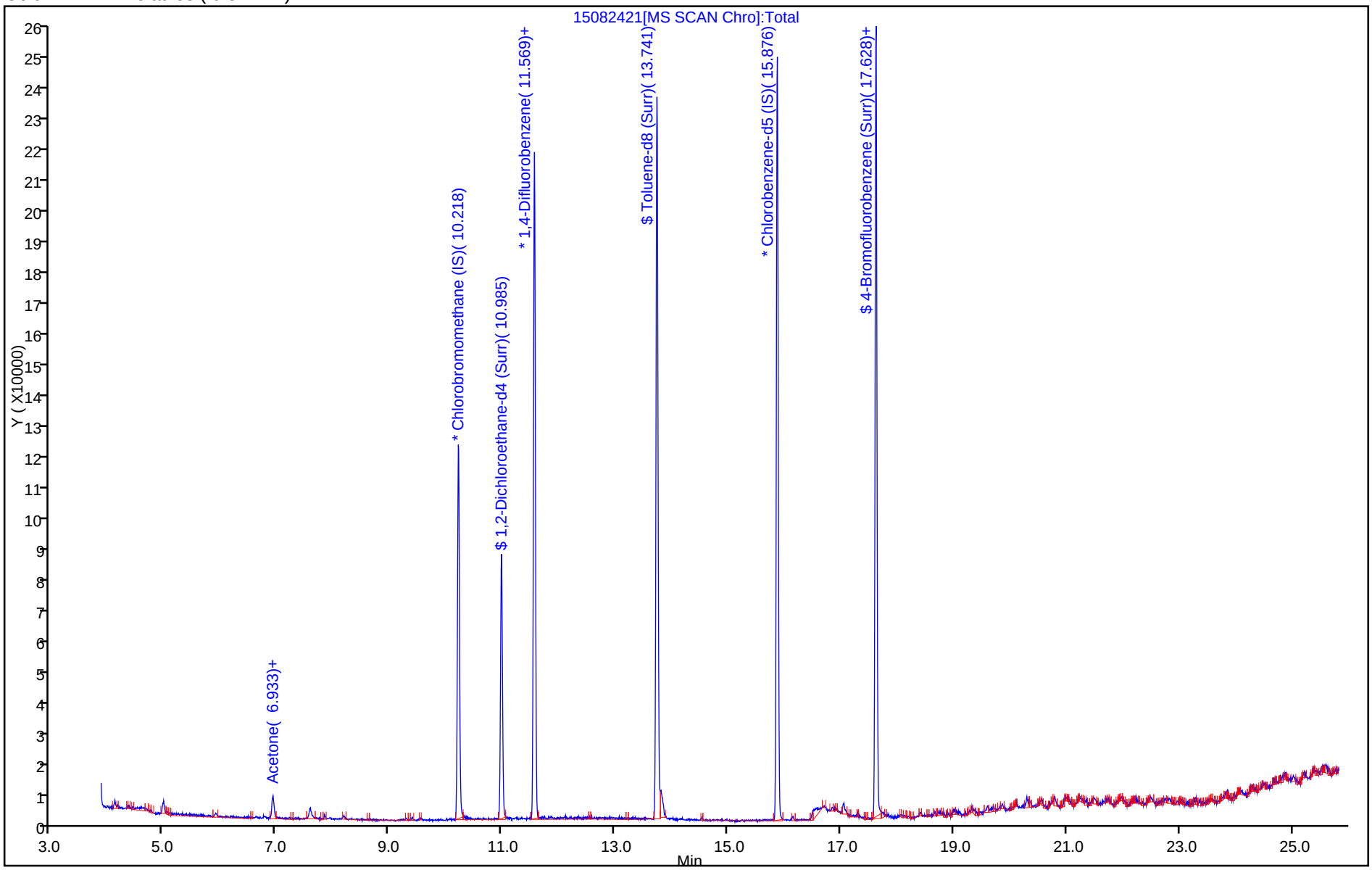
Report Date: 25-Aug-2015 16:53:57 Chrom Revision: 2.2 23-Jul-2015 08:26:08

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS2\20150824-24442.b\15082421.D

Injection Date:	25-Aug-2015 01:50:30	Instrument ID:	ATMS2	Operator ID:	SRS
Lims ID:	320-14570-A-5	Lab Sample ID:	320-14570-5	Worklist Smp#:	39
Client ID:	34001186				
Purge Vol:	250.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	TO15_ATMS2N	Limit Group:	MSA - TO15 - ICAL		

Column: RTX Volatiles (0.32 mm)

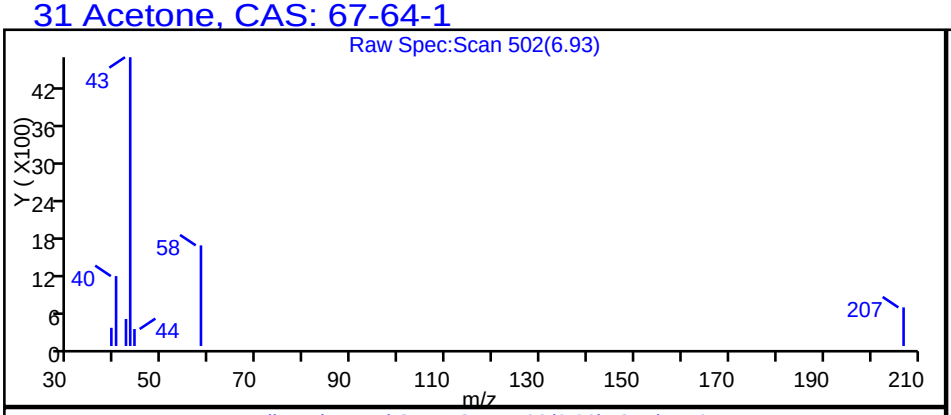


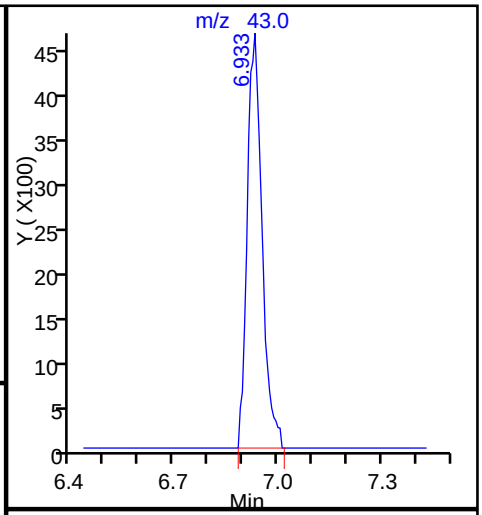
TestAmerica Sacramento

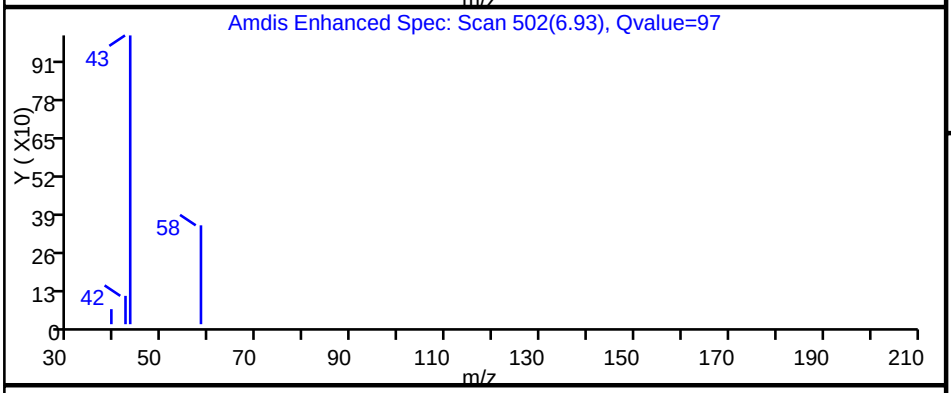
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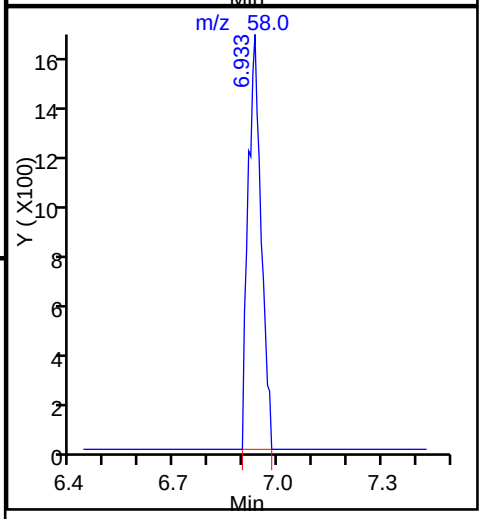
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Lims ID:	320-14570-A-5	Lab Sample ID:	320-14570-5		
Client ID:	34001186				
Operator ID:	SRS	ALS Bottle#:	14	Worklist Smp#:	39
Purge Vol:	250.000 mL	Dil. Factor:	1.0000		
Method:	TO15_ATMS2N	Limit Group:	MSA - TO15 - ICAL		
Column:	RTX Volatiles (0.32 mm)	Detector	MS SCAN		

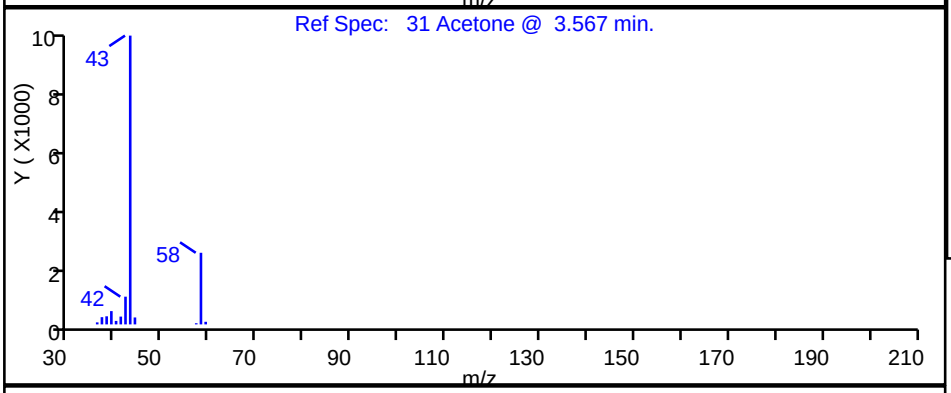
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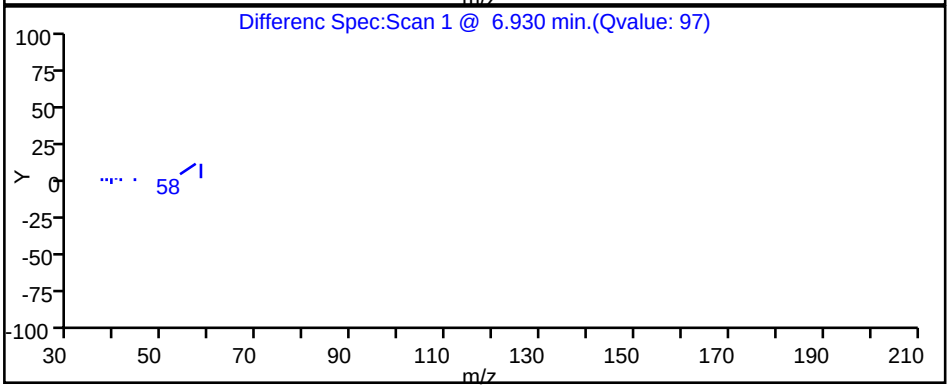












Data Validation Report

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Project:	Marshall Landfill Site August and September 2016 Samples
GEI File No:	00504-104-00
Date:	November 16, 2016

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA 2009) of analytical data from the analyses of water and air samples collected as part of the August 2016 and September 2016 sampling events, and the associated laboratory and field quality control samples. The samples were obtained from the Marshall Landfill site located in Spokane County, Washington.

In summary and in our opinion, the quality and accuracy of the analytical data are acceptable for the intended use, with the qualifications applied from the data validation. The primary data validation qualifiers were: (1) GeoEngineers, Inc. (GeoEngineers) qualified selected data as estimated (J/UJ) because of holding time, accuracy, and precision outliers; and (2) GeoEngineers qualified selected data as non-detected (U) because of method blank contamination; and (3) GeoEngineers qualified selected data as estimated (J) because of ion abundance ratio (dioxin/furans only) outliers.

The evaluation criteria and qualifications are discussed in greater detail below; a summary of qualified samples is listed in Table 2.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), Inorganic Superfund Data Review (EPA 2010), and Chlorinated Dioxin/Furan Data Review (EPA 2011) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Remedial Investigation/Feasibility Study Work Plan (GeoEngineers, 2015), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries

- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory and Field Duplicates
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-4267-1	MW-8A-082116, MW-8B-082116, MW-9A-082116
590-4284-1	MW-2A-082216, MW-4A-082216, MW-16A-082216
590-4291-1	MW-3:082316, MW-5-082316, MW-5A-082316, MW-15-082316, MW-15A-082316
590-4291-2	MW-3:082316, MW-5-082316, MW-5A-082316, MW-15-082316, MW-15A-082316
590-4302-1	MW-7D:082416, MW-11A:082416, MW-14:082416
590-4302-2	MW-7D:082416, MW-11A:082416, MW-14:082416
590-4322-1	MW-1A-082516, MW-7B-082516, DUP-082516, MW-12A-082516
590-4322-2	MW-1A-082516, MW-7B-082516, DUP-082516, MW-12A-082516
590-4339-1	LFB-3-082616, LFB-4-082616, LFB-5-082616, LFB-8-082616, LFB-9-082616, LFB-10-082616, LFB-11-082616, LFB-15-082616, LFB-16-082616, LFB-17-082616
590-4346-1	MW-16:082916
590-4346-2	MW-16:082916
590-4348-1	SW-1:082916
590-4348-2	SW-1:082916

CHEMICAL ANALYSIS PERFORMED

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

Water

- Gasoline-range Hydrocarbons (NWTPH-Gx) by Method NWTPH-Gx;
- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Silica Gel Treated and Hexane Extractable Material - Oil and Grease by Method EPA1664B;
- Volatile Organic Compounds (VOCs) by Methods SW8260C/EPA624;
- 1,2-Dibromoethane (EDB) by Method SW8011;
- Semi-volatile Organic Compounds (SVOCs) by Method SW8270D;

- Polychlorinated Biphenyls (PCBs) by Method SW8082A;
- Organochlorine Pesticides by Method SW8081B;
- Organophosphorous Pesticides by Method SW8141B;
- Chlorinated Herbicides by Method SW8151A;
- Dioxins and Furans by Method SW8290A;
- Total Metals by Methods EPA207.7 Rev 4.4/EPA200.8/EPA245.1;
- Dissolved Metals by Methods EPA200.8/EPA245.1;
- Anions by Method EPA300.0;
- Total Cyanide by Method EPA335.4;
- Ammonia (as N) by Method EPA350.1;
- Chemical Oxygen Demand (COD) by Method EPA410.4;
- Total Organic Carbon (TOC) by Method SM5310C;
- pH by Method SM4500-HB; and
- Total Coliform and Escherichia coli by Method SM9223B.

Air

- Volatile Organic Compounds in Air (VOCs-Air) by Method TO-15

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory, with the following exception:

SDG 590-4284-1: The laboratory noted that for Samples MW-2A-082216, MW-4A-082216, and MW-16A-082216 the sample vial labels listed a sample collection date of 8/22/2016 and COC listed a sample collection date of 8/23/2016. Per GeoEngineers, the samples were logged with the sample collection date of 8/22/2016.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis, with the exceptions noted below. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

SDG 590-4322-1: (Anions) The 48-hour holding time for nitrate as N analysis was exceeded by 2 days in Sample MW-1A-082516. The positive result for nitrate as N was qualified as estimated (J) in this sample.

(pH) The 15-minute holding time for pH was exceeded in Sample Tank-2:092816. The result for pH was qualified as estimated (J) in this sample.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-4302-1: (SVOCs) The percent recovery for surrogate terphenyl-d14 was less than the control limits in Sample MW-14:082416; however, the sample was spiked with two additional base neutral surrogates and in each case the percent recoveries were within their respective control limits. No action was required for this outlier.

SDG 590-4339-1: (VOCs-Air) The percent recovery for surrogate 4-Bromofluorobenzene was greater than the control limits in Samples LFB-4-082616 and LFB-11-082616; however, the samples were spiked with two additional surrogates and in each case the percent recoveries were within their respective control limits. No action was required for these outliers.

SDG 590-4346-1: (SVOCs) The percent recoveries for surrogates 2-Fluorophenol and phenol-d5 were less than the control limits in Sample MW-16:082916; however, the sample was spiked with one additional acidic surrogate and the percent recovery was within the control limits. No action was required for these outliers.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exceptions:

SDG 590-4267-1: (NWTPH-Dx) There was a positive result for diesel-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/23/2016. There were no positive results for diesel-range hydrocarbons in the associated field samples; therefore, no qualifications were required.

(SVOCs) There were positive results for benzyl alcohol and bis(2-ethylhexyl) phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/26/2016. The positive results for benzyl alcohol and bis(2-ethylhexyl) phthalate were qualified as non-detected (U) in Samples MW-8A-082116, MW-8B-082116, and MW-9A-082116.

(Anions) There was a positive result for nitrate as N detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/22/2016. The associated field samples, MW-8A-082116 and MW-8B-082116, reported positive results detected at concentrations greater than

10X the concentration in the method blank for nitrate as N; and there were no positive results for nitrate as N in Sample MW-9A-082116; therefore, no qualifications were required.

(Dioxins/Furans) There were positive results for 1,2,3,4,6,7,8-HpCDF and 2,3,7,8-TCDF detected above the estimated detection limit, but below the reporting limit in the method blank extracted on 9/6/2016. There were no positive results for 2,3,7,8-TCDF and 1,2,3,4,6,7,8-HpCDF in Samples MW-8A-082116, MW-8B-082116, and MW-9A-082116; therefore, no qualifications were required.

SDG 590-4284-1: (VOCs) There were positive results for 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/23/2016. There were no positive results for 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene in the associated field samples; therefore, no qualifications were required.

(SVOCs) There were positive results for benzyl alcohol and bis(2-ethylhexyl) phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/26/2016. The positive results for benzyl alcohol and bis(2-ethylhexyl) phthalate were qualified as non-detected (U) in Samples MW-2A-082216, MW-4A-082216, and MW-16A-082216.

(Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/15/2016. The positive results for OCDD were qualified as non-detected (U) in Samples MW-2A-082216, MW-4A-082216, and MW-16A-082216.

SDG 590-4291-1: (SVOCs) There were positive results for benzyl alcohol and bis(2-ethylhexyl) phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/26/2016. The positive results for benzyl alcohol were qualified as non-detected (U) in Samples MW-3:082316, MW-5A-082316, and MW-15A-082316. There were no positive results for benzyl alcohol in Samples MW-5-082316 and MW-15-082316; therefore, no qualifications were required.

Also, the positive results for bis(2-ethylhexyl) phthalate were qualified as non-detected (U) in Samples MW-15-082316 and MW-15A-082316. The positive result for bis(2-ethylhexyl) phthalate was detected at a concentration greater than 5X the concentration in the method blank for Sample MW-5-082316; and there were no positive results for bis(2-ethylhexyl) phthalate in Samples MW-3:082316 and MW-5A-082316; therefore, no qualifications were required.

(Anions) There was a positive result for nitrate as N detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/24/2016. The positive results for nitrate as N were qualified as non-detected (U) in Samples MW-3:082316 and MW-15A-082316. The positive results for nitrate as N were detected at concentrations greater than 10X the concentration in the method blank in Samples MW-5-082316, MW-5A-082316, and MW-15-082316; therefore no qualifications were required.

SDG 590-4291-2: (Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/15/2016. The positive result for OCDD was qualified as non-detected (U) in Sample MW-3:082316. There were no positive results for OCDD in Sample MW-5-082316; therefore, no qualification was required.

There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/19/2016. The positive results for OCDD were qualified as non-detected (U) in Samples MW-5A-082316 and MW-15A-082316. There were no positive results for OCDD in Sample MW-15-082316; therefore, no qualification was required.

Also, there was a positive result for 1,2,3,4,6,7,8-HpCDD detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive result for 1,2,3,4,6,7,8-HpCDD was

qualified as non-detected (U) in Sample MW-15A-082316. There were no positive results for 1,2,3,4,6,7,8-HpCDD in Samples MW-5A-082316 and MW-15-082316; therefore, no qualifications were required.

SDG 590-4302-1: (SVOCs) There were positive results for benzyl alcohol and bis(2-ethylhexyl) phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/26/2016. The positive result for bis(2-ethylhexyl) phthalate was qualified as non-detected (U) in Sample MW-14:082416. There were no positive results for bis(2-ethylhexyl) phthalate in Samples MW-7D:082416 and MW-11A:082416; and there were no positive results for benzyl alcohol in Samples MW-7D:082416, MW-11A:082416, and MW-14:082416; therefore, no qualifications were required.

(Dissolved Metals) There was a positive result for dissolved cadmium detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/31/2016. The positive results for dissolved cadmium were qualified as non-detected (U) in Samples MW-7D:082416 and MW-14:082416. There were no positive results for total cadmium in Sample MW-11A:082416; therefore, no qualification was required.

SDG 590-4302-2: (Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/19/2016. The positive results for OCDD were qualified as non-detected (U) in Samples MW-7D:082416, MW-11A:082416, and MW-14:082416.

Also, there was a positive result for 1,2,3,4,6,7,8-HpCDD detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive results for 1,2,3,4,6,7,8-HpCDD were qualified as non-detected (U) in Samples MW-7D:082416, MW-11A:082416, and MW-14:082416.

SDG 590-4322-1: (VOCs) There was a positive result for 1,2,3-Trichlorobenzene detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/27/2016. There were no positive results for 1,2,3-Trichlorobenzene in the associated field samples; therefore, no qualifications were required.

(SVOCs) There were positive results for benzyl alcohol, butyl benzyl phthalate, and di-n-butyl phthalate detected in the method blank extracted on 8/30/2016. The positive results for butyl benzyl phthalate were qualified as non-detected (U) in Samples MW-1A-082516, MW-7B-082516, and MW-12A-082516. The positive results for benzyl alcohol and di-n-butyl phthalate were qualified as non-detected (U) in Samples MW-1A-082516, MW-7B-082516, and DUP-082516. There were no positive results for butyl benzyl phthalate in Sample DUP-082516; and there were no positive results for benzyl alcohol and di-n-butyl phthalate in Sample MW-12A-082516; therefore, no qualifications were required.

(Total Metals) There was a positive result for total iron detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/30/2016. The positive result for total iron was detected at a concentration greater than 10X the concentration in the method blank in Sample DUP-082516; therefore no qualification was required.

(Dissolved Metals) There were positive results for dissolved cadmium and dissolved silver detected above the method detection limit, but below the reporting limit in the method blank extracted on 8/31/2016. The positive results for dissolved cadmium were qualified non-detected (U) in Samples MW-12A-082516 and DUP-082516. There were no positive results for dissolved silver in Samples MW-12A-082516 and DUP-082516; therefore, no qualifications were required.

SDG 590-4322-2: (Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/19/2016. The positive results for

OCDD were qualified as non-detected (U) in Samples MW-1A-082516, MW-7B-082516, DUP-082516, and MW-12A-082516.

Also, there was a positive result for 1,2,3,4,6,7,8-HpCDD detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive results for 1,2,3,4,6,7,8-HpCDD were qualified as non-detected (U) in Samples MW-1A-082516, MW-7B-082516, DUP-082516, and MW-12A-082516.

SDG 590-4339-1: (VOCs-Air) There were positive results for ethanol and toluene detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/2/2016. The positive results for toluene were detected at concentrations greater than 2X the concentration in the method blank for Samples LFB-3-082616, LFB-4-082616, LFB-5-082616, LFB-8-082616, LFB-9-082616, LFB-10-082616, LFB-11-082616, LFB-15-082616, LFB-16-082616, and LFB-17-082616; therefore, no qualifications were required. There were no positive results for ethanol in the associated field samples; therefore, no qualifications were required.

SDG 590-4346-1: (VOCs) There was a positive result for acetone detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/1/2016. There were no positive results for acetone in the associated field sample; therefore, no qualification was required.

(SVOCs) There were positive results for butyl benzyl phthalate and di-n-butyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/2/2016. The positive results for di-n-butyl phthalate were qualified as non-detected (U) in Sample MW-16:082916. There were no positive results for butyl benzyl phthalate in Sample MW-16:082916; therefore, no qualification was required.

(Total Metals) There were positive results for total antimony, total barium, total cadmium, total lead, and total silver detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/1/2016. The positive results for total antimony, total cadmium, total lead, and total silver were qualified as non-detected (U) in Sample MW-16:082916. The positive result for total barium was detected at a concentration greater than 10X the concentration in the method blank in Sample MW-16:082916; therefore no qualification was required.

There was a positive result for total mercury detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/13/2016. The positive result for total mercury was qualified as non-detected (U) in Sample MW-16:082916.

(Dissolved Metals) There was a positive result for dissolved mercury detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/13/2016. The positive result for dissolved mercury was qualified as non-detected (U) in Sample MW-16:082916.

SDG 590-4346-2: (Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/19/2016. The positive result for OCDD was qualified as non-detected (U) in Sample MW-16:082916.

Also, there was a positive result for 1,2,3,4,6,7,8-HpCDD detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive result for 1,2,3,4,6,7,8-HpCDD was qualified as non-detected (U) in Sample MW-16:082916.

SDG 590-4348-1: (VOCs) There was a positive result for acetone detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/1/2016. There were no positive results for acetone in the associated field sample; therefore, no qualification was required.

(SVOCs) There were positive results for butyl benzyl phthalate and di-n-butyl phthalate detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/2/2016. There were no positive results for butyl benzyl phthalate and di-n-butyl phthalate in the associated field sample; therefore, no qualifications were required.

(Total Metals) There were positive results for total antimony, total barium, total cadmium, total lead, and total silver detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/1/2016. The positive results for total antimony, total cadmium, total lead, and total silver were qualified as non-detected (U) in Sample SW-1:082916. The positive result for total barium was detected at a concentration greater than 10X the concentration in the method blank in Sample SW-1:082916; therefore no qualification was required.

There was a positive result for total mercury detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/13/2016. The positive result for total mercury was qualified as non-detected (U) in Sample SW-1:082916.

(Dissolved Metals) There was a positive result for dissolved mercury detected above the method detection limit, but below the reporting limit in the method blank extracted on 9/13/2016. The positive result for dissolved mercury was qualified as non-detected (U) in Sample SW-1:082916.

SDG 590-4348-2: (Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 9/19/2016. The positive result for OCDD was qualified as non-detected (U) in Sample SW-1:082916.

Also, there was a positive result for 1,2,3,4,6,7,8-HpCDD detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive result for 1,2,3,4,6,7,8-HpCDD was qualified as non-detected (U) in Sample SW-1:082916.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-4267-1: (Anions) The laboratory performed an MS/MSD sample set on Sample MW-8B-082116. The percent recovery for chloride was less than the control limits in the MS/MSD extracted on 8/29/2016. The positive result for chloride was qualified as estimated (J) in Sample MW-8B-082116.

SDG 590-4284-1: (Total Cyanide) The laboratory performed an MS on Sample MW-2A-082216. The percent recovery for total cyanide was less than the control limit in the MS extracted on 8/26/2016. The percent recovery for this target analyte was within the control limits in the associated sample batch LCS,

which demonstrates the possibility of matrix interference; therefore, no qualification of the data was required.

SDG 590-4291-1: (VOCs) The laboratory performed an MS on Sample MW-3:082316. The percent recoveries for all VOC target analytes, with the exception of acetone, were less than the control limits in the MS extracted on 8/26/2016. The percent recoveries for these target analytes were within the control limits in the associated sample batch LCS, which demonstrates the possibility of matrix interference; therefore, no qualifications of the data were required.

(NWTPH-Gx) The laboratory performed an MS on Sample MW-5-082316. The percent recovery for gasoline-range hydrocarbons was less than the control limits in the MS extracted on 8/26/2016. The percent recovery for this target analyte was within the control limits in the associated sample batch LCS, which demonstrates the possibility of matrix interference; therefore, no qualification of the data was required.

(COD) The laboratory performed an MS on Sample MW-3:082316. There percent recovery of COD was greater than the control limits in the MS extracted on 8/29/2016. The positive result for COD was qualified as estimated (J) in Sample MW-3:082316.

SDG 590-4322-1: (VOCs) The laboratory performed an MS on Sample MW-7B-082516. The percent recoveries for many VOC target analytes were less than the control limits in the MS extracted on 8/27/2016. The percent recoveries for these target analytes were within the control limits in the associated sample batch LCS, which demonstrates the possibility of matrix interference; therefore, no qualifications of the data were required.

(Total Cyanide) The laboratory performed an MS on Sample MW-7B-082516. The percent recovery for total cyanide was less than the control limit in the MS extracted on 9/6/2016. The percent recovery for this target analyte was within the control limits in the associated sample batch LCS and LCSD, which demonstrates the possibility of matrix interference; therefore, no qualification of the data was required.

The laboratory performed an MS on Sample DUP-082516. The percent recovery for total cyanide was less than the control limit in the MS extracted on 9/6/2016. The percent recovery for this target analyte was within the control limits in the associated sample batch LCS and LCSD, which demonstrates the possibility of matrix interference; therefore, no qualification of the data was required.

SDG 590-4346-1: (Anions) The laboratory performed an MS/MSD sample set on Sample MW-16:082916. The percent recovery for nitrate as N was greater than the control limits in the MS/MSD extracted on 8/30/2016. The positive result for nitrate as N was qualified as estimated (J) in Sample MW-16:082916.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-4267-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 8/22/2016. There were no positive results for acetone in the associated field samples; therefore no qualifications were required.

(SVOCs) The percent recoveries for benzyl alcohol and bis(2-ethylhexyl) phthalate were greater than the control limits in the LCS and LCSD extracted on 8/26/2016; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD and LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the RPD values for 3,3'-Dichlorobenzidine, 4-Nitroaniline, benzyl alcohol, and bis(2-ethylhexyl) phthalate were greater than the control limits. After the qualification of benzyl alcohol and bis(2-ethylhexyl) phthalate due to method blank contamination, there were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

SDG 590-4284-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 8/23/2016. There were no positive results for acetone in the associated field samples; therefore no qualifications were required.

(SVOCs) The percent recoveries for benzyl alcohol and bis(2-ethylhexyl) phthalate were greater than the control limits in the LCS and LCSD extracted on 8/26/2016; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD and LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the RPD values for 3,3'-Dichlorobenzidine, 4-Nitroaniline, benzyl alcohol, and bis(2-ethylhexyl) phthalate were greater than the control limits. After the qualification of benzyl alcohol and bis(2-ethylhexyl) phthalate due to method blank contamination, there were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

(Dioxin/Furans) The percent recovery for 1,2,3,6,7,8-HxCDF was greater than the control limits in the LCS extracted 9/15/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier.

SDG 590-4291-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 8/26/2016. There were no positive results for acetone in the associated field samples; therefore no qualifications were required.

(SVOCs) The percent recoveries for benzyl alcohol and bis(2-ethylhexyl) phthalate were greater than the control limits in the LCS and LCSD extracted on 8/26/2016; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD and LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the RPD values for 3,3'-Dichlorobenzidine, 4-Nitroaniline, benzyl alcohol, and bis(2-ethylhexyl) phthalate were greater than the control limits. The positive results for bis(2-ethylhexyl) phthalate were qualified as estimated (J) in Sample MW-5-082316. For the remaining associated field samples, after the qualification of benzyl alcohol and bis(2-ethylhexyl) phthalate due to method blank contamination, there were no positive results for these target analytes; therefore, no qualifications were required.

SDG 590-4291-2: (Dioxin/Furans) The percent recovery for 1,2,3,6,7,8-HxCDF was greater than the control limits in the LCS extracted 9/15/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier.

SDG 590-4302-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 8/26/2016. There were no positive results for acetone in the associated field samples; therefore no qualifications were required.

(SVOCs) The percent recoveries for benzyl alcohol and bis(2-ethylhexyl) phthalate were greater than the control limits in the LCS and LCSD extracted on 8/26/2016; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD and LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the RPD values for 3,3'-Dichlorobenzidine, 4-Nitroaniline, benzyl alcohol, and bis(2-ethylhexyl) phthalate were greater than the control limits. After the qualification of bis(2-ethylhexyl) phthalate due to method blank contamination, there were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

SDG 590-4322-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 8/26/2016. The positive result for acetone was qualified as estimated (J) in Sample MW-12A-082516.

The percent recovery for acetone was greater than the control limits in the LCS analyzed on 8/27/2016. There were no positive results for acetone in the associated field samples; therefore no qualifications were required.

(SVOCs) The percent recoveries for 2,6-Dinitrotoluene (6% and 8%), 4-Chloroaniline (8% and 4%), and hexachlorocyclopentadiene (6% and 13%) were less than the control limits in the LCS and LCSD, respectively, extracted on 8/30/2016. The positive result for 2,6-Dinitrotoluene was qualified as estimated (J) in Sample DUP-082516. The National Functional Guidelines state that if the percent recovery in the LCS or LCSD is less than 10% and the parent sample result is non-detected, the result should be labeled as unusable. For this reason, the reporting limits for 2,6-Dinitrotoluene, 4-Chloroaniline, and hexachlorocyclopentadiene were qualified as rejected (R) in Samples MW-1A-082516, MW-7B-082516, and MW-12A-082516; and the reporting limits for 4-Chloroaniline and hexachlorocyclopentadiene were qualified as rejected (R) in Sample DUP-082516.

Also, in the same LCS/LCSD sample set, the percent recoveries for benzyl alcohol, bis(2-ethylhexyl) phthalate, and butyl benzyl phthalate were greater than the control limits in the LCSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

Additionally, in the same LCS/LCSD sample set, the RPD values for 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Nitroaniline, 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, benzyl alcohol, bis(2-ethylhexyl) phthalate, hexachlorobutadiene, hexachlorocyclopentadiene, and hexachloroethane were greater than the control limits. The positive results for bis(2-ethylhexyl) phthalate were qualified as estimated (J) in Samples MW-1A-082516, MW-7B-082516, and DUP-082516. After the qualification of benzyl alcohol due to method blank contamination, there were no positive results for 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Nitroaniline, 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, benzyl alcohol, hexachlorobutadiene, hexachlorocyclopentadiene, and hexachloroethane in the associated field samples; therefore no qualifications were required.

SDG 590-4346-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 9/1/2016. There were no positive results for acetone in the associated field sample; therefore no qualification was required.

(SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits in the LCS extracted on 9/2/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the RPD values for 3,3'-Dichlorobenzidine, 4-Chloroaniline, and 4-Nitrophenol were greater than the

control limits. There were no positive results for these target analytes in the associated field sample; therefore, no qualifications were required.

SDG 590-4348-1: (VOCs) The percent recovery for acetone was greater than the control limits in the LCS analyzed on 9/1/2016. There were no positive results for acetone in the associated field sample; therefore no qualification was required.

(SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits in the LCS extracted on 9/2/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the RPD values for 3,3'-Dichlorobenzidine, 4-Chloroaniline, and 4-Nitrophenol were greater than the control limits. There were no positive results for these target analytes in the associated field sample; therefore, no qualifications were required.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration greater than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 35 percent.

SDG 590-4322-1: One field duplicate sample pair, MW-7B-082516 and DUP-082516, was submitted with this SDG. The precision criteria for all target analytes were met for this sample pair, with the exception of dissolved antimony, dissolved arsenic, dissolved barium, dissolved chromium, dissolved copper, dissolved lead, dissolved manganese, dissolved nickel, dissolved zinc, total chromium, total copper, total iron, total lead, total manganese, total silver, and total zinc. The positive results for these target analytes were qualified as estimated (J) in this sample pair.

Miscellaneous

SDG 590-4267-1: (Dioxin/Furans) The positive results for 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,7,8-PeCDF, and OCDD in Sample MW-8A-082116; the positive results for 1,2,3,4,6,7,8-HpCDD and OCDF in Sample MW-8B-082116; and the positive result for OCDD in Sample MW-9A-082116 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in these samples, accordingly.

SDG 590-4284-1: (Dioxin/Furans) The positive results for 1,2,3,6,7,8-HxCDD and 1,2,3,4,6,7,8-HpCDD in Sample MW-4A-082216 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance

ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in this sample.

SDG 590-4322-1: (Anions) The laboratory reported two sets of results for nitrate as N and nitrite as N in Sample MW-1A-082516, an initial and a dilution (10X), because the results for nitrate as N exceeded the instrument calibration range in the initial sample. The initial reported result for nitrate as N and the dilution reported result for nitrite as N were labeled as do-not-report (DNR) and should not be used for any purpose.

SDG 590-4322-2: (Dioxin/Furans) The positive result for OCDF in Sample MW-1A-082516 was noted by the laboratory to represent the Estimated Maximum Possible Concentration for this compound. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The result for this target analyte was qualified as estimated (J) in this sample.

SDG 590-4348-2: (Dioxin/Furans) The positive result for 1,2,3,4,6,7,8-HpCDF in Sample SW-1:082916 was noted by the laboratory to represent the Estimated Maximum Possible Concentration for this compound. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The result for this target analyte was qualified as estimated (J) in this sample.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2. SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
MW-1A-082516	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	2,6-Dinitrotoluene	R	LCS/LCSD Recovery
	4-Chloroaniline	R	LCS/LCSD Recovery
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD Recovery
	Butyl benzyl phthalate	U	Method Blank Contamination
	Di-n-butyl phthalate	U	Method Blank Contamination
	Hexachlorocyclopentadiene	R	LCS/LCSD Recovery
	Nitrate as N	J	Holding Time
	OCDD	U	Method Blank Contamination
	OCDF	J	See Miscellaneous
MW-2A-082216	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-3:082316	Benzyl alcohol	U	Method Blank Contamination
	COD	J	MS Recovery
	Nitrate as N	U	Method Blank Contamination

Sample ID	Analyte	Qualifier	Reason
	OCDD	U	Method Blank Contamination
MW-4A-082216	1,2,3,6,7,8-HxCDD	J	See Miscellaneous
	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-5-082316	bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
MW-5A-082316	Benzyl alcohol	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-7B-082516	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	2,6-Dinitrotoluene	R	LCS/LCSD Recovery
	4-Chloroaniline	R	LCS/LCSD Recovery
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD Recovery
	Butyl benzyl phthalate	U	Method Blank Contamination
	Di-n-butyl phthalate	U	Method Blank Contamination
	Dissolved antimony	J	Field Duplicate RPD
	Dissolved arsenic	J	Field Duplicate RPD
	Dissolved barium	J	Field Duplicate RPD
	Dissolved chromium	J	Field Duplicate RPD
	Dissolved copper	J	Field Duplicate RPD
	Dissolved lead	J	Field Duplicate RPD
	Dissolved manganese	J	Field Duplicate RPD
	Dissolved nickel	J	Field Duplicate RPD
	Dissolved zinc	J	Field Duplicate RPD
	Hexachlorocyclopentadiene	R	LCS/LCSD Recovery
	OCDD	U	Method Blank Contamination
	Total chromium	J	Field Duplicate RPD
	Total copper	J	Field Duplicate RPD
	Total iron	J	Field Duplicate RPD
	Total lead	J	Field Duplicate RPD
	Total manganese	J	Field Duplicate RPD
	Total silver	J	Field Duplicate RPD
	Total zinc	J	Field Duplicate RPD
DUP-082516	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	2,6-Dinitrotoluene	J	LCS/LCSD Recovery
	4-Chloroaniline	R	LCS/LCSD Recovery
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD Recovery
	Di-n-butyl phthalate	U	Method Blank Contamination
	Dissolved antimony	J	Field Duplicate RPD
	Dissolved arsenic	J	Field Duplicate RPD
	Dissolved barium	J	Field Duplicate RPD

Sample ID	Analyte	Qualifier	Reason
	Dissolved cadmium	U	Method Blank Contamination
	Dissolved chromium	J	Field Duplicate RPD
	Dissolved copper	J	Field Duplicate RPD
	Dissolved lead	J	Field Duplicate RPD
	Dissolved manganese	J	Field Duplicate RPD
	Dissolved nickel	J	Field Duplicate RPD
	Dissolved zinc	J	Field Duplicate RPD
	Hexachlorocyclopentadiene	R	LCS/LCSD Recovery
	OCDD	U	Method Blank Contamination
	Total chromium	J	Field Duplicate RPD
	Total copper	J	Field Duplicate RPD
	Total iron	J	Field Duplicate RPD
	Total lead	J	Field Duplicate RPD
	Total manganese	J	Field Duplicate RPD
	Total silver	J	Field Duplicate RPD
	Total zinc	J	Field Duplicate RPD
MW-7D:082416	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	Dissolved cadmium	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-8A-082116	1,2,3,4,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
	1,2,3,7,8-PeCDD	J	See Miscellaneous
	2,3,4,7,8-PeCDF	J	See Miscellaneous
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	OCDD	J	See Miscellaneous
MW-8B-082116	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	Chloride	J	MS/MSD Recovery
	OCDF	J	See Miscellaneous
MW-9A-082116	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	OCDD	J	See Miscellaneous
MW-11A:082416	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-12A-082516	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	2,6-Dinitrotoluene	R	LCS/LCSD Recovery
	4-Chloroaniline	R	LCS/LCSD Recovery
	Acetone	J	LCS Recovery
	Butyl benzyl phthalate	U	Method Blank Contamination
	Dissolved cadmium	U	Method Blank Contamination
	Hexachlorocyclopentadiene	R	LCS/LCSD Recovery

Sample ID	Analyte	Qualifier	Reason
	OCDD	U	Method Blank Contamination
MW-14:082416	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	Dissolved cadmium	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-15-082316	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
MW-15A-082316	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	Nitrate as N	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-16:082916	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	Di-n-butyl phthalate	U	Method Blank Contamination
	Dissolved mercury	U	Method Blank Contamination
	Nitrate as N	J	MS/MSD Recovery
	OCDD	U	Method Blank Contamination
	Total antimony	U	Method Blank Contamination
	Total cadmium	U	Method Blank Contamination
	Total lead	U	Method Blank Contamination
	Total mercury	U	Method Blank Contamination
	Total silver	U	Method Blank Contamination
MW-16A-082216	Benzyl alcohol	U	Method Blank Contamination
	Bis(2-ethylhexyl) phthalate	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
SW-1:082916	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	Dissolved mercury	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	Total antimony	U	Method Blank Contamination
	Total cadmium	U	Method Blank Contamination
	Total lead	U	Method Blank Contamination
	Total mercury	U	Method Blank Contamination
	Total silver	U	Method Blank Contamination
Tank-2:092816	pH	J	Holding Time
	Total molybdenum	U	Method Blank Contamination

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ANALYTICAL REPORT

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TestAmerica Job ID: 590-4267-1
Client Project/Site: Marshall 0504-104-00

For:
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Authorized for release by:
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Job ID: 590-4267-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/22/2016 10:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9º C.

Receipt Exceptions
Two 1L ambers for sample MW-9A-082116 (590-4267-3) were delayed by FedEx and received at the Denver lab at 11.4°C. Denver had received two containers for sample 3 on 8/23 in temp and in good condition,and these two are sufficient for requested analyses.

GC/MS VOA
Method 8260C: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 590-8202 contained target analytes above the instrument calibration range. Ethylbenzene, m,p-Xylene, o-Xylene, Toluene and Xylenes, Total in the MS/MSD have been reported as estimates.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226191 recovered above the upper control limit for 3,3'-Dichlorobenzidine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-8A-082116 (590-4267-1), MW-8B-082116 (590-4267-2), MW-9A-082116 (590-4267-3) and (CCVIS 580-226191/3).

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-226191 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-226029 and analytical batch 580-226191 recovered outside control limits for the following analytes: Benzyl alcohol (LCS only) and Bis(2-ethylhexyl) phthalate (LCSD only). These analytes were biased high in the LCS. The affected samples were either not detected for this analyte or had hits below the reporting limit but above the detection limit. Bis(2-ethylhexyl) phthalate is a common lab contaminant.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226029 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, Bis(2-ethylhexyl) phthalate, 4-Nitroaniline and Benzyl alcohol.

Method 8270D: The method blank for preparation batch 580-226029 and analytical batch 580-226191 contained Benzyl alcohol and Bis(2-ethylhexyl) phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) for 2,4-DB and Dalapon associated with analytical batch 280-340437 recovered outside the control limit on the back/confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the front/primary column which is in control.

Method 8141B: The initial calibration verification (ICV) result for batch 280-341530 was outside control limits on the front column for simazine. Sample results were non-detects, and were reported off of the back, in control, column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

IC
Method 300.0: The method blank for analytical batch 590-8198 contained Nitrate as N above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

Job ID: 590-4267-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 300.0: The continuing calibration blank (CCB) for analytical batch 590-8311 contained Nitrate as N above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
Method 8290A: The bracketing continuing calibration verification (CCV) associated with batch 320-126274 has 1,2,3,4,7,8,9-HpCDF, 1,2,3,7,8,9-HpCDD, and OCDF with percent difference values that are between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

Method 8290A: The bracketing continuing calibration verification (CCV) associated with batch 320-126274 has 13C-OCDD with percent difference value that is between the method criteria of 30% to 35% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate the Isotope Dilution Analyte (IDA) recovery in the associated samples.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 245.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-225830 and 580-226222.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 339570.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 339693.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4267-1	MW-8A-082116	Water	08/21/16 15:10	08/22/16 10:55
590-4267-2	MW-8B-082116	Water	08/21/16 16:45	08/22/16 10:55
590-4267-3	MW-9A-082116	Water	08/21/16 18:25	08/22/16 10:55

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/22/16 18:04	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/22/16 18:04	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/22/16 18:04	1
o-Xylene	ND		1.0	0.16	ug/L			08/22/16 18:04	1
Toluene	ND		1.0	0.31	ug/L			08/22/16 18:04	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/22/16 18:04	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/22/16 18:04	1
Naphthalene	ND		2.0	0.63	ug/L			08/22/16 18:04	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/22/16 18:04	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/22/16 18:04	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/22/16 18:04	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/22/16 18:04	1
Bromoform	ND		2.0	0.80	ug/L			08/22/16 18:04	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/22/16 18:04	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/22/16 18:04	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 18:04	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/22/16 18:04	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/22/16 18:04	1
Acetone	ND	*	25	4.1	ug/L			08/22/16 18:04	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/22/16 18:04	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/22/16 18:04	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/22/16 18:04	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/22/16 18:04	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/22/16 18:04	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/22/16 18:04	1
Chloromethane	ND		3.0	0.22	ug/L			08/22/16 18:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/22/16 18:04	1
Bromomethane	ND		5.0	0.22	ug/L			08/22/16 18:04	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/22/16 18:04	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/22/16 18:04	1
Dibromomethane	ND		1.0	0.50	ug/L			08/22/16 18:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/22/16 18:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:04	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/22/16 18:04	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/22/16 18:04	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/22/16 18:04	1
Hexane	ND		1.0	0.084	ug/L			08/22/16 18:04	1
Styrene	ND		1.0	0.10	ug/L			08/22/16 18:04	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/22/16 18:04	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/22/16 18:04	1
Bromobenzene	ND		1.0	0.28	ug/L			08/22/16 18:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:04	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/22/16 18:04	1
Chloroethane	ND		2.0	1.1	ug/L			08/22/16 18:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/22/16 18:04	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/22/16 18:04	1
Trichloroethene	ND		1.0	0.44	ug/L			08/22/16 18:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/22/16 18:04	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/22/16 18:04	1

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		10	0.75	ug/L			08/22/16 18:04	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/22/16 18:04	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/22/16 18:04	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/22/16 18:04	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/22/16 18:04	1
Trichlorofluoromethane	**0.30**	**J**	1.0	0.20	ug/L			08/22/16 18:04	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/22/16 18:04	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/22/16 18:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/22/16 18:04	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/22/16 18:04	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/22/16 18:04	1
Chloroform	ND		1.0	0.41	ug/L			08/22/16 18:04	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/22/16 18:04	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/22/16 18:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/22/16 18:04	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/22/16 18:04	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/22/16 18:04	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/22/16 18:04	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/22/16 18:04	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/22/16 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 125*		*08/22/16 18:04*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*08/22/16 18:04*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/22/16 18:04*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/22/16 18:04*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/22/16 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*08/22/16 18:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2,6-Dinitrotoluene	**0.13**	**J**	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 13:03	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 13:03	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
4-Nitrophenol	ND		2.8	0.95	ug/L		08/26/16 14:41	08/30/16 13:03	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzoic acid	**0.60**	**J**	2.8	0.57	ug/L		08/26/16 14:41	08/30/16 13:03	1
Benzyl alcohol	**0.19**	**J B ***	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Bis(2-ethylhexyl) phthalate	**1.6**	**J B ***	2.8	1.1	ug/L		08/26/16 14:41	08/30/16 13:03	1
Butyl benzyl phthalate	**0.39**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 13:03	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 13:03	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Di-n-butyl phthalate	**0.13**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 13:03	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 13:03	1
Fluoranthene	ND		0.047	0.012	ug/L		08/26/16 14:41	08/30/16 13:03	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.66	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 13:03	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 13:03	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*96*		*57 - 132*	*08/26/16 14:41*	*08/30/16 13:03*	*1*
2-Fluorobiphenyl	*72*		*50 - 120*	*08/26/16 14:41*	*08/30/16 13:03*	*1*
2-Fluorophenol	*74*		*50 - 113*	*08/26/16 14:41*	*08/30/16 13:03*	*1*
Nitrobenzene-d5	*86*		*59 - 120*	*08/26/16 14:41*	*08/30/16 13:03*	*1*
Phenol-d5	*77*		*52 - 120*	*08/26/16 14:41*	*08/30/16 13:03*	*1*
Terphenyl-d14	*95*		*72 - 140*	*08/26/16 14:41*	*08/30/16 13:03*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:43	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0056	ug/L		08/26/16 15:29	08/29/16 18:46	1
4,4'-DDE	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 18:46	1
4,4'-DDT	ND		0.028	0.0047	ug/L		08/26/16 15:29	08/29/16 18:46	1
Aldrin	ND		0.028	0.0065	ug/L		08/26/16 15:29	08/29/16 18:46	1
alpha-BHC	ND		0.028	0.0065	ug/L		08/26/16 15:29	08/29/16 18:46	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 18:46	1
beta-BHC	ND		0.047	0.011	ug/L		08/26/16 15:29	08/29/16 18:46	1
delta-BHC	ND		0.047	0.0093	ug/L		08/26/16 15:29	08/29/16 18:46	1
Dieldrin	ND		0.028	0.0047	ug/L		08/26/16 15:29	08/29/16 18:46	1
Endosulfan I	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 18:46	1
Endosulfan II	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 18:46	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 18:46	1
Endrin	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 18:46	1
Endrin aldehyde	ND		0.19	0.032	ug/L		08/26/16 15:29	08/29/16 18:46	1
Endrin ketone	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 18:46	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		08/26/16 15:29	08/29/16 18:46	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 18:46	1
Heptachlor	ND		0.019	0.0037	ug/L		08/26/16 15:29	08/29/16 18:46	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 18:46	1
Methoxychlor	ND		0.093	0.0019	ug/L		08/26/16 15:29	08/29/16 18:46	1
Toxaphene	ND		0.93	0.21	ug/L		08/26/16 15:29	08/29/16 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*22 - 150*	*08/26/16 15:29*	*08/29/16 18:46*	*1*
Tetrachloro-m-xylene	*83*		*40 - 113*	*08/26/16 15:29*	*08/29/16 18:46*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.093	0.058	ug/L		08/30/16 13:27	08/30/16 19:22	1
PCB-1221	ND		0.093	0.058	ug/L		08/30/16 13:27	08/30/16 19:22	1
PCB-1232	ND		0.093	0.058	ug/L		08/30/16 13:27	08/30/16 19:22	1
PCB-1242	ND		0.093	0.058	ug/L		08/30/16 13:27	08/30/16 19:22	1

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.093	0.058	ug/L		08/30/16 13:27	08/30/16 19:22	1
PCB-1254	ND		0.093	0.058	ug/L		08/30/16 13:27	08/30/16 19:22	1
PCB-1260	ND		0.093	0.040	ug/L		08/30/16 13:27	08/30/16 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*20 - 120*	*08/30/16 13:27*	*08/30/16 19:22*	*1*
DCB Decachlorobiphenyl (Surr)	*113*		*36 - 138*	*08/30/16 13:27*	*08/30/16 19:22*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 14:38	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/25/16 14:55	09/10/16 14:38	1
Bolstar	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 14:38	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/25/16 14:55	09/10/16 14:38	1
Coumaphos	ND		0.95	0.13	ug/L		08/25/16 14:55	09/10/16 14:38	1
Demeton, Total	ND		2.8	0.20	ug/L		08/25/16 14:55	09/10/16 14:38	1
Diazinon	ND		0.47	0.14	ug/L		08/25/16 14:55	09/10/16 14:38	1
Dichlorvos	ND		0.47	0.15	ug/L		08/25/16 14:55	09/10/16 14:38	1
Dimethoate	ND		1.4	0.42	ug/L		08/25/16 14:55	09/10/16 14:38	1
Disulfoton	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 14:38	1
EPN	ND		1.1	0.14	ug/L		08/25/16 14:55	09/10/16 14:38	1
Famphur	ND		0.95	0.17	ug/L		08/25/16 14:55	09/10/16 14:38	1
Fensulfothion	ND		2.4	0.51	ug/L		08/25/16 14:55	09/10/16 14:38	1
Fenthion	ND		2.4	0.15	ug/L		08/25/16 14:55	09/10/16 14:38	1
Malathion	ND		1.9	0.13	ug/L		08/25/16 14:55	09/10/16 14:38	1
Merphos	ND		4.7	0.16	ug/L		08/25/16 14:55	09/10/16 14:38	1
Methyl parathion	ND		3.8	0.13	ug/L		08/25/16 14:55	09/10/16 14:38	1
Mevinphos	ND		5.9	0.43	ug/L		08/25/16 14:55	09/10/16 14:38	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/25/16 14:55	09/10/16 14:38	1
Phorate	ND		1.1	0.15	ug/L		08/25/16 14:55	09/10/16 14:38	1
Ronnel	ND		9.5	0.11	ug/L		08/25/16 14:55	09/10/16 14:38	1
Simazine	ND		9.5	0.21	ug/L		08/25/16 14:55	09/10/16 14:38	1
Sulfotepp	ND		1.4	0.16	ug/L		08/25/16 14:55	09/10/16 14:38	1
Thionazin	ND		0.95	0.29	ug/L		08/25/16 14:55	09/10/16 14:38	1
Tokuthion	ND		1.5	0.12	ug/L		08/25/16 14:55	09/10/16 14:38	1
Trichloronate	ND		1.4	0.23	ug/L		08/25/16 14:55	09/10/16 14:38	1
Ethoprop	ND		1.4	0.17	ug/L		08/25/16 14:55	09/10/16 14:38	1
Propazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*75*		*49 - 171*	*08/25/16 14:55*	*09/10/16 14:38*	*1*
Triphenylphosphate	*95*		*60 - 154*	*08/25/16 14:55*	*09/10/16 14:38*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.94	0.18	ug/L		08/26/16 10:50	09/01/16 21:41	1
2,4-D	ND		3.8	0.20	ug/L		08/26/16 10:50	09/01/16 21:41	1
2,4-DB	ND		3.8	0.34	ug/L		08/26/16 10:50	09/01/16 21:41	1
Dalapon	ND		1.9	0.86	ug/L		08/26/16 10:50	09/01/16 21:41	1
Dicamba	ND		1.9	0.14	ug/L		08/26/16 10:50	09/01/16 21:41	1

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.61	ug/L		08/26/16 10:50	09/01/16 21:41	1
MCPA	ND		380	16	ug/L		08/26/16 10:50	09/01/16 21:41	1
MCPP	ND		380	31	ug/L		08/26/16 10:50	09/01/16 21:41	1
Silvex (2,4,5-TP)	ND		0.94	0.16	ug/L		08/26/16 10:50	09/01/16 21:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*89*		*39 - 135*	*08/26/16 10:50*	*09/01/16 21:41*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/23/16 09:09	08/23/16 23:43	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/23/16 09:09	08/23/16 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*08/23/16 09:09*	*08/23/16 23:43*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*08/23/16 09:09*	*08/23/16 23:43*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.9**		0.80	0.42	mg/L			08/22/16 14:34	1
Nitrate as N	**1.3**	**B**	0.20	0.039	mg/L			08/22/16 14:34	1
Nitrite as N	ND		0.20	0.069	mg/L			08/22/16 14:34	1
Sulfate	**10**		0.50	0.13	mg/L			08/22/16 14:34	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.62	pg/L		09/06/16 13:26	09/08/16 06:28	1
2,3,7,8-TCDF	ND		9.5	0.32	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,7,8-PeCDD	**1.2**	**J q**	47	1.0	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,7,8-PeCDF	ND		47	0.65	pg/L		09/06/16 13:26	09/08/16 06:28	1
2,3,4,7,8-PeCDF	**0.78**	**J q**	47	0.69	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,4,7,8-HxCDD	**1.6**	**J**	47	0.49	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,6,7,8-HxCDD	**1.8**	**J**	47	0.46	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,7,8,9-HxCDD	**2.1**	**J B**	47	0.38	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,4,7,8-HxCDF	**1.2**	**J q**	47	0.45	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,6,7,8-HxCDF	ND		47	0.40	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,7,8,9-HxCDF	**1.1**	**J q**	47	0.46	pg/L		09/06/16 13:26	09/08/16 06:28	1
2,3,4,6,7,8-HxCDF	**2.0**	**J**	47	0.44	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,4,6,7,8-HpCDD	**2.7**	**J B**	47	0.48	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.68	pg/L		09/06/16 13:26	09/08/16 06:28	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.87	pg/L		09/06/16 13:26	09/08/16 06:28	1
OCDD	**3.7**	**J q B**	95	0.72	pg/L		09/06/16 13:26	09/08/16 06:28	1
OCDF	**4.7**	**J B**	95	0.76	pg/L		09/06/16 13:26	09/08/16 06:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-1,2,3,7,8-PeCDD	*80*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-1,2,3,7,8-PeCDF	*83*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-1,2,3,6,7,8-HxCDD	*96*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*

Client Sample ID: MW-8A-082116

Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*73*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*
13C-OCDD	*79*		*40 - 135*	*09/06/16 13:26*	*09/08/16 06:28*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00073**	**J**	0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 02:03	1
Antimony	**0.00045**		0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 02:03	1
Barium	**0.035**		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 02:03	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 02:03	1
Cadmium	**0.00012**	**J**	0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 02:03	1
Chromium	**0.00045**		0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 02:03	1
Copper	**0.0061**		0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 02:03	1
Iron	**0.025**	**J**	0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 02:03	1
Lead	**0.00082**		0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 02:03	1
Manganese	**0.00087**	**J**	0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 02:03	1
Nickel	**0.019**		0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 02:03	1
Selenium	**0.00041**	**J**	0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 02:03	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 02:03	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 02:03	1
Vanadium	**0.0026**	**J**	0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 02:03	1
Zinc	**0.016**		0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 02:03	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0010**		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:46	1
Antimony	**0.00043**		0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:46	1
Barium	**0.036**		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:46	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:46	1
Cadmium	**0.00014**	**J**	0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:46	1
Chromium	**0.00068**		0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:46	1
Copper	**0.0082**		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:46	1
Iron	**0.028**	**J**	0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:46	1
Lead	**0.0013**		0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:46	1
Manganese	**0.0017**	**J**	0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:46	1
Nickel	**0.017**		0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:46	1
Selenium	**0.00046**	**J**	0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:46	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:46	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:46	1
Vanadium	**0.0027**	**J**	0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:46	1
Zinc	**0.029**		0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:46	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/26/16 10:03	08/26/16 16:13	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:36	1

Client Sample ID: MW-8A-082116

Lab Sample ID: 590-4267-1

Date Collected: 08/21/16 15:10

Matrix: Water

Date Received: 08/22/16 10:55

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 20:08	1
Ammonia (as N)	**0.16**		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:22	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/26/16 12:01	1
Total Organic Carbon	**0.71**	**J**	1.0	0.50	mg/L			08/29/16 16:45	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/22/16 13:30	1
Escherichia coli	**0.00**				MPN/100mL			08/22/16 13:30	1

Client Sample ID: MW-8B-082116

Lab Sample ID: 590-4267-2

Date Collected: 08/21/16 16:45

Matrix: Water

Date Received: 08/22/16 10:55

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/22/16 18:26	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/22/16 18:26	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/22/16 18:26	1
o-Xylene	ND		1.0	0.16	ug/L			08/22/16 18:26	1
Toluene	ND		1.0	0.31	ug/L			08/22/16 18:26	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/22/16 18:26	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/22/16 18:26	1
Naphthalene	ND		2.0	0.63	ug/L			08/22/16 18:26	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/22/16 18:26	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/22/16 18:26	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/22/16 18:26	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/22/16 18:26	1
Bromoform	ND		2.0	0.80	ug/L			08/22/16 18:26	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/22/16 18:26	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/22/16 18:26	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 18:26	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/22/16 18:26	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/22/16 18:26	1
Acetone	ND	*	25	4.1	ug/L			08/22/16 18:26	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/22/16 18:26	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/22/16 18:26	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/22/16 18:26	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/22/16 18:26	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/22/16 18:26	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/22/16 18:26	1
Chloromethane	ND		3.0	0.22	ug/L			08/22/16 18:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/22/16 18:26	1
Bromomethane	ND		5.0	0.22	ug/L			08/22/16 18:26	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/22/16 18:26	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/22/16 18:26	1
Dibromomethane	ND		1.0	0.50	ug/L			08/22/16 18:26	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/22/16 18:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:26	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/22/16 18:26	1

Client Sample ID: MW-8B-082116
Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/22/16 18:26	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/22/16 18:26	1
Hexane	ND		1.0	0.084	ug/L			08/22/16 18:26	1
Styrene	ND		1.0	0.10	ug/L			08/22/16 18:26	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/22/16 18:26	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/22/16 18:26	1
Bromobenzene	ND		1.0	0.28	ug/L			08/22/16 18:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:26	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/22/16 18:26	1
Chloroethane	ND		2.0	1.1	ug/L			08/22/16 18:26	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/22/16 18:26	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/22/16 18:26	1
Trichloroethene	ND		1.0	0.44	ug/L			08/22/16 18:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/22/16 18:26	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/22/16 18:26	1
2-Hexanone	ND		10	0.75	ug/L			08/22/16 18:26	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/22/16 18:26	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/22/16 18:26	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/22/16 18:26	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/22/16 18:26	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/22/16 18:26	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/22/16 18:26	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/22/16 18:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/22/16 18:26	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/22/16 18:26	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/22/16 18:26	1
Chloroform	ND		1.0	0.41	ug/L			08/22/16 18:26	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/22/16 18:26	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/22/16 18:26	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/22/16 18:26	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/22/16 18:26	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/22/16 18:26	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/22/16 18:26	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/22/16 18:26	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/22/16 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*08/22/16 18:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*08/22/16 18:26*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/22/16 18:26*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/22/16 18:26*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/22/16 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*08/22/16 18:26*	*1*

Client Sample ID: MW-8B-082116
Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 14:21	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 14:21	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
4-Nitrophenol	ND		2.8	0.95	ug/L		08/26/16 14:41	08/30/16 14:21	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzoic acid	**0.67**	**J**	2.8	0.57	ug/L		08/26/16 14:41	08/30/16 14:21	1
Benzyl alcohol	**0.16**	**J B ***	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Bis(2-ethylhexyl) phthalate	**2.7**	**J B ***	2.8	1.1	ug/L		08/26/16 14:41	08/30/16 14:21	1
Butyl benzyl phthalate	**0.22**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 14:21	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 14:21	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-8B-082116
Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		08/26/16 14:41	08/30/16 14:21	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 14:21	1
Fluoranthene	ND		0.047	0.012	ug/L		08/26/16 14:41	08/30/16 14:21	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Pentachlorophenol	ND		0.66	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 14:21	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 14:21	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*103*		*57 - 132*	*08/26/16 14:41*	*08/30/16 14:21*	*1*
2-Fluorobiphenyl	*75*		*50 - 120*	*08/26/16 14:41*	*08/30/16 14:21*	*1*
2-Fluorophenol	*76*		*50 - 113*	*08/26/16 14:41*	*08/30/16 14:21*	*1*
Nitrobenzene-d5	*96*		*59 - 120*	*08/26/16 14:41*	*08/30/16 14:21*	*1*
Phenol-d5	*81*		*52 - 120*	*08/26/16 14:41*	*08/30/16 14:21*	*1*
Terphenyl-d14	*102*		*72 - 140*	*08/26/16 14:41*	*08/30/16 14:21*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:59	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0056	ug/L		08/26/16 15:29	08/29/16 19:03	1
4,4'-DDE	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 19:03	1
4,4'-DDT	ND		0.028	0.0047	ug/L		08/26/16 15:29	08/29/16 19:03	1
Aldrin	ND		0.028	0.0065	ug/L		08/26/16 15:29	08/29/16 19:03	1
alpha-BHC	ND		0.028	0.0065	ug/L		08/26/16 15:29	08/29/16 19:03	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 19:03	1
beta-BHC	ND		0.047	0.011	ug/L		08/26/16 15:29	08/29/16 19:03	1
delta-BHC	ND		0.047	0.0093	ug/L		08/26/16 15:29	08/29/16 19:03	1
Dieldrin	ND		0.028	0.0047	ug/L		08/26/16 15:29	08/29/16 19:03	1
Endosulfan I	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 19:03	1
Endosulfan II	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 19:03	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 19:03	1
Endrin	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 19:03	1
Endrin aldehyde	ND		0.19	0.032	ug/L		08/26/16 15:29	08/29/16 19:03	1
Endrin ketone	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 19:03	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		08/26/16 15:29	08/29/16 19:03	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 19:03	1

Client Sample ID: MW-8B-082116
Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0037	ug/L		08/26/16 15:29	08/29/16 19:03	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		08/26/16 15:29	08/29/16 19:03	1
Methoxychlor	ND		0.093	0.0019	ug/L		08/26/16 15:29	08/29/16 19:03	1
Toxaphene	ND		0.93	0.21	ug/L		08/26/16 15:29	08/29/16 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*75*		*22 - 150*	*08/26/16 15:29*	*08/29/16 19:03*	*1*
Tetrachloro-m-xylene	*81*		*40 - 113*	*08/26/16 15:29*	*08/29/16 19:03*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.092	0.057	ug/L		08/30/16 13:27	08/30/16 19:42	1
PCB-1221	ND		0.092	0.057	ug/L		08/30/16 13:27	08/30/16 19:42	1
PCB-1232	ND		0.092	0.057	ug/L		08/30/16 13:27	08/30/16 19:42	1
PCB-1242	ND		0.092	0.057	ug/L		08/30/16 13:27	08/30/16 19:42	1
PCB-1248	ND		0.092	0.057	ug/L		08/30/16 13:27	08/30/16 19:42	1
PCB-1254	ND		0.092	0.057	ug/L		08/30/16 13:27	08/30/16 19:42	1
PCB-1260	ND		0.092	0.040	ug/L		08/30/16 13:27	08/30/16 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*74*		*20 - 120*	*08/30/16 13:27*	*08/30/16 19:42*	*1*
DCB Decachlorobiphenyl (Surr)	*108*		*36 - 138*	*08/30/16 13:27*	*08/30/16 19:42*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 15:09	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/25/16 14:55	09/10/16 15:09	1
Bolstar	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 15:09	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/25/16 14:55	09/10/16 15:09	1
Coumaphos	ND		0.95	0.13	ug/L		08/25/16 14:55	09/10/16 15:09	1
Demeton, Total	ND		2.8	0.20	ug/L		08/25/16 14:55	09/10/16 15:09	1
Diazinon	ND		0.47	0.14	ug/L		08/25/16 14:55	09/10/16 15:09	1
Dichlorvos	ND		0.47	0.15	ug/L		08/25/16 14:55	09/10/16 15:09	1
Dimethoate	ND		1.4	0.42	ug/L		08/25/16 14:55	09/10/16 15:09	1
Disulfoton	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 15:09	1
EPN	ND		1.1	0.14	ug/L		08/25/16 14:55	09/10/16 15:09	1
Famphur	ND		0.95	0.17	ug/L		08/25/16 14:55	09/10/16 15:09	1
Fensulfothion	ND		2.4	0.51	ug/L		08/25/16 14:55	09/10/16 15:09	1
Fenthion	ND		2.4	0.15	ug/L		08/25/16 14:55	09/10/16 15:09	1
Malathion	ND		1.9	0.13	ug/L		08/25/16 14:55	09/10/16 15:09	1
Merphos	ND		4.7	0.16	ug/L		08/25/16 14:55	09/10/16 15:09	1
Methyl parathion	ND		3.8	0.13	ug/L		08/25/16 14:55	09/10/16 15:09	1
Mevinphos	ND		5.9	0.43	ug/L		08/25/16 14:55	09/10/16 15:09	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/25/16 14:55	09/10/16 15:09	1
Phorate	ND		1.1	0.15	ug/L		08/25/16 14:55	09/10/16 15:09	1
Ronnel	ND		9.5	0.11	ug/L		08/25/16 14:55	09/10/16 15:09	1
Simazine	ND		9.5	0.21	ug/L		08/25/16 14:55	09/10/16 15:09	1
Sulfotepp	ND		1.4	0.16	ug/L		08/25/16 14:55	09/10/16 15:09	1
Thionazin	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 15:09	1
Tokuthion	ND		1.5	0.12	ug/L		08/25/16 14:55	09/10/16 15:09	1

Client Sample ID: MW-8B-082116

Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2

Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		08/25/16 14:55	09/10/16 15:09	1
Ethoprop	ND		1.4	0.17	ug/L		08/25/16 14:55	09/10/16 15:09	1
Propazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*66*		*49 - 171*	*08/25/16 14:55*	*09/10/16 15:09*	*1*
Triphenylphosphate	*93*		*60 - 154*	*08/25/16 14:55*	*09/10/16 15:09*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		08/26/16 10:50	09/01/16 22:03	1
2,4-D	ND		3.8	0.20	ug/L		08/26/16 10:50	09/01/16 22:03	1
2,4-DB	ND		3.8	0.34	ug/L		08/26/16 10:50	09/01/16 22:03	1
Dalapon	ND		1.9	0.86	ug/L		08/26/16 10:50	09/01/16 22:03	1
Dicamba	ND		1.9	0.14	ug/L		08/26/16 10:50	09/01/16 22:03	1
Dichlorprop	ND		3.8	0.62	ug/L		08/26/16 10:50	09/01/16 22:03	1
MCPA	ND		380	16	ug/L		08/26/16 10:50	09/01/16 22:03	1
MCPP	ND		380	31	ug/L		08/26/16 10:50	09/01/16 22:03	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		08/26/16 10:50	09/01/16 22:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*89*		*39 - 135*	*08/26/16 10:50*	*09/01/16 22:03*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/23/16 09:09	08/24/16 00:02	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/23/16 09:09	08/24/16 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/23/16 09:09*	*08/24/16 00:02*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*08/23/16 09:09*	*08/24/16 00:02*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43**	**F1**	0.80	0.42	mg/L			08/29/16 14:00	1
Nitrate as N	**3.4**	**B**	0.20	0.039	mg/L			08/22/16 15:10	1
Nitrite as N	ND		0.20	0.069	mg/L			08/22/16 15:10	1
Sulfate	**28**		0.50	0.13	mg/L			08/29/16 14:00	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.47	pg/L		09/06/16 13:26	09/08/16 07:11	1
2,3,7,8-TCDF	ND		9.5	0.36	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,7,8-PeCDD	ND		47	0.66	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,7,8-PeCDF	ND		47	0.42	pg/L		09/06/16 13:26	09/08/16 07:11	1
2,3,4,7,8-PeCDF	ND		47	0.44	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,4,7,8-HxCDD	ND		47	0.37	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,6,7,8-HxCDD	ND		47	0.35	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,7,8,9-HxCDD	ND		47	0.29	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,4,7,8-HxCDF	ND		47	0.30	pg/L		09/06/16 13:26	09/08/16 07:11	1

Client Sample ID: MW-8B-082116

Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		47	0.27	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,7,8,9-HxCDF	ND		47	0.31	pg/L		09/06/16 13:26	09/08/16 07:11	1
2,3,4,6,7,8-HxCDF	**0.63**	**J**	47	0.29	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,4,6,7,8-HpCDD	**1.1**	**J B q**	47	0.43	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.38	pg/L		09/06/16 13:26	09/08/16 07:11	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.49	pg/L		09/06/16 13:26	09/08/16 07:11	1
OCDD	**2.4**	**J B**	95	0.50	pg/L		09/06/16 13:26	09/08/16 07:11	1
OCDF	**1.1**	**J B q**	95	0.55	pg/L		09/06/16 13:26	09/08/16 07:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*86*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-2,3,7,8-TCDF	*87*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-1,2,3,7,8-PeCDD	*94*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-1,2,3,7,8-PeCDF	*99*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-1,2,3,6,7,8-HxCDD	*93*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*70*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*79*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*
13C-OCDD	*94*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:11*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 01:22	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 01:22	1
Barium	**0.19**		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 01:22	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 01:22	1
Cadmium	**0.000041**	**J**	0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 01:22	1
Chromium	**0.00064**		0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 01:22	1
Copper	**0.0014**	**J**	0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 01:22	1
Iron	**0.86**		0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 01:22	1
Lead	**0.00048**		0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 01:22	1
Manganese	**0.022**		0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 01:22	1
Nickel	**0.0013**	**J**	0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 01:22	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 01:22	1
Silver	**0.000037**	**J**	0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 01:22	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 01:22	1
Vanadium	**0.0039**	**J**	0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 01:22	1
Zinc	**0.0032**	**J**	0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 01:22	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:50	1
Antimony	**0.00012**	**J**	0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:50	1
Barium	**0.19**		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:50	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:50	1
Cadmium	**0.000043**	**J**	0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:50	1
Chromium	**0.00034**	**J**	0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:50	1
Copper	**0.0014**	**J**	0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:50	1
Iron	**0.023**	**J**	0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:50	1
Lead	**0.00027**	**J**	0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:50	1
Manganese	**0.00063**	**J**	0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:50	1

Client Sample ID: MW-8B-082116

Lab Sample ID: 590-4267-2

Date Collected: 08/21/16 16:45

Matrix: Water

Date Received: 08/22/16 10:55

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.00087**	**J**	0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:50	1
Selenium	**0.00032**	**J**	0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:50	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:50	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:50	1
Vanadium	**0.0028**	**J**	0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:50	1
Zinc	**0.0019**	**J**	0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:50	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/26/16 10:03	08/26/16 16:15	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 20:09	1
Ammonia (as N)	**0.18**		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:23	1
Chemical Oxygen Demand	**5.9**	**J**	20	4.0	mg/L			08/26/16 12:01	1
Total Organic Carbon	**1.5**		1.0	0.50	mg/L			08/29/16 16:45	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/22/16 13:30	1
Escherichia coli	**0.00**				MPN/100mL			08/22/16 13:30	1

Client Sample ID: MW-9A-082116

Lab Sample ID: 590-4267-3

Date Collected: 08/21/16 18:25

Matrix: Water

Date Received: 08/22/16 10:55

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/22/16 18:48	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/22/16 18:48	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/22/16 18:48	1
o-Xylene	ND		1.0	0.16	ug/L			08/22/16 18:48	1
Toluene	ND		1.0	0.31	ug/L			08/22/16 18:48	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/22/16 18:48	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/22/16 18:48	1
Naphthalene	ND		2.0	0.63	ug/L			08/22/16 18:48	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/22/16 18:48	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/22/16 18:48	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/22/16 18:48	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/22/16 18:48	1
Bromoform	ND		2.0	0.80	ug/L			08/22/16 18:48	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/22/16 18:48	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/22/16 18:48	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 18:48	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/22/16 18:48	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/22/16 18:48	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	25	4.1	ug/L			08/22/16 18:48	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/22/16 18:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/22/16 18:48	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/22/16 18:48	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/22/16 18:48	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/22/16 18:48	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/22/16 18:48	1
Chloromethane	ND		3.0	0.22	ug/L			08/22/16 18:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/22/16 18:48	1
Bromomethane	ND		5.0	0.22	ug/L			08/22/16 18:48	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/22/16 18:48	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/22/16 18:48	1
Dibromomethane	ND		1.0	0.50	ug/L			08/22/16 18:48	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/22/16 18:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:48	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/22/16 18:48	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/22/16 18:48	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/22/16 18:48	1
Hexane	ND		1.0	0.084	ug/L			08/22/16 18:48	1
Styrene	ND		1.0	0.10	ug/L			08/22/16 18:48	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/22/16 18:48	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/22/16 18:48	1
Bromobenzene	ND		1.0	0.28	ug/L			08/22/16 18:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:48	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/22/16 18:48	1
Chloroethane	ND		2.0	1.1	ug/L			08/22/16 18:48	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/22/16 18:48	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/22/16 18:48	1
Trichloroethene	ND		1.0	0.44	ug/L			08/22/16 18:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/22/16 18:48	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/22/16 18:48	1
2-Hexanone	ND		10	0.75	ug/L			08/22/16 18:48	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/22/16 18:48	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/22/16 18:48	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/22/16 18:48	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/22/16 18:48	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/22/16 18:48	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/22/16 18:48	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/22/16 18:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/22/16 18:48	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/22/16 18:48	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/22/16 18:48	1
Chloroform	ND		1.0	0.41	ug/L			08/22/16 18:48	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/22/16 18:48	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/22/16 18:48	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/22/16 18:48	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/22/16 18:48	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/22/16 18:48	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/22/16 18:48	1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/22/16 18:48	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/22/16 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 125*		*08/22/16 18:48*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*08/22/16 18:48*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*08/22/16 18:48*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/22/16 18:48*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/22/16 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*08/22/16 18:48*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
2-Chlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
2-Methylphenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2-Nitroaniline	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
2-Nitrophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
3-Nitroaniline	ND		0.38	0.12	ug/L		08/26/16 14:41	08/30/16 14:46	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		08/26/16 14:41	08/30/16 14:46	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
4-Chloroaniline	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
4-Nitroaniline	ND	*	0.58	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
4-Nitrophenol	ND		2.9	0.96	ug/L		08/26/16 14:41	08/30/16 14:46	1
Acenaphthene	ND		0.096	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Acenaphthylene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Anthracene	ND		0.038	0.0096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Benzoic acid	**0.79**	**J**	2.9	0.58	ug/L		08/26/16 14:41	08/30/16 14:46	1
Benzyl alcohol	**0.30**	**J B ***	0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Bis(2-ethylhexyl) phthalate	**7.9**	**B ***	2.9	1.1	ug/L		08/26/16 14:41	08/30/16 14:46	1
Butyl benzyl phthalate	**0.47**	**J**	0.58	0.19	ug/L		08/26/16 14:41	08/30/16 14:46	1
Carbazole	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 14:46	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Dibenzofuran	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Diethyl phthalate	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Di-n-butyl phthalate	**0.14**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 14:46	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 14:46	1
Fluoranthene	ND		0.048	0.012	ug/L		08/26/16 14:41	08/30/16 14:46	1
Fluorene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Hexachloroethane	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Isophorone	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Naphthalene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Nitrobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Pentachlorophenol	ND		0.67	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Phenanthrene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 14:46	1
Phenol	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 14:46	1
Pyrene	ND		0.058	0.012	ug/L		08/26/16 14:41	08/30/16 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*57 - 132*	*08/26/16 14:41*	*08/30/16 14:46*	*1*
2-Fluorobiphenyl	*73*		*50 - 120*	*08/26/16 14:41*	*08/30/16 14:46*	*1*
2-Fluorophenol	*81*		*50 - 113*	*08/26/16 14:41*	*08/30/16 14:46*	*1*
Nitrobenzene-d5	*95*		*59 - 120*	*08/26/16 14:41*	*08/30/16 14:46*	*1*
Phenol-d5	*89*		*52 - 120*	*08/26/16 14:41*	*08/30/16 14:46*	*1*
Terphenyl-d14	*95*		*72 - 140*	*08/26/16 14:41*	*08/30/16 14:46*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 12:15	1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.027	0.0055	ug/L		08/26/16 15:29	08/29/16 19:20	1
4,4'-DDE	ND		0.018	0.0027	ug/L		08/26/16 15:29	08/29/16 19:20	1
4,4'-DDT	ND		0.027	0.0046	ug/L		08/26/16 15:29	08/29/16 19:20	1
Aldrin	ND		0.027	0.0064	ug/L		08/26/16 15:29	08/29/16 19:20	1
alpha-BHC	ND		0.027	0.0064	ug/L		08/26/16 15:29	08/29/16 19:20	1
alpha-Chlordane	ND		0.018	0.0027	ug/L		08/26/16 15:29	08/29/16 19:20	1
beta-BHC	ND		0.046	0.011	ug/L		08/26/16 15:29	08/29/16 19:20	1
delta-BHC	ND		0.046	0.0092	ug/L		08/26/16 15:29	08/29/16 19:20	1
Dieldrin	ND		0.027	0.0046	ug/L		08/26/16 15:29	08/29/16 19:20	1
Endosulfan I	ND		0.018	0.0027	ug/L		08/26/16 15:29	08/29/16 19:20	1
Endosulfan II	ND		0.018	0.0018	ug/L		08/26/16 15:29	08/29/16 19:20	1
Endosulfan sulfate	ND		0.018	0.0018	ug/L		08/26/16 15:29	08/29/16 19:20	1
Endrin	ND		0.018	0.0027	ug/L		08/26/16 15:29	08/29/16 19:20	1
Endrin aldehyde	ND		0.18	0.031	ug/L		08/26/16 15:29	08/29/16 19:20	1
Endrin ketone	ND		0.018	0.0018	ug/L		08/26/16 15:29	08/29/16 19:20	1
gamma-BHC (Lindane)	ND		0.027	0.0046	ug/L		08/26/16 15:29	08/29/16 19:20	1
gamma-Chlordane	ND		0.018	0.0027	ug/L		08/26/16 15:29	08/29/16 19:20	1
Heptachlor	ND		0.018	0.0037	ug/L		08/26/16 15:29	08/29/16 19:20	1
Heptachlor epoxide	ND		0.018	0.0027	ug/L		08/26/16 15:29	08/29/16 19:20	1
Methoxychlor	ND		0.092	0.0018	ug/L		08/26/16 15:29	08/29/16 19:20	1
Toxaphene	ND		0.92	0.20	ug/L		08/26/16 15:29	08/29/16 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*76*		*22 - 150*	*08/26/16 15:29*	*08/29/16 19:20*	*1*
Tetrachloro-m-xylene	*82*		*40 - 113*	*08/26/16 15:29*	*08/29/16 19:20*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 20:01	1
PCB-1221	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 20:01	1
PCB-1232	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 20:01	1
PCB-1242	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 20:01	1
PCB-1248	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 20:01	1
PCB-1254	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 20:01	1
PCB-1260	ND		0.096	0.042	ug/L		08/30/16 13:27	08/30/16 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*53*		*20 - 120*	*08/30/16 13:27*	*08/30/16 20:01*	*1*
DCB Decachlorobiphenyl (Surr)	*91*		*36 - 138*	*08/30/16 13:27*	*08/30/16 20:01*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 15:39	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/25/16 14:55	09/10/16 15:39	1
Bolstar	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 15:39	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/25/16 14:55	09/10/16 15:39	1
Coumaphos	ND		0.95	0.13	ug/L		08/25/16 14:55	09/10/16 15:39	1
Demeton, Total	ND		2.9	0.20	ug/L		08/25/16 14:55	09/10/16 15:39	1
Diazinon	ND		0.48	0.14	ug/L		08/25/16 14:55	09/10/16 15:39	1
Dichlorvos	ND		0.48	0.15	ug/L		08/25/16 14:55	09/10/16 15:39	1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		08/25/16 14:55	09/10/16 15:39	1
Disulfoton	ND		0.95	0.31	ug/L		08/25/16 14:55	09/10/16 15:39	1
EPN	ND		1.1	0.14	ug/L		08/25/16 14:55	09/10/16 15:39	1
Famphur	ND		0.95	0.17	ug/L		08/25/16 14:55	09/10/16 15:39	1
Fensulfothion	ND		2.4	0.52	ug/L		08/25/16 14:55	09/10/16 15:39	1
Fenthion	ND		2.4	0.15	ug/L		08/25/16 14:55	09/10/16 15:39	1
Malathion	ND		1.9	0.13	ug/L		08/25/16 14:55	09/10/16 15:39	1
Merphos	ND		4.8	0.17	ug/L		08/25/16 14:55	09/10/16 15:39	1
Methyl parathion	ND		3.8	0.13	ug/L		08/25/16 14:55	09/10/16 15:39	1
Mevinphos	ND		5.9	0.44	ug/L		08/25/16 14:55	09/10/16 15:39	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/25/16 14:55	09/10/16 15:39	1
Phorate	ND		1.1	0.15	ug/L		08/25/16 14:55	09/10/16 15:39	1
Ronnel	ND		9.5	0.11	ug/L		08/25/16 14:55	09/10/16 15:39	1
Simazine	ND		9.5	0.21	ug/L		08/25/16 14:55	09/10/16 15:39	1
Sulfotepp	ND		1.4	0.16	ug/L		08/25/16 14:55	09/10/16 15:39	1
Thionazin	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 15:39	1
Tokuthion	ND		1.5	0.12	ug/L		08/25/16 14:55	09/10/16 15:39	1
Trichloronate	ND		1.4	0.23	ug/L		08/25/16 14:55	09/10/16 15:39	1
Ethoprop	ND		1.4	0.17	ug/L		08/25/16 14:55	09/10/16 15:39	1
Propazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*74*		*49 - 171*	*08/25/16 14:55*	*09/10/16 15:39*	*1*
Triphenylphosphate	*103*		*60 - 154*	*08/25/16 14:55*	*09/10/16 15:39*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		08/26/16 10:50	09/01/16 22:26	1
2,4-D	ND		3.8	0.20	ug/L		08/26/16 10:50	09/01/16 22:26	1
2,4-DB	ND		3.8	0.34	ug/L		08/26/16 10:50	09/01/16 22:26	1
Dalapon	ND		1.9	0.86	ug/L		08/26/16 10:50	09/01/16 22:26	1
Dicamba	ND		1.9	0.14	ug/L		08/26/16 10:50	09/01/16 22:26	1
Dichlorprop	ND		3.8	0.62	ug/L		08/26/16 10:50	09/01/16 22:26	1
MCPA	ND		380	16	ug/L		08/26/16 10:50	09/01/16 22:26	1
MCPP	ND		380	31	ug/L		08/26/16 10:50	09/01/16 22:26	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		08/26/16 10:50	09/01/16 22:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*39 - 135*	*08/26/16 10:50*	*09/01/16 22:26*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/23/16 09:09	08/24/16 00:20	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/23/16 09:09	08/24/16 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*08/23/16 09:09*	*08/24/16 00:20*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*08/23/16 09:09*	*08/24/16 00:20*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50**		0.80	0.42	mg/L			08/29/16 14:12	1
Nitrate as N	ND		0.20	0.039	mg/L			08/22/16 15:22	1
Nitrite as N	ND		0.20	0.069	mg/L			08/22/16 15:22	1
Sulfate	**11**		0.50	0.13	mg/L			08/29/16 14:12	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.48	pg/L		09/06/16 13:26	09/08/16 07:54	1
2,3,7,8-TCDF	ND		9.5	0.45	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,7,8-PeCDD	ND		48	0.75	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,7,8-PeCDF	ND		48	0.48	pg/L		09/06/16 13:26	09/08/16 07:54	1
2,3,4,7,8-PeCDF	ND		48	0.50	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,4,7,8-HxCDD	ND		48	0.44	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,6,7,8-HxCDD	ND		48	0.42	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,7,8,9-HxCDD	ND		48	0.35	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,4,7,8-HxCDF	ND		48	0.34	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,6,7,8-HxCDF	ND		48	0.30	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,7,8,9-HxCDF	ND		48	0.35	pg/L		09/06/16 13:26	09/08/16 07:54	1
2,3,4,6,7,8-HxCDF	ND		48	0.33	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,4,6,7,8-HpCDD	**1.0**	**J B**	48	0.45	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.52	pg/L		09/06/16 13:26	09/08/16 07:54	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.66	pg/L		09/06/16 13:26	09/08/16 07:54	1
OCDD	**2.7**	**J B q**	95	0.66	pg/L		09/06/16 13:26	09/08/16 07:54	1
OCDF	ND		95	0.69	pg/L		09/06/16 13:26	09/08/16 07:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*80*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-1,2,3,7,8-PeCDD	*80*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-1,2,3,7,8-PeCDF	*87*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*75*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*
13C-OCDD	*80*		*40 - 135*	*09/06/16 13:26*	*09/08/16 07:54*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0029**		0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 02:07	1
Antimony	**0.00023**	**J**	0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 02:07	1
Barium	**0.049**		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 02:07	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 02:07	1
Cadmium	**0.000028**	**J**	0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 02:07	1
Chromium	ND		0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 02:07	1
Copper	**0.0029**		0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 02:07	1
Iron	**0.018**	**J**	0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 02:07	1
Lead	**0.000083**	**J**	0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 02:07	1
Manganese	**0.00043**	**J**	0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 02:07	1
Nickel	**0.0017**	**J**	0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 02:07	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 02:07	1
Silver	**0.00090**		0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 02:07	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-9A-082116
Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 02:07	1
Vanadium	**0.0099**		0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 02:07	1
Zinc	**0.0020**	**J**	0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 02:07	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0031**		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:55	1
Antimony	**0.00019**	**J**	0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:55	1
Barium	**0.049**		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:55	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:55	1
Cadmium	**0.000029**	**J**	0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:55	1
Chromium	**0.00018**	**J**	0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:55	1
Copper	**0.0035**		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:55	1
Iron	**0.029**	**J**	0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:55	1
Lead	**0.00044**		0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:55	1
Manganese	**0.0010**	**J**	0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:55	1
Nickel	**0.0017**	**J**	0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:55	1
Selenium	**0.00039**	**J**	0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:55	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:55	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:55	1
Vanadium	**0.0094**		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:55	1
Zinc	**0.0026**	**J**	0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:55	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/26/16 10:03	08/26/16 16:17	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 20:10	1
Ammonia (as N)	**0.17**		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:24	1
Chemical Oxygen Demand	**16**	**J**	20	4.0	mg/L			08/26/16 12:01	1
Total Organic Carbon	**5.4**		1.0	0.50	mg/L			08/29/16 16:45	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/22/16 13:30	1
Escherichia coli	**0.00**				MPN/100mL			08/22/16 13:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8202/13
Matrix: Water
Analysis Batch: 8202

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/22/16 17:43	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/22/16 17:43	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/22/16 17:43	1
o-Xylene	ND		1.0	0.16	ug/L			08/22/16 17:43	1
Toluene	ND		1.0	0.31	ug/L			08/22/16 17:43	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/22/16 17:43	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/22/16 17:43	1
Naphthalene	ND		2.0	0.63	ug/L			08/22/16 17:43	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/22/16 17:43	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/22/16 17:43	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/22/16 17:43	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/22/16 17:43	1
Bromoform	ND		2.0	0.80	ug/L			08/22/16 17:43	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/22/16 17:43	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/22/16 17:43	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 17:43	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/22/16 17:43	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/22/16 17:43	1
Acetone	ND		25	4.1	ug/L			08/22/16 17:43	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/22/16 17:43	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/22/16 17:43	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/22/16 17:43	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/22/16 17:43	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/22/16 17:43	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/22/16 17:43	1
Chloromethane	ND		3.0	0.22	ug/L			08/22/16 17:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/22/16 17:43	1
Bromomethane	ND		5.0	0.22	ug/L			08/22/16 17:43	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/22/16 17:43	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/22/16 17:43	1
Dibromomethane	ND		1.0	0.50	ug/L			08/22/16 17:43	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/22/16 17:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 17:43	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/22/16 17:43	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/22/16 17:43	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/22/16 17:43	1
Hexane	ND		1.0	0.084	ug/L			08/22/16 17:43	1
Styrene	ND		1.0	0.10	ug/L			08/22/16 17:43	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/22/16 17:43	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/22/16 17:43	1
Bromobenzene	ND		1.0	0.28	ug/L			08/22/16 17:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 17:43	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/22/16 17:43	1
Chloroethane	ND		2.0	1.1	ug/L			08/22/16 17:43	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/22/16 17:43	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/22/16 17:43	1
Trichloroethene	ND		1.0	0.44	ug/L			08/22/16 17:43	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/22/16 17:43	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8202/13
Matrix: Water
Analysis Batch: 8202

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/22/16 17:43	1
2-Hexanone	ND		10	0.75	ug/L			08/22/16 17:43	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/22/16 17:43	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/22/16 17:43	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/22/16 17:43	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/22/16 17:43	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/22/16 17:43	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/22/16 17:43	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/22/16 17:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/22/16 17:43	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/22/16 17:43	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/22/16 17:43	1
Chloroform	ND		1.0	0.41	ug/L			08/22/16 17:43	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/22/16 17:43	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/22/16 17:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/22/16 17:43	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/22/16 17:43	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/22/16 17:43	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/22/16 17:43	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/22/16 17:43	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/22/16 17:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*08/22/16 17:43*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*08/22/16 17:43*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*08/22/16 17:43*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/22/16 17:43*	*1*

Lab Sample ID: LCS 590-8202/1011
Matrix: Water
Analysis Batch: 8202

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.87		ug/L		99	80 - 120
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
m,p-Xylene	10.0	10.5		ug/L		105	80 - 120
o-Xylene	10.0	10.5		ug/L		105	80 - 120
Toluene	10.0	10.4		ug/L		104	80 - 123
Methyl tert-butyl ether	10.0	10.4		ug/L		104	71 - 128
Naphthalene	10.0	10.4		ug/L		104	63 - 124
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	71 - 130
cis-1,3-Dichloropropene	10.0	9.53		ug/L		95	72 - 120
Carbon disulfide	10.0	9.01		ug/L		90	67 - 129
Bromochloromethane	10.0	10.1		ug/L		101	70 - 126
Bromoform	10.0	8.87		ug/L		89	60 - 122
Tetrachloroethene	10.0	10.4		ug/L		104	71 - 132
1,1-Dichloroethane	10.0	9.61		ug/L		96	79 - 121
1,2-Dichloroethane	10.0	9.86		ug/L		99	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8202/1011
Matrix: Water
Analysis Batch: 8202

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.4		ug/L		104	76 - 121
1,1,2-Trichloroethane	10.0	9.76		ug/L		98	76 - 120
Acetone	50.0	76.6	*	ug/L		153	20 - 150
Dichlorodifluoromethane	10.0	7.26		ug/L		73	32 - 150
4-Methyl-2-pentanone (MIBK)	50.0	48.1		ug/L		96	60 - 127
1,1,2-Trichlorotrifluoroethane	10.0	9.98		ug/L		100	70 - 127
Methylene Chloride	10.0	10.2		ug/L		102	20 - 150
Hexachlorobutadiene	10.0	10.7		ug/L		107	62 - 132
n-Butylbenzene	10.0	10.7		ug/L		107	71 - 120
Chloromethane	10.0	7.55		ug/L		75	51 - 150
1,2,4-Trimethylbenzene	10.0	11.1		ug/L		111	77 - 120
Bromomethane	10.0	8.85		ug/L		88	45 - 150
2-Chlorotoluene	10.0	10.6		ug/L		106	75 - 121
Dibromochloromethane	10.0	9.55		ug/L		96	72 - 120
Dibromomethane	10.0	9.57		ug/L		96	71 - 120
1,1-Dichloropropene	10.0	10.0		ug/L		100	76 - 125
1,2,4-Trichlorobenzene	10.0	11.2		ug/L		112	66 - 124
Chlorobenzene	10.0	10.5		ug/L		105	79 - 125
1,2-Dibromo-3-Chloropropane	10.0	10.0		ug/L		100	36 - 140
1,3-Dichlorobenzene	10.0	10.4		ug/L		104	77 - 120
Hexane	10.0	9.51		ug/L		95	68 - 125
Styrene	10.0	10.1		ug/L		101	73 - 120
4-Chlorotoluene	10.0	10.6		ug/L		106	74 - 120
trans-1,2-Dichloroethene	10.0	9.36		ug/L		94	75 - 124
Bromobenzene	10.0	10.4		ug/L		104	74 - 121
1,2,3-Trichlorobenzene	10.0	11.1		ug/L		111	60 - 125
1,1,2,2-Tetrachloroethane	10.0	10.6		ug/L		106	66 - 122
Chloroethane	10.0	8.90		ug/L		89	48 - 150
1,1-Dichloroethene	10.0	9.11		ug/L		91	69 - 127
1,2-Dichlorobenzene	10.0	10.8		ug/L		108	78 - 120
Trichloroethene	10.0	9.65		ug/L		96	75 - 129
1,1,1,2-Tetrachloroethane	10.0	10.8		ug/L		108	75 - 124
sec-Butylbenzene	10.0	11.2		ug/L		112	74 - 121
2-Hexanone	50.0	58.1		ug/L		116	46 - 146
2-Butanone (MEK)	50.0	59.1		ug/L		118	40 - 150
Isopropylbenzene	10.0	10.9		ug/L		109	77 - 123
2,2-Dichloropropane	10.0	10.5		ug/L		105	49 - 147
N-Propylbenzene	10.0	10.7		ug/L		107	76 - 120
Trichlorofluoromethane	10.0	8.84		ug/L		88	60 - 140
p-Isopropyltoluene	10.0	11.1		ug/L		111	77 - 120
1,2,3-Trichloropropane	10.0	9.76		ug/L		98	60 - 124
1,3,5-Trimethylbenzene	10.0	10.9		ug/L		109	75 - 122
trans-1,3-Dichloropropene	10.0	9.87		ug/L		99	70 - 121
cis-1,2-Dichloroethene	10.0	9.94		ug/L		99	76 - 121
Chloroform	10.0	9.59		ug/L		96	73 - 126
Dichlorofluoromethane	10.0	9.61		ug/L		96	60 - 140
Vinyl chloride	10.0	7.53		ug/L		75	42 - 150
1,2-Dibromoethane (EDB)	10.0	9.60		ug/L		96	70 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8202/1011
Matrix: Water
Analysis Batch: 8202

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
tert-Butylbenzene	10.0	10.9		ug/L		109	79 - 120
Carbon tetrachloride	10.0	10.0		ug/L		100	68 - 134
1,4-Dichlorobenzene	10.0	10.8		ug/L		108	77 - 121
1,3-Dichloropropane	10.0	10.4		ug/L		104	75 - 120
Bromodichloromethane	10.0	9.38		ug/L		94	67 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8191/13
Matrix: Water
Analysis Batch: 8191

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/22/16 17:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*08/22/16 17:43*	*1*

Lab Sample ID: LCS 590-8191/1012
Matrix: Water
Analysis Batch: 8191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	1050		ug/L		105	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitrophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3-Nitroaniline	ND		0.40	0.12	ug/L		08/26/16 14:41	08/30/16 10:29	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitroaniline	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitrophenol	ND		3.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthene	ND		0.10	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthylene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Anthracene	ND		0.040	0.010	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzoic acid	ND		3.0	0.60	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzyl alcohol	0.193	J	0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-ethylhexyl) phthalate	2.02	J	3.0	1.2	ug/L		08/26/16 14:41	08/30/16 10:29	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		08/26/16 14:41	08/30/16 10:29	1
Carbazole	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Chrysene	ND		0.040	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenzofuran	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Diethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluoranthene	ND		0.050	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluorene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachloroethane	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Isophorone	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Naphthalene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Nitrobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pentachlorophenol	ND		0.70	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenanthrene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pyrene	ND		0.060	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*57 - 132*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorobiphenyl	*68*		*50 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorophenol	*74*		*50 - 113*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Nitrobenzene-d5	*88*		*59 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Phenol-d5	*81*		*52 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Terphenyl-d14	*97*		*72 - 140*	*08/26/16 14:41*	*08/30/16 10:29*	*1*

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.31		ug/L		65	40 - 115
1,2-Dichlorobenzene	2.00	1.27		ug/L		64	44 - 119
1,3-Dichlorobenzene	2.00	1.12		ug/L		56	34 - 116
1,4-Dichlorobenzene	2.00	1.10		ug/L		55	40 - 118
1-Methylnaphthalene	2.00	1.51		ug/L		75	54 - 119
2,4,5-Trichlorophenol	2.00	1.80		ug/L		90	56 - 122
2,4,6-Trichlorophenol	2.00	1.63		ug/L		82	55 - 134
2,4-Dichlorophenol	2.00	1.65		ug/L		83	50 - 125
2,4-Dimethylphenol	2.00	1.30	J	ug/L		65	20 - 106
2,4-Dinitrophenol	4.00	3.22	J	ug/L		81	24 - 139
2,4-Dinitrotoluene	2.00	1.85		ug/L		92	40 - 143
2,6-Dinitrotoluene	2.00	1.75		ug/L		87	45 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	55 - 125
2-Chlorophenol	2.00	1.71		ug/L		86	57 - 125
2-Methylnaphthalene	2.00	1.50		ug/L		75	56 - 117
2-Methylphenol	2.00	1.46		ug/L		73	53 - 118
2-Nitroaniline	2.00	2.01		ug/L		101	58 - 124
2-Nitrophenol	2.00	1.73		ug/L		87	20 - 150
3 & 4 Methylphenol	2.00	1.54		ug/L		77	54 - 112
3,3'-Dichlorobenzidine	4.00	1.91	J	ug/L		48	20 - 121
3-Nitroaniline	2.00	1.17		ug/L		58	22 - 124

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,6-Dinitro-2-methylphenol	4.00	3.39	J	ug/L		85	20 - 150
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	62 - 132
4-Chloro-3-methylphenol	2.00	1.70		ug/L		85	56 - 133
4-Chloroaniline	2.00	1.11		ug/L		55	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.50		ug/L		75	59 - 125
4-Nitroaniline	2.00	1.09		ug/L		55	40 - 118
4-Nitrophenol	4.00	2.77	J	ug/L		69	20 - 150
Acenaphthene	2.00	1.41		ug/L		71	55 - 113
Acenaphthylene	2.00	1.52		ug/L		76	24 - 135
Anthracene	2.00	1.41		ug/L		70	20 - 125
Benzo[a]anthracene	2.00	1.88		ug/L		94	49 - 115
Benzo[a]pyrene	2.00	1.39		ug/L		69	20 - 115
Benzo[b]fluoranthene	2.00	1.71		ug/L		85	63 - 129
Benzo[g,h,i]perylene	2.00	1.77		ug/L		89	58 - 127
Benzo[k]fluoranthene	2.00	1.71		ug/L		86	60 - 134
Benzoic acid	4.00	4.33		ug/L		108	20 - 150
Benzyl alcohol	2.00	2.95	*	ug/L		147	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.45		ug/L		72	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.64		ug/L		82	59 - 125
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.62	J	ug/L		131	22 - 150
Butyl benzyl phthalate	2.00	2.86		ug/L		143	46 - 150
Carbazole	2.00	2.06		ug/L		103	68 - 142
Chrysene	2.00	1.86		ug/L		93	57 - 131
Dibenz(a,h)anthracene	2.00	1.79		ug/L		90	56 - 124
Dibenzofuran	2.00	1.55		ug/L		77	60 - 125
Diethyl phthalate	2.00	1.79		ug/L		90	60 - 134
Dimethyl phthalate	2.00	1.82		ug/L		91	65 - 134
Di-n-butyl phthalate	2.00	2.28		ug/L		114	67 - 140
Di-n-octyl phthalate	2.00	2.08		ug/L		104	55 - 150
Fluoranthene	2.00	1.95		ug/L		97	70 - 135
Fluorene	2.00	1.57		ug/L		78	57 - 125
Hexachlorobenzene	2.00	1.55		ug/L		78	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.698	J	ug/L		35	20 - 110
Hexachloroethane	2.00	0.928		ug/L		46	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.91		ug/L		95	54 - 124
Isophorone	2.00	1.64		ug/L		82	64 - 125
Naphthalene	2.00	1.45		ug/L		72	56 - 119
Nitrobenzene	2.00	1.74		ug/L		87	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.68		ug/L		84	54 - 120
N-Nitrosodiphenylamine	2.00	1.44		ug/L		72	40 - 124
Pentachlorophenol	4.00	2.61		ug/L		65	30 - 122
Phenanthrene	2.00	1.76		ug/L		88	57 - 125
Phenol	2.00	1.80		ug/L		90	53 - 113
Pyrene	2.00	1.70		ug/L		85	64 - 128

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*57 - 132*
2-Fluorobiphenyl	*72*		*50 - 120*
2-Fluorophenol	*74*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*76*		*52 - 120*
Terphenyl-d14	*87*		*72 - 140*

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.46		ug/L		73	40 - 115	11	20
1,2-Dichlorobenzene			2.00	1.36		ug/L		68	44 - 119	7	20
1,3-Dichlorobenzene			2.00	1.22		ug/L		61	34 - 116	8	29
1,4-Dichlorobenzene			2.00	1.19		ug/L		59	40 - 118	8	20
1-Methylnaphthalene			2.00	1.54		ug/L		77	54 - 119	2	20
2,4,5-Trichlorophenol			2.00	1.80		ug/L		90	56 - 122	0	20
2,4,6-Trichlorophenol			2.00	1.59		ug/L		79	55 - 134	3	20
2,4-Dichlorophenol			2.00	1.66		ug/L		83	50 - 125	0	26
2,4-Dimethylphenol			2.00	1.50	J	ug/L		75	20 - 106	14	35
2,4-Dinitrophenol			4.00	3.37	J	ug/L		84	24 - 139	5	35
2,4-Dinitrotoluene			2.00	1.79		ug/L		89	40 - 143	3	29
2,6-Dinitrotoluene			2.00	1.74		ug/L		87	45 - 134	0	31
2-Chloronaphthalene			2.00	1.57		ug/L		79	55 - 125	4	20
2-Chlorophenol			2.00	1.76		ug/L		88	57 - 125	3	20
2-Methylnaphthalene			2.00	1.56		ug/L		78	56 - 117	4	20
2-Methylphenol			2.00	1.41		ug/L		70	53 - 118	4	33
2-Nitroaniline			2.00	1.98		ug/L		99	58 - 124	2	20
2-Nitrophenol			2.00	1.77		ug/L		89	20 - 150	2	35
3 & 4 Methylphenol			2.00	1.59		ug/L		79	54 - 112	3	20
3,3'-Dichlorobenzidine			4.00	2.81	*	ug/L		70	20 - 121	38	35
3-Nitroaniline			2.00	1.42		ug/L		71	22 - 124	19	35
4,6-Dinitro-2-methylphenol			4.00	3.56	J	ug/L		89	20 - 150	5	30
4-Bromophenyl phenyl ether			2.00	1.80		ug/L		90	62 - 132	0	20
4-Chloro-3-methylphenol			2.00	1.77		ug/L		89	56 - 133	4	20
4-Chloroaniline			2.00	1.29		ug/L		64	20 - 110	15	35
4-Chlorophenyl phenyl ether			2.00	1.51		ug/L		76	59 - 125	0	20
4-Nitroaniline			2.00	1.38	*	ug/L		69	40 - 118	24	20
4-Nitrophenol			4.00	3.50		ug/L		87	20 - 150	23	29
Acenaphthene			2.00	1.44		ug/L		72	55 - 113	2	20
Acenaphthylene			2.00	1.56		ug/L		78	24 - 135	3	20
Anthracene			2.00	1.40		ug/L		70	20 - 125	0	26
Benzo[a]anthracene			2.00	1.90		ug/L		95	49 - 115	1	20
Benzo[a]pyrene			2.00	1.41		ug/L		70	20 - 115	2	35
Benzo[b]fluoranthene			2.00	1.76		ug/L		88	63 - 129	3	20
Benzo[g,h,i]perylene			2.00	1.73		ug/L		86	58 - 127	3	20
Benzo[k]fluoranthene			2.00	1.62		ug/L		81	60 - 134	6	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzoic acid			4.00	3.55		ug/L		89	20 - 150	20	35
Benzyl alcohol			2.00	1.99	*	ug/L		100	52 - 124	39	20
bis (2-chloroisopropyl) ether			2.00	1.52		ug/L		76	44 - 123	5	20
Bis(2-chloroethoxy)methane			2.00	1.64		ug/L		82	59 - 125	0	20
Bis(2-chloroethyl)ether			2.00	1.71		ug/L		86	55 - 125	3	20
Bis(2-ethylhexyl) phthalate			2.00	3.62	*	ug/L		181	22 - 150	32	20
Butyl benzyl phthalate			2.00	2.65		ug/L		132	46 - 150	8	20
Carbazole			2.00	2.07		ug/L		103	68 - 142	0	20
Chrysene			2.00	1.83		ug/L		91	57 - 131	2	20
Dibenz(a,h)anthracene			2.00	1.75		ug/L		87	56 - 124	2	20
Dibenzofuran			2.00	1.57		ug/L		78	60 - 125	1	20
Diethyl phthalate			2.00	1.59		ug/L		80	60 - 134	12	20
Dimethyl phthalate			2.00	1.80		ug/L		90	65 - 134	1	20
Di-n-butyl phthalate			2.00	2.14		ug/L		107	67 - 140	6	20
Di-n-octyl phthalate			2.00	2.05		ug/L		103	55 - 150	1	20
Fluoranthene			2.00	1.98		ug/L		99	70 - 135	1	20
Fluorene			2.00	1.57		ug/L		79	57 - 125	0	20
Hexachlorobenzene			2.00	1.57		ug/L		78	55 - 135	1	20
Hexachlorobutadiene			2.00	1.21		ug/L		61	25 - 125	18	31
Hexachlorocyclopentadiene			2.00	0.766	J	ug/L		38	20 - 110	9	35
Hexachloroethane			2.00	1.04		ug/L		52	24 - 125	11	35
Indeno[1,2,3-cd]pyrene			2.00	1.86		ug/L		93	54 - 124	2	20
Isophorone			2.00	1.65		ug/L		83	64 - 125	1	20
Naphthalene			2.00	1.51		ug/L		76	56 - 119	4	20
Nitrobenzene			2.00	1.70		ug/L		85	62 - 125	2	20
N-Nitrosodi-n-propylamine			2.00	1.77		ug/L		89	54 - 120	5	20
N-Nitrosodiphenylamine			2.00	1.41		ug/L		71	40 - 124	2	20
Pentachlorophenol			4.00	2.64		ug/L		66	30 - 122	1	35
Phenanthrene			2.00	1.73		ug/L		87	57 - 125	2	20
Phenol			2.00	1.58		ug/L		79	53 - 113	13	20
Pyrene			2.00	1.70		ug/L		85	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*91*		*57 - 132*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol	*71*		*50 - 113*
Nitrobenzene-d5	*83*		*59 - 120*
Phenol-d5	*74*		*52 - 120*
Terphenyl-d14	*83*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Lab Sample ID: LCS 590-8317/3-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.135		ug/L		108	60 - 140

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226041/1-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 17:56	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 17:56	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*22 - 150*	*08/26/16 15:29*	*08/29/16 17:56*	*1*
Tetrachloro-m-xylene	*95*		*40 - 113*	*08/26/16 15:29*	*08/29/16 17:56*	*1*

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.194		ug/L		97	32 - 133
4,4'-DDE	0.200	0.190		ug/L		95	30 - 138
4,4'-DDT	0.200	0.213		ug/L		107	34 - 131
Aldrin	0.200	0.187		ug/L		93	35 - 124
alpha-BHC	0.200	0.185		ug/L		92	39 - 126
alpha-Chlordane	0.200	0.185		ug/L		93	37 - 133
beta-BHC	0.200	0.181		ug/L		91	38 - 114
delta-BHC	0.200	0.184		ug/L		92	20 - 138
Dieldrin	0.200	0.190		ug/L		95	39 - 140
Endosulfan I	0.200	0.190		ug/L		95	23 - 142

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endosulfan II	0.200	0.192		ug/L		96	20 - 150
Endosulfan sulfate	0.200	0.192		ug/L		96	36 - 130
Endrin	0.200	0.225		ug/L		113	32 - 130
Endrin aldehyde	0.200	0.209		ug/L		105	37 - 139
Endrin ketone	0.200	0.188		ug/L		94	32 - 136
gamma-BHC (Lindane)	0.200	0.171		ug/L		85	40 - 121
gamma-Chlordane	0.200	0.187		ug/L		93	38 - 136
Heptachlor	0.200	0.191		ug/L		95	39 - 129
Heptachlor epoxide	0.200	0.178		ug/L		89	34 - 135
Methoxychlor	0.200	0.213		ug/L		106	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*105*		*22 - 150*
Tetrachloro-m-xylene	*100*		*40 - 113*

Lab Sample ID: LCSD 580-226041/3-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.178		ug/L		89	32 - 133	8	35
4,4'-DDE	0.200	0.174		ug/L		87	30 - 138	8	35
4,4'-DDT	0.200	0.197		ug/L		99	34 - 131	8	35
Aldrin	0.200	0.173		ug/L		86	35 - 124	8	35
alpha-BHC	0.200	0.173		ug/L		86	39 - 126	7	35
alpha-Chlordane	0.200	0.171		ug/L		85	37 - 133	8	35
beta-BHC	0.200	0.170		ug/L		85	38 - 114	7	35
delta-BHC	0.200	0.170		ug/L		85	20 - 138	8	35
Dieldrin	0.200	0.176		ug/L		88	39 - 140	8	35
Endosulfan I	0.200	0.176		ug/L		88	23 - 142	8	35
Endosulfan II	0.200	0.177		ug/L		89	20 - 150	8	35
Endosulfan sulfate	0.200	0.177		ug/L		89	36 - 130	8	35
Endrin	0.200	0.208		ug/L		104	32 - 130	8	35
Endrin aldehyde	0.200	0.200		ug/L		100	37 - 139	5	35
Endrin ketone	0.200	0.174		ug/L		87	32 - 136	7	35
gamma-BHC (Lindane)	0.200	0.164		ug/L		82	40 - 121	4	35
gamma-Chlordane	0.200	0.174		ug/L		87	38 - 136	7	35
Heptachlor	0.200	0.180		ug/L		90	39 - 129	6	35
Heptachlor epoxide	0.200	0.168		ug/L		84	34 - 135	6	35
Methoxychlor	0.200	0.199		ug/L		99	33 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*92*		*22 - 150*
Tetrachloro-m-xylene	*95*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.56		ug/L		98	23 - 140		
PCB-1260			1.60	1.47		ug/L		92	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-339570/1-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/25/16 13:43	09/10/16 11:35	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/25/16 13:43	09/10/16 11:35	1
Bolstar	ND		1.0	0.31	ug/L		08/25/16 13:43	09/10/16 11:35	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/25/16 13:43	09/10/16 11:35	1
Coumaphos	ND		1.0	0.14	ug/L		08/25/16 13:43	09/10/16 11:35	1
Demeton, Total	ND		3.0	0.21	ug/L		08/25/16 13:43	09/10/16 11:35	1
Diazinon	ND		0.50	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Dichlorvos	ND		0.50	0.16	ug/L		08/25/16 13:43	09/10/16 11:35	1
Dimethoate	ND		1.5	0.45	ug/L		08/25/16 13:43	09/10/16 11:35	1
Disulfoton	ND		1.0	0.32	ug/L		08/25/16 13:43	09/10/16 11:35	1
EPN	ND		1.2	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Famphur	ND		1.0	0.18	ug/L		08/25/16 13:43	09/10/16 11:35	1
Fensulfothion	ND		2.5	0.54	ug/L		08/25/16 13:43	09/10/16 11:35	1
Fenthion	ND		2.5	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Malathion	ND		2.0	0.13	ug/L		08/25/16 13:43	09/10/16 11:35	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-339570/1-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Merphos	ND		5.0	0.17	ug/L		08/25/16 13:43	09/10/16 11:35	1
Methyl parathion	ND		4.0	0.14	ug/L		08/25/16 13:43	09/10/16 11:35	1
Mevinphos	ND		6.2	0.46	ug/L		08/25/16 13:43	09/10/16 11:35	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/25/16 13:43	09/10/16 11:35	1
Phorate	ND		1.2	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Ronnel	ND		10	0.12	ug/L		08/25/16 13:43	09/10/16 11:35	1
Simazine	ND		10	0.22	ug/L		08/25/16 13:43	09/10/16 11:35	1
Sulfotepp	ND		1.5	0.17	ug/L		08/25/16 13:43	09/10/16 11:35	1
Thionazin	ND		1.0	0.31	ug/L		08/25/16 13:43	09/10/16 11:35	1
Tokuthion	ND		1.6	0.12	ug/L		08/25/16 13:43	09/10/16 11:35	1
Trichloronate	ND		1.5	0.24	ug/L		08/25/16 13:43	09/10/16 11:35	1
Ethoprop	ND		1.5	0.18	ug/L		08/25/16 13:43	09/10/16 11:35	1
Propazine	ND		10	0.29	ug/L		08/25/16 13:43	09/10/16 11:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*68*		*49 - 171*	*08/25/16 13:43*	*09/10/16 11:35*	*1*
Triphenylphosphate	*97*		*60 - 154*	*08/25/16 13:43*	*09/10/16 11:35*	*1*

Lab Sample ID: LCS 280-339570/2-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	3.71	J	ug/L		93	52 - 115
Azinphos-methyl	4.00	3.69		ug/L		92	59 - 115
Chlorpyrifos	4.00	3.76		ug/L		94	54 - 115
Coumaphos	4.00	4.15		ug/L		104	63 - 118
Demeton, Total	4.00	2.16	J	ug/L		54	44 - 115
Diazinon	4.00	3.24		ug/L		81	47 - 115
Dichlorvos	4.00	4.66		ug/L		116	53 - 128
Dimethoate	4.00	2.89		ug/L		72	42 - 115
Disulfoton	4.00	3.17		ug/L		79	45 - 115
EPN	4.00	3.66		ug/L		92	56 - 115
Famphur	4.00	3.83		ug/L		96	62 - 115
Fensulfothion	4.00	4.01		ug/L		100	50 - 115
Fenthion	4.00	3.62		ug/L		91	55 - 115
Malathion	4.00	3.25		ug/L		81	52 - 115
Merphos	4.00	2.03	J	ug/L		51	31 - 115
Methyl parathion	4.00	3.84	J	ug/L		96	58 - 115
Mevinphos	4.00	3.04	J	ug/L		76	42 - 115
Ethyl Parathion	4.00	3.79		ug/L		95	55 - 115
Phorate	4.00	2.76		ug/L		69	40 - 115
Ronnel	4.00	3.80	J	ug/L		95	55 - 115
Simazine	4.00	3.67	J	ug/L		92	39 - 115
Sulfotepp	4.00	3.44		ug/L		86	53 - 115
Thionazin	4.00	3.55		ug/L		89	54 - 115
Trichloronate	4.00	3.32		ug/L		83	48 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-339570/2-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethoprop	4.00	3.47		ug/L		87	50 - 115
BolstarFamphur	4.00	7.97		ug/L		199	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*93*		*49 - 171*
Triphenylphosphate	*112*		*60 - 154*

Lab Sample ID: LCSD 280-339570/3-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	3.45	J	ug/L		86	52 - 115	7	45
Azinphos-methyl	4.00	3.50		ug/L		88	59 - 115	5	20
Chlorpyrifos	4.00	3.49		ug/L		87	54 - 115	7	24
Coumaphos	4.00	3.85		ug/L		96	63 - 118	7	20
Demeton, Total	4.00	1.93	J	ug/L		48	44 - 115	11	38
Diazinon	4.00	3.04		ug/L		76	47 - 115	6	37
Dichlorvos	4.00	4.24		ug/L		106	53 - 128	9	37
Dimethoate	4.00	2.91		ug/L		73	42 - 115	0	38
Disulfoton	4.00	2.93		ug/L		73	45 - 115	8	31
EPN	4.00	3.42		ug/L		86	56 - 115	7	20
Famphur	4.00	3.62		ug/L		91	62 - 115	6	20
Fensulfothion	4.00	3.82		ug/L		96	50 - 115	5	27
Fenthion	4.00	3.37		ug/L		84	55 - 115	7	22
Malathion	4.00	3.04		ug/L		76	52 - 115	7	20
Merphos	4.00	1.91	J	ug/L		48	31 - 115	6	25
Methyl parathion	4.00	3.44	J	ug/L		86	58 - 115	11	20
Mevinphos	4.00	2.74	J	ug/L		68	42 - 115	10	27
Ethyl Parathion	4.00	3.54		ug/L		89	55 - 115	7	20
Phorate	4.00	2.56		ug/L		64	40 - 115	8	32
Ronnel	4.00	3.53	J	ug/L		88	55 - 115	8	28
Simazine	4.00	3.38	J	ug/L		84	39 - 115	8	53
Sulfotepp	4.00	3.18		ug/L		79	53 - 115	8	27
Thionazin	4.00	3.15		ug/L		79	54 - 115	12	27
Trichloronate	4.00	3.09		ug/L		77	48 - 115	7	26
Ethoprop	4.00	3.05		ug/L		76	50 - 115	13	29
BolstarFamphur	4.00	7.43		ug/L		186		7	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*76*		*49 - 171*
Triphenylphosphate	*104*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-339693/1-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/26/16 10:50	09/01/16 18:17	1
2,4-D	ND		4.0	0.21	ug/L		08/26/16 10:50	09/01/16 18:17	1
2,4-DB	ND		4.0	0.36	ug/L		08/26/16 10:50	09/01/16 18:17	1
Dalapon	ND		2.0	0.91	ug/L		08/26/16 10:50	09/01/16 18:17	1
Dicamba	ND		2.0	0.15	ug/L		08/26/16 10:50	09/01/16 18:17	1
Dichlorprop	ND		4.0	0.65	ug/L		08/26/16 10:50	09/01/16 18:17	1
MCPA	ND		400	17	ug/L		08/26/16 10:50	09/01/16 18:17	1
MCPP	ND		400	33	ug/L		08/26/16 10:50	09/01/16 18:17	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/26/16 10:50	09/01/16 18:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*81*		*39 - 135*	*08/26/16 10:50*	*09/01/16 18:17*	*1*

Lab Sample ID: LCS 280-339693/2-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339693

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	3.78		ug/L		76	45 - 135		
2,4-D			5.00	3.75	J	ug/L		75	46 - 126		
2,4-DB			5.00	3.65	J	ug/L		73	18 - 135		
Dalapon			5.00	3.77		ug/L		75	52 - 119		
Dicamba			5.00	3.93		ug/L		79	50 - 128		
Dichlorprop			5.00	3.90	J	ug/L		78	44 - 121		
MCPA			500	376	J	ug/L		75	43 - 118		
MCPP			500	438		ug/L		88	45 - 121		
Silvex (2,4,5-TP)			5.00	4.21		ug/L		84	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Lab Sample ID: LCSD 280-339693/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339693

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	3.88		ug/L		78	45 - 135	3	30
2,4-D			5.00	3.85	J	ug/L		77	46 - 126	3	30
2,4-DB			5.00	4.05		ug/L		81	18 - 135	11	30
Dalapon			5.00	4.03		ug/L		81	52 - 119	7	30
Dicamba			5.00	3.91		ug/L		78	50 - 128	1	30
Dichlorprop			5.00	3.89	J	ug/L		78	44 - 121	0	30
MCPA			500	392	J	ug/L		78	43 - 118	4	30
MCPP			500	444		ug/L		89	45 - 121	2	30
Silvex (2,4,5-TP)			5.00	4.23		ug/L		85	48 - 127	0	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-339693/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339693

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8207/1-A
Matrix: Water
Analysis Batch: 8212

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 8207

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.0440	J	0.12	0.040	mg/L		08/23/16 09:09	08/23/16 23:07	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/23/16 09:09	08/23/16 23:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*08/23/16 09:09*	*08/23/16 23:07*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*08/23/16 09:09*	*08/23/16 23:07*	*1*

Lab Sample ID: LCS 590-8207/2-A
Matrix: Water
Analysis Batch: 8212

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 8207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.26		mg/L		78	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.53		mg/L		95	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*90*		*50 - 150*
n-Triacontane-d62	*93*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8197/1012
Matrix: Water
Analysis Batch: 8197

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/22/16 16:11	1
Sulfate	ND		0.50	0.13	mg/L			08/22/16 16:11	1

Lab Sample ID: LCS 590-8197/1011
Matrix: Water
Analysis Batch: 8197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.1		mg/L		105	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 590-8197/1011
Matrix: Water
Analysis Batch: 8197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			12.5	13.1		mg/L		105	90 - 110		

Lab Sample ID: 590-4267-1 MS
Matrix: Water
Analysis Batch: 8197

Client Sample ID: MW-8A-082116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	8.9		11.4	20.1		mg/L		99	80 - 120		
Sulfate	10		11.4	22.0		mg/L		106	80 - 120		

Lab Sample ID: 590-4267-1 MSD
Matrix: Water
Analysis Batch: 8197

Client Sample ID: MW-8A-082116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.9		11.4	20.2		mg/L		100	80 - 120	1	10
Sulfate	10		11.4	22.0		mg/L		105	80 - 120	0	10

Lab Sample ID: 590-4267-1 DU
Matrix: Water
Analysis Batch: 8197

Client Sample ID: MW-8A-082116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	8.9			8.78		mg/L				0.9	18.8
Sulfate	10			10.0		mg/L				0.05	15.7

Lab Sample ID: MB 590-8198/1012
Matrix: Water
Analysis Batch: 8198

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0390	J	0.20	0.039	mg/L			08/22/16 16:11	1
Nitrite as N	ND		0.20	0.069	mg/L			08/22/16 16:11	1

Lab Sample ID: LCS 590-8198/1011
Matrix: Water
Analysis Batch: 8198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	5.22		mg/L		104	90 - 110		
Nitrite as N			5.00	5.16		mg/L		103	90 - 110		

Lab Sample ID: 590-4267-1 MS
Matrix: Water
Analysis Batch: 8198

Client Sample ID: MW-8A-082116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	1.3	B	4.55	6.22		mg/L		107	80 - 120		
Nitrite as N	ND		4.55	4.64		mg/L		102	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-4267-1 MSD — **Client Sample ID: MW-8A-082116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8198

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.3	B	4.55	6.21		mg/L		107	80 - 120	0	12.1
Nitrite as N	ND		4.55	4.66		mg/L		102	80 - 120	0	10

Lab Sample ID: 590-4267-1 DU — **Client Sample ID: MW-8A-082116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8198

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.3	B	1.26		mg/L		6	13.1
Nitrite as N	ND		ND		mg/L		NC	10

Lab Sample ID: MB 590-8310/1002 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8310

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/29/16 13:24	1
Sulfate	ND		0.50	0.13	mg/L			08/29/16 13:24	1

Lab Sample ID: LCS 590-8310/1003 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8310

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.3		mg/L		106	90 - 110
Sulfate	12.5	13.4		mg/L		107	90 - 110

Lab Sample ID: 590-4267-2 MS — **Client Sample ID: MW-8B-082116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	43	F1	11.4	48.1	F1	mg/L		47	80 - 120
Sulfate	28		11.4	37.2		mg/L		85	80 - 120

Lab Sample ID: 590-4267-2 MSD — **Client Sample ID: MW-8B-082116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8310

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	43	F1	11.4	48.2	F1	mg/L		48	80 - 120	0	10
Sulfate	28		11.4	37.3		mg/L		86	80 - 120	0	10

Lab Sample ID: 590-4267-2 DU — **Client Sample ID: MW-8B-082116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8310

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	43	F1	42.2		mg/L		1	18.8

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-4267-2 DU
Matrix: Water
Analysis Batch: 8310

Client Sample ID: MW-8B-082116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate	28			27.3		mg/L				0.8	15.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-125834/1-A
Matrix: Water
Analysis Batch: 126274

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 125834

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.80	pg/L		09/06/16 13:26	09/08/16 01:28	1
2,3,7,8-TCDF	3.15	J	10	0.46	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,7,8-PeCDD	ND		50	1.0	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,7,8-PeCDF	ND		50	0.59	pg/L		09/06/16 13:26	09/08/16 01:28	1
2,3,4,7,8-PeCDF	ND		50	0.62	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,4,7,8-HxCDD	ND		50	0.66	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,6,7,8-HxCDD	ND		50	0.62	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,7,8,9-HxCDD	2.68	J q	50	0.52	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,4,7,8-HxCDF	ND		50	0.66	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,6,7,8-HxCDF	ND		50	0.59	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,7,8,9-HxCDF	ND		50	0.68	pg/L		09/06/16 13:26	09/08/16 01:28	1
2,3,4,6,7,8-HxCDF	ND		50	0.64	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,4,6,7,8-HpCDD	3.66	J q	50	1.4	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,4,6,7,8-HpCDF	3.18	J	50	0.98	pg/L		09/06/16 13:26	09/08/16 01:28	1
1,2,3,4,7,8,9-HpCDF	ND		50	1.3	pg/L		09/06/16 13:26	09/08/16 01:28	1
OCDD	3.45	J q	100	0.98	pg/L		09/06/16 13:26	09/08/16 01:28	1
OCDF	1.20	J q	100	0.91	pg/L		09/06/16 13:26	09/08/16 01:28	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-1,2,3,7,8-PeCDD	*74*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-1,2,3,7,8-PeCDF	*81*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*68*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*
13C-OCDD	*72*		*40 - 135*	*09/06/16 13:26*	*09/08/16 01:28*	*1*

Lab Sample ID: LCS 320-125834/2-A
Matrix: Water
Analysis Batch: 126274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD			200	244		pg/L		122	64 - 142		
2,3,7,8-TCDF			200	226		pg/L		113	71 - 142		
1,2,3,7,8-PeCDD			1000	1130		pg/L		113	71 - 140		
1,2,3,7,8-PeCDF			1000	1080		pg/L		108	76 - 135		
2,3,4,7,8-PeCDF			1000	1130		pg/L		113	74 - 137		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-125834/2-A
Matrix: Water
Analysis Batch: 126274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,7,8-HxCDD	1000	1050		pg/L		105	56 - 146
1,2,3,6,7,8-HxCDD	1000	1070		pg/L		107	73 - 144
1,2,3,7,8,9-HxCDD	1000	1170		pg/L		117	71 - 151
1,2,3,4,7,8-HxCDF	1000	1080		pg/L		108	75 - 131
1,2,3,6,7,8-HxCDF	1000	1090		pg/L		109	76 - 133
1,2,3,7,8,9-HxCDF	1000	954		pg/L		95	77 - 142
2,3,4,6,7,8-HxCDF	1000	1090		pg/L		109	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	1130		pg/L		113	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1080		pg/L		108	79 - 133
1,2,3,4,7,8,9-HpCDF	1000	1140		pg/L		114	83 - 130
OCDD	2000	2050		pg/L		102	80 - 132
OCDF	2000	2250		pg/L		112	72 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*77*		*40 - 135*
13C-2,3,7,8-TCDF	*79*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*78*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*81*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*90*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*59*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*68*		*40 - 135*
13C-OCDD	*70*		*40 - 135*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-225973/14-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225973

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 01:13	1
Antimony	ND		0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 01:13	1
Barium	ND		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 01:13	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 01:13	1
Cadmium	ND		0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 01:13	1
Chromium	ND		0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 01:13	1
Copper	ND		0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 01:13	1
Iron	ND		0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 01:13	1
Lead	ND		0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 01:13	1
Manganese	ND		0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 01:13	1
Nickel	ND		0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 01:13	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 01:13	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 01:13	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 01:13	1
Vanadium	ND		0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 01:13	1
Zinc	ND		0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 01:13	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-225973/15-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.105		mg/L		105	85 - 115
Antimony	0.100	0.107		mg/L		107	85 - 115
Barium	0.100	0.110		mg/L		110	85 - 115
Beryllium	0.100	0.106		mg/L		106	85 - 115
Cadmium	0.100	0.104		mg/L		104	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.106		mg/L		106	85 - 115
Iron	10.0	10.1		mg/L		101	85 - 115
Lead	0.100	0.108		mg/L		108	85 - 115
Manganese	0.100	0.103		mg/L		103	85 - 115
Nickel	0.100	0.106		mg/L		106	85 - 115
Selenium	0.100	0.104		mg/L		104	85 - 115
Silver	0.100	0.105		mg/L		105	85 - 115
Thallium	0.100	0.108		mg/L		108	85 - 115
Vanadium	0.100	0.103		mg/L		103	85 - 115
Zinc	0.100	0.108		mg/L		108	85 - 115

Lab Sample ID: LCSD 580-225973/16-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.105		mg/L		105	85 - 115	0	20
Antimony	0.100	0.106		mg/L		106	85 - 115	1	20
Barium	0.100	0.109		mg/L		109	85 - 115	0	20
Beryllium	0.100	0.106		mg/L		106	85 - 115	0	20
Cadmium	0.100	0.104		mg/L		104	85 - 115	1	20
Chromium	0.100	0.102		mg/L		102	85 - 115	0	20
Copper	0.100	0.106		mg/L		106	85 - 115	0	20
Iron	10.0	10.1		mg/L		101	85 - 115	0	20
Lead	0.100	0.107		mg/L		107	85 - 115	1	20
Manganese	0.100	0.103		mg/L		103	85 - 115	0	20
Nickel	0.100	0.107		mg/L		107	85 - 115	0	20
Selenium	0.100	0.103		mg/L		103	85 - 115	1	20
Silver	0.100	0.105		mg/L		105	85 - 115	0	20
Thallium	0.100	0.108		mg/L		108	85 - 115	0	20
Vanadium	0.100	0.104		mg/L		104	85 - 115	1	20
Zinc	0.100	0.107		mg/L		107	85 - 115	0	20

Lab Sample ID: 590-4267-2 MS
Matrix: Water
Analysis Batch: 226204

Client Sample ID: MW-8B-082116
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0018		0.100	0.106		mg/L		104	70 - 130
Antimony	0.00015	J	0.100	0.105		mg/L		105	70 - 130
Barium	0.19		0.100	0.297		mg/L		106	70 - 130
Beryllium	ND		0.100	0.105		mg/L		105	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-4267-2 MS
Matrix: Water
Analysis Batch: 226204

Client Sample ID: MW-8B-082116
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.000041	J	0.100	0.100		mg/L		100	70 - 130
Chromium	0.00064		0.100	0.101		mg/L		101	70 - 130
Copper	0.0014	J	0.100	0.102		mg/L		100	70 - 130
Iron	0.86		10.0	10.8		mg/L		99	70 - 130
Lead	0.00048		0.100	0.104		mg/L		104	70 - 130
Manganese	0.022		0.100	0.124		mg/L		102	70 - 130
Nickel	0.0013	J	0.100	0.102		mg/L		101	70 - 130
Selenium	ND		0.100	0.100		mg/L		100	70 - 130
Silver	0.000037	J	0.100	0.0999		mg/L		100	70 - 130
Thallium	ND		0.100	0.105		mg/L		105	70 - 130
Vanadium	0.0039	J	0.100	0.108		mg/L		104	70 - 130
Zinc	0.0032	J	0.100	0.106		mg/L		102	70 - 130

Lab Sample ID: 590-4267-2 MSD
Matrix: Water
Analysis Batch: 226204

Client Sample ID: MW-8B-082116
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0018		0.100	0.106		mg/L		104	70 - 130	0	20
Antimony	0.00015	J	0.100	0.105		mg/L		105	70 - 130	0	20
Barium	0.19		0.100	0.294		mg/L		102	70 - 130	1	20
Beryllium	ND		0.100	0.106		mg/L		106	70 - 130	1	20
Cadmium	0.000041	J	0.100	0.100		mg/L		100	70 - 130	0	20
Chromium	0.00064		0.100	0.102		mg/L		101	70 - 130	1	20
Copper	0.0014	J	0.100	0.102		mg/L		100	70 - 130	0	20
Iron	0.86		10.0	10.9		mg/L		100	70 - 130	1	20
Lead	0.00048		0.100	0.105		mg/L		105	70 - 130	1	20
Manganese	0.022		0.100	0.124		mg/L		102	70 - 130	0	20
Nickel	0.0013	J	0.100	0.103		mg/L		102	70 - 130	1	20
Selenium	ND		0.100	0.101		mg/L		101	70 - 130	1	20
Silver	0.000037	J	0.100	0.100		mg/L		100	70 - 130	0	20
Thallium	ND		0.100	0.107		mg/L		107	70 - 130	2	20
Vanadium	0.0039	J	0.100	0.108		mg/L		104	70 - 130	1	20
Zinc	0.0032	J	0.100	0.105		mg/L		101	70 - 130	1	20

Lab Sample ID: 590-4267-2 DU
Matrix: Water
Analysis Batch: 226204

Client Sample ID: MW-8B-082116
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0018		0.00184		mg/L		3	20
Antimony	0.00015	J	0.000147	J	mg/L		0.5	20
Barium	0.19		0.188		mg/L		2	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	0.000041	J	ND		mg/L		NC	20
Chromium	0.00064		0.000725		mg/L		12	20
Copper	0.0014	J	0.00138	J	mg/L		0.4	20
Iron	0.86		0.910		mg/L		6	20
Lead	0.00048		0.000512		mg/L		7	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-4267-2 DU
Matrix: Water
Analysis Batch: 226204

Client Sample ID: MW-8B-082116
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Manganese	0.022		0.0211		mg/L		6	20
Nickel	0.0013	J	0.00114	J	mg/L		13	20
Selenium	ND		ND		mg/L		NC	20
Silver	0.000037	J	0.0000367	J	mg/L		2	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0039	J	0.00402		mg/L		2	20
Zinc	0.0032	J	0.00507	J F5	mg/L		45	20

Lab Sample ID: MB 580-226123/11-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226123

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:23	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:23	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:23	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:23	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:23	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:23	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:23	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:23	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:23	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:23	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:23	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:23	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:23	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:23	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:23	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:23	1

Lab Sample ID: LCS 580-226123/12-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226123

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.104		mg/L		104	85 - 115
Antimony	0.100	0.104		mg/L		104	85 - 115
Barium	0.100	0.109		mg/L		109	85 - 115
Beryllium	0.100	0.102		mg/L		102	85 - 115
Cadmium	0.100	0.102		mg/L		102	85 - 115
Chromium	0.100	0.0983		mg/L		98	85 - 115
Copper	0.100	0.102		mg/L		102	85 - 115
Iron	10.0	9.83		mg/L		98	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.101		mg/L		101	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.101		mg/L		101	85 - 115
Silver	0.100	0.102		mg/L		102	85 - 115
Thallium	0.100	0.104		mg/L		104	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226123/12-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226123

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.100	0.100		mg/L		100	85 - 115
Zinc	0.100	0.103		mg/L		103	85 - 115

Lab Sample ID: LCSD 580-226123/13-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226123

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.103		mg/L		103	85 - 115	0	20
Antimony	0.100	0.106		mg/L		106	85 - 115	2	20
Barium	0.100	0.110		mg/L		110	85 - 115	1	20
Beryllium	0.100	0.102		mg/L		102	85 - 115	0	20
Cadmium	0.100	0.102		mg/L		102	85 - 115	0	20
Chromium	0.100	0.0996		mg/L		100	85 - 115	1	20
Copper	0.100	0.103		mg/L		103	85 - 115	1	20
Iron	10.0	10.0		mg/L		100	85 - 115	2	20
Lead	0.100	0.102		mg/L		102	85 - 115	0	20
Manganese	0.100	0.101		mg/L		101	85 - 115	0	20
Nickel	0.100	0.100		mg/L		100	85 - 115	1	20
Selenium	0.100	0.100		mg/L		100	85 - 115	1	20
Silver	0.100	0.102		mg/L		102	85 - 115	0	20
Thallium	0.100	0.104		mg/L		104	85 - 115	0	20
Vanadium	0.100	0.101		mg/L		101	85 - 115	0	20
Zinc	0.100	0.101		mg/L		101	85 - 115	2	20

Lab Sample ID: MB 580-225830/4-B
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226123

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:19	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:19	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:19	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:19	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:19	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:19	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:19	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:19	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:19	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:19	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:19	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:19	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:19	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:19	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:19	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:19	1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-225962/18-A
Matrix: Water
Analysis Batch: 226060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225962

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/26/16 10:03	08/26/16 15:23	1

Lab Sample ID: LCS 580-225962/19-A
Matrix: Water
Analysis Batch: 226060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00201		mg/L		100	85 - 115

Lab Sample ID: LCSD 580-225962/20-A
Matrix: Water
Analysis Batch: 226060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 225962

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00204		mg/L		102	85 - 115	2	20

Lab Sample ID: LCSSRM 580-225962/21-A
Matrix: Water
Analysis Batch: 226060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225962

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00198		mg/L		99	75 - 125

Lab Sample ID: LCS 580-226222/9-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00209		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226222/10-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00206		mg/L		103	85 - 115	2	20

Lab Sample ID: MB 580-225830/4-D
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226222

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:29	1

Lab Sample ID: 590-4267-1 DU
Matrix: Water
Analysis Batch: 226336

Client Sample ID: MW-8A-082116
Prep Type: Dissolved
Prep Batch: 226222

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-365923/1-A
Matrix: Water
Analysis Batch: 365936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 19:59	1

Lab Sample ID: LCS 490-365923/2-A
Matrix: Water
Analysis Batch: 365936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.100		mg/L		100	90 - 110

Lab Sample ID: LCSD 490-365923/3-A
Matrix: Water
Analysis Batch: 365936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 365923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.108		mg/L		108	90 - 110	8	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-365836/1-A
Matrix: Water
Analysis Batch: 366333

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:17	1

Lab Sample ID: LCS 490-365836/2-A
Matrix: Water
Analysis Batch: 366333

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.57		mg/L		91	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-365785/3
Matrix: Water
Analysis Batch: 365785

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/26/16 12:01	1

Lab Sample ID: LCS 490-365785/4
Matrix: Water
Analysis Batch: 365785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.5		mg/L		97	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-365785/5
Matrix: Water
Analysis Batch: 365785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	47.9		mg/L		96	90 - 110	1	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-366492/1
Matrix: Water
Analysis Batch: 366492

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			08/29/16 16:45	1

Lab Sample ID: LCS 490-366492/4
Matrix: Water
Analysis Batch: 366492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon			10.0	10.2		mg/L		102	90 - 110
TOC Result 1			10.0	10.1		mg/L		101	90 - 110
TOC Result 2			10.0	10.4		mg/L		104	90 - 110

Client Sample ID: MW-8A-082116
Date Collected: 08/21/16 15:10
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8202	08/22/16 18:04	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8191	08/22/16 18:04	MRS	TAL SPK
Total/NA	Prep	3520C			1056.1 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 13:03	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 11:43	NMI	TAL SPK
Total/NA	Prep	3510C			268.1 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 18:46	JCP	TAL SEA
Total/NA	Prep	3510C			269.2 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 19:22	NMI	TAL SPK
Total/NA	Prep	3510C			1057.8 mL	2 mL	339570	08/25/16 14:55	KI	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	341530	09/10/16 14:38	TEM	TAL DEN
Total/NA	Prep	8151A			1059.6 mL	10 mL	339693	08/26/16 10:50	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 21:41	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			248.8 mL	2 mL	8207	08/23/16 09:09	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8212	08/23/16 23:43	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8197	08/22/16 14:34	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8198	08/22/16 14:34	MRS	TAL SPK
Total/NA	Prep	8290			1055.9 mL	20 uL	125834	09/06/16 13:26	DXD	TAL SAC
Total/NA	Analysis	8290A		1			126274	09/08/16 06:28	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:08	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226123	08/29/16 10:19		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 17:46	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	225973	08/26/16 10:51		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 02:03	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:08	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226222	08/30/16 10:47	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 14:36	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	225962	08/26/16 10:03	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226060	08/26/16 16:13	PAB	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	365923	08/26/16 16:16	ADJ	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	365936	08/26/16 20:08	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	365836	08/26/16 14:02	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366333	08/29/16 12:22	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	365785	08/26/16 12:01	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	366492	08/29/16 16:45	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8231	08/22/16 13:30	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-8B-082116

Date Collected: 08/21/16 16:45
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8202	08/22/16 18:26	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8191	08/22/16 18:26	MRS	TAL SPK
Total/NA	Prep	3520C			1058.1 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 14:21	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 11:59	NMI	TAL SPK
Total/NA	Prep	3510C			267.5 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 19:03	JCP	TAL SEA
Total/NA	Prep	3510C			270.8 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 19:42	NMI	TAL SPK
Total/NA	Prep	3510C			1057.5 mL	2 mL	339570	08/25/16 14:55	KI	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	341530	09/10/16 15:09	TEM	TAL DEN
Total/NA	Prep	8151A			1056.3 mL	10 mL	339693	08/26/16 10:50	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 22:03	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			251 mL	2 mL	8207	08/23/16 09:09	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8212	08/24/16 00:02	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8198	08/22/16 15:10	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8310	08/29/16 14:00	MRS	TAL SPK
Total/NA	Prep	8290			1055.2 mL	20 uL	125834	09/06/16 13:26	DXD	TAL SAC
Total/NA	Analysis	8290A		1			126274	09/08/16 07:11	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:08	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226123	08/29/16 10:19		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 17:50	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	225973	08/26/16 10:51		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 01:22	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:08	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226222	08/30/16 10:47	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 14:40	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	225962	08/26/16 10:03	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226060	08/26/16 16:15	PAB	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	365923	08/26/16 16:16	ADJ	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	365936	08/26/16 20:09	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	365836	08/26/16 14:02	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366333	08/29/16 12:23	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	365785	08/26/16 12:01	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	366492	08/29/16 16:45	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8231	08/22/16 13:30	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Client Sample ID: MW-9A-082116

Date Collected: 08/21/16 18:25
Date Received: 08/22/16 10:55

Lab Sample ID: 590-4267-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8202	08/22/16 18:48	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8191	08/22/16 18:48	MRS	TAL SPK
Total/NA	Prep	3520C			1041.1 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 14:46	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 12:15	NMI	TAL SPK
Total/NA	Prep	3510C			272.8 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 19:20	JCP	TAL SEA
Total/NA	Prep	3510C			259.8 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 20:01	NMI	TAL SPK
Total/NA	Prep	3510C			1049.2 mL	2 mL	339570	08/25/16 14:55	KI	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	341530	09/10/16 15:39	TEM	TAL DEN
Total/NA	Prep	8151A			1054.8 mL	10 mL	339693	08/26/16 10:50	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 22:26	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			249.8 mL	2 mL	8207	08/23/16 09:09	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8212	08/24/16 00:20	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8198	08/22/16 15:22	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8310	08/29/16 14:12	MRS	TAL SPK
Total/NA	Prep	8290			1047.3 mL	20 uL	125834	09/06/16 13:26	DXD	TAL SAC
Total/NA	Analysis	8290A		1			126274	09/08/16 07:54	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:08	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226123	08/29/16 10:19		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 17:55	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	225973	08/26/16 10:51		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 02:07	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:08	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226222	08/30/16 10:47	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 14:42	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	225962	08/26/16 10:03	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226060	08/26/16 16:17	PAB	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	365923	08/26/16 16:16	ADJ	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	365936	08/26/16 20:10	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	365836	08/26/16 14:02	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366333	08/29/16 12:24	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	365785	08/26/16 12:01	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	366492	08/29/16 16:45	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8231	08/22/16 13:30	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4267-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee I	Carrier Tracking No(s):	COC No: 590-1713-619.3
Client Contact: Josh Lee	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 3 of 3
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days): 3W,			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504.104.00	Project #: 59004077			
Site: Marshall	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlr; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Aqueous)	9290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA_24[illegible]	3260C - Standard List VOA Compounds	3270C - Semivolatiles	200.8_CWA_24[illegible]	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_300_ORGFM	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-8A:082116	8/21/16	1510	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-8B:082116	↓	1645	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-9A:082116	↓	1025	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	

590-4267-01 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/22/16 0800		Sheila Hall	8/22/16 1055	TA Spok

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.9C-R003

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee I	Carrier Tracking No(s):	COC No: 590-1713-6197
Client Contact: Josh Lee / Jon Endres	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 3
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202	PO #: Purchase Order not required			
Phone: 509-363-3125	WO #:			
Email: jmlee@geoengineers.com	Project #: 59000577			
Project Name: Marshall 0504-104-00	SSOW#:			
Site:				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_NS - Gx_SGWS	9223_ColiQT_WW - Quantitray 2000	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
Preservation Code							A	R	N	A		
MW-8A:082116	8/21/16	1510	G	Water	N		X	X	X	X	3	
MW-8B:082116	↓	1645	↓	Water	N		X	X	X	X	3	
MW-9A:082116	↓	1825	↓	Water	N		X	X	X	X	3	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/22/16 0800	GEI	Sheria Brady	8/22/16 1055	TA Spok
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1942.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4267-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/1/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-8A-082116 (590-4267-1)	8/21/16	15:10 Pacific		Water			X	X	4	
MW-8B-082116 (590-4267-2)	8/21/16	16:45 Pacific		Water			X	X	4	
MW-9A-082116 (590-4267-3)	8/21/16	18:25 Pacific		Water			X	X	4	

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Kady	8/22/16 1525	TAL Spok	Reed Pitt	8-23-16 0915	TAD
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.4 IR S 0.0 RP 8-23-16

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1942.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 590-4267-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/1/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-8A-082116 (590-4267-1)	8/21/16	15:10 Pacific		Water			X	X	4	
MW-8B-082116 (590-4267-2)	8/21/16	16:45 Pacific		Water			X	X	4	
MW-9A-082116 (590-4267-3)	8/21/16	18:25 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kady	8/22/16 1525	TAL SPK	Reed Kutt	8-24-16 0946	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		11.4 DR5 0.0 RP 8-24-16

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1945.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4267-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/6/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8A-082116 (590-4267-1)	8/21/16	15:10 Pacific		Water			X	2	
MW-8B-082116 (590-4267-2)	8/21/16	16:45 Pacific		Water			X	2	
MW-9A-082116 (590-4267-3)	8/21/16	18:25 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kraft	8/22/16 1605	TAL SDC		8/23/16 0930	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.8

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-4267 Chain of Custody

Cooler Received/Opened On 8/23/2016 @ 0850

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1780 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960357 pH Strip Lot HC564992 Chlorine Strip Lot 012516A

2. Temperature of rep. sample or temp blank when opened: 1.1c Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Side

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) Dw

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) PM

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) PM

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) PM

I certify that I attached a label with the unique LIMS number to each container (intial) PM

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
4267

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

9/29/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	COC No: 590-1943.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Analysis Requested	Job #: 590-4267-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 9/1/2016		Preservation Codes:
City: Nashville	TAT Requested (days):		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		Other:
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-8A-082116 (590-4267-1)	8/21/16	15:10 Pacific		Water			X	X	X	X	3	
MW-8B-082116 (590-4267-2)	8/21/16	16:45 Pacific		Water			X	X	X	X	3	
MW-9A-082116 (590-4267-3)	8/21/16	18:25 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Sheila Kady	Date/Time: 8/22/16 1530	Company TA Spok	Received by: 16
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Date/Time:	Company
8/23/16 850	TAN
Date/Time:	Company
Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1946.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4267-1
Address: 5755 8th Street East,	Due Date Requested: 9/1/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	245.1/FILTRATION Dissolved Mercury - Seattle	245.1/245.1_Prep Total Mercury - Seattle	200.8_CWA/FILTRATION (MOD) Template for building analyte list	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-8A-082116 (590-4267-1)	8/21/16	15:10 Pacific		Water			X	X	X	X	X	X	6	
MW-8B-082116 (590-4267-2)	8/21/16	16:45 Pacific		Water			X	X	X	X	X	X	6	
MW-9A-082116 (590-4267-3)	8/21/16	18:25 Pacific		Water			X	X	X	X	X	X	6	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kratz	8/23/16 1400	TAS Spok	B. Shee	8.24.16 1013	TA SEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR2 = 0.1 / 0.2 W/0 CS

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4267-1

Login Number: 4267
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4267-1

Login Number: 4267
List Number: 2
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 08/23/16 12:00 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	False	missing a cooler
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4267-1

Login Number: 4267
List Number: 4
Creator: Ngo, Phiet

List Source: TestAmerica Nashville
List Creation: 08/23/16 04:29 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4267-1

Login Number: 4267
List Number: 3
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 08/23/16 01:07 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4267-1

Login Number: 4267
List Number: 5
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 08/24/16 04:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4284-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/29/2016 11:42:04 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-4284-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/23/2016 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): MW-4A-082216 (590-4284-1), MW-16A-082216 (590-4284-2) and MW-2A-082216 (590-4284-3). The container labels list a collection date of 8/22/2016, while the COC lists 08/23/2016. The client was contacted, and the lab was instructed to use a collection date of 08/22/2016.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8229 recovered above the upper control limit for 2-Butanone (MEK) and Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-4A-082216 (590-4284-1), MW-16A-082216 (590-4284-2) and MW-2A-082216 (590-4284-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226191 recovered above the upper control limit for 3,3'-Dichlorobenzidine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-4A-082216 (590-4284-1), MW-16A-082216 (590-4284-2), MW-2A-082216 (590-4284-3) and (CCVIS 580-226191/3).

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-226191 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-226029 and analytical batch 580-226191 recovered outside control limits for the following analytes: Benzyl alcohol (LCS only) and Bis(2-ethylhexyl) phthalate (LCSD only). These analytes were biased high in the LCS. The affected samples were either not detected for this analyte or had hits below the reporting limit but above the detection limit. Bis(2-ethylhexyl) phthalate is a common lab contaminant.

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226029 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, Bis(2-ethylhexyl) phthalate, 4-Nitroaniline and Benzyl alcohol.

Method 8270D: The method blank for preparation batch 580-226029 and analytical batch 580-226191 contained Benzyl alcohol and Bis(2-ethylhexyl) phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) for 2,4-DB and Dalapon associated with analytical batch 280-340437 recovered outside the control limit on the back/confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the front/primary column which is in control.

Method 8141B: The initial calibration verification (ICV) result for batch 280-341530 was outside control limits on the front column for simazine. Sample results were non-detects and are reported off of the back, in control, column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
Method 8290A: The laboratory control sample (LCS) for 320-127279 recovered outside control limits for 1,2,3,6,7,8-HxCDF. This analyte

Job ID: 590-4284-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

was biased high in the LCS and was either not detected or detected as a 'J' flagged estimated value below the reporting limit (RL) in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 200.8: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-225830 and 580-226123.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 335.4: The matrix spike (MS) recoveries for preparation batch 490-365923 and analytical batch 490-365936 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8141B_3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 339570.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-339876.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 339693.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4284-1	MW-4A-082216	Water	08/22/16 11:02	08/23/16 09:50
590-4284-2	MW-16A-082216	Water	08/22/16 12:20	08/23/16 09:50
590-4284-3	MW-2A-082216	Water	08/22/16 15:30	08/23/16 09:50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-4A-082216
Date Collected: 08/22/16 11:02
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/23/16 23:50	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/23/16 23:50	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/23/16 23:50	1
o-Xylene	ND		1.0	0.16	ug/L			08/23/16 23:50	1
Toluene	ND		1.0	0.31	ug/L			08/23/16 23:50	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/23/16 23:50	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/23/16 23:50	1
Naphthalene	ND		2.0	0.63	ug/L			08/23/16 23:50	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/23/16 23:50	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/23/16 23:50	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/23/16 23:50	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/23/16 23:50	1
Bromoform	ND		2.0	0.80	ug/L			08/23/16 23:50	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/23/16 23:50	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/23/16 23:50	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/23/16 23:50	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/23/16 23:50	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/23/16 23:50	1
Acetone	ND	*	25	4.1	ug/L			08/23/16 23:50	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/23/16 23:50	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/23/16 23:50	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/23/16 23:50	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/23/16 23:50	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/23/16 23:50	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/23/16 23:50	1
Chloromethane	ND		3.0	0.22	ug/L			08/23/16 23:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/23/16 23:50	1
Bromomethane	ND		5.0	0.22	ug/L			08/23/16 23:50	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/23/16 23:50	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/23/16 23:50	1
Dibromomethane	ND		1.0	0.50	ug/L			08/23/16 23:50	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/23/16 23:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/23/16 23:50	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/23/16 23:50	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/23/16 23:50	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/23/16 23:50	1
Hexane	ND		1.0	0.084	ug/L			08/23/16 23:50	1
Styrene	ND		1.0	0.10	ug/L			08/23/16 23:50	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/23/16 23:50	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/23/16 23:50	1
Bromobenzene	ND		1.0	0.28	ug/L			08/23/16 23:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/23/16 23:50	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/23/16 23:50	1
Chloroethane	ND		2.0	1.1	ug/L			08/23/16 23:50	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/23/16 23:50	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/23/16 23:50	1
Trichloroethene	ND		1.0	0.44	ug/L			08/23/16 23:50	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/23/16 23:50	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/23/16 23:50	1

Client Sample ID: MW-4A-082216
Date Collected: 08/22/16 11:02
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		10	0.75	ug/L			08/23/16 23:50	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/23/16 23:50	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/23/16 23:50	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/23/16 23:50	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/23/16 23:50	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/23/16 23:50	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/23/16 23:50	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/23/16 23:50	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/23/16 23:50	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/23/16 23:50	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/23/16 23:50	1
Chloroform	ND		1.0	0.41	ug/L			08/23/16 23:50	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/23/16 23:50	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/23/16 23:50	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/23/16 23:50	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/23/16 23:50	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/23/16 23:50	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/23/16 23:50	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/23/16 23:50	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/23/16 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*08/23/16 23:50*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*08/23/16 23:50*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/23/16 23:50*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/23/16 23:50*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/23/16 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*08/23/16 23:50*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1

Client Sample ID: MW-4A-082216
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Lab Sample ID: 590-4284-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 15:12	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 15:12	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
4-Nitrophenol	ND		2.8	0.95	ug/L		08/26/16 14:41	08/30/16 15:12	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzoic acid	ND		2.8	0.57	ug/L		08/26/16 14:41	08/30/16 15:12	1
Benzyl alcohol	**0.16**	**J B ***	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Bis(2-ethylhexyl) phthalate	**3.1**	**B ***	2.8	1.1	ug/L		08/26/16 14:41	08/30/16 15:12	1
Butyl benzyl phthalate	**0.37**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 15:12	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 15:12	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		08/26/16 14:41	08/30/16 15:12	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 15:12	1
Fluoranthene	ND		0.047	0.012	ug/L		08/26/16 14:41	08/30/16 15:12	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1

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Lab Sample ID: 590-4284-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.66	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 15:12	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 15:12	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*92*		*57 - 132*	*08/26/16 14:41*	*08/30/16 15:12*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*08/26/16 14:41*	*08/30/16 15:12*	*1*
2-Fluorophenol	*78*		*50 - 113*	*08/26/16 14:41*	*08/30/16 15:12*	*1*
Nitrobenzene-d5	*89*		*59 - 120*	*08/26/16 14:41*	*08/30/16 15:12*	*1*
Phenol-d5	*80*		*52 - 120*	*08/26/16 14:41*	*08/30/16 15:12*	*1*
Terphenyl-d14	*94*		*72 - 140*	*08/26/16 14:41*	*08/30/16 15:12*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 12:30	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 19:37	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 19:37	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 19:37	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 19:37	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 19:37	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 19:37	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 19:37	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 19:37	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 19:37	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 19:37	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 19:37	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 19:37	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 19:37	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 19:37	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 19:37	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 19:37	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 19:37	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 19:37	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 19:37	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 19:37	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*08/26/16 15:29*	*08/29/16 19:37*	*1*
Tetrachloro-m-xylene	*82*		*40 - 113*	*08/26/16 15:29*	*08/29/16 19:37*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 20:20	1
PCB-1221	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 20:20	1
PCB-1232	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 20:20	1
PCB-1242	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 20:20	1

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Lab Sample ID: 590-4284-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 20:20	1
PCB-1254	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 20:20	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*20 - 120*	*08/30/16 13:27*	*08/30/16 20:20*	*1*
DCB Decachlorobiphenyl (Surr)	*105*		*36 - 138*	*08/30/16 13:27*	*08/30/16 20:20*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 13:07	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/25/16 14:55	09/10/16 13:07	1
Bolstar	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 13:07	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/25/16 14:55	09/10/16 13:07	1
Coumaphos	ND		0.95	0.13	ug/L		08/25/16 14:55	09/10/16 13:07	1
Demeton, Total	ND		2.9	0.20	ug/L		08/25/16 14:55	09/10/16 13:07	1
Diazinon	ND		0.48	0.14	ug/L		08/25/16 14:55	09/10/16 13:07	1
Dichlorvos	ND		0.48	0.15	ug/L		08/25/16 14:55	09/10/16 13:07	1
Dimethoate	ND		1.4	0.43	ug/L		08/25/16 14:55	09/10/16 13:07	1
Disulfoton	ND		0.95	0.31	ug/L		08/25/16 14:55	09/10/16 13:07	1
EPN	ND		1.1	0.14	ug/L		08/25/16 14:55	09/10/16 13:07	1
Famphur	ND		0.95	0.17	ug/L		08/25/16 14:55	09/10/16 13:07	1
Fensulfothion	ND		2.4	0.52	ug/L		08/25/16 14:55	09/10/16 13:07	1
Fenthion	ND		2.4	0.15	ug/L		08/25/16 14:55	09/10/16 13:07	1
Malathion	ND		1.9	0.13	ug/L		08/25/16 14:55	09/10/16 13:07	1
Merphos	ND		4.8	0.17	ug/L		08/25/16 14:55	09/10/16 13:07	1
Methyl parathion	ND		3.8	0.13	ug/L		08/25/16 14:55	09/10/16 13:07	1
Mevinphos	ND		5.9	0.44	ug/L		08/25/16 14:55	09/10/16 13:07	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/25/16 14:55	09/10/16 13:07	1
Phorate	ND		1.1	0.15	ug/L		08/25/16 14:55	09/10/16 13:07	1
Ronnel	ND		9.5	0.11	ug/L		08/25/16 14:55	09/10/16 13:07	1
Simazine	ND		9.5	0.21	ug/L		08/25/16 14:55	09/10/16 13:07	1
Sulfotepp	ND		1.4	0.16	ug/L		08/25/16 14:55	09/10/16 13:07	1
Thionazin	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 13:07	1
Tokuthion	ND		1.5	0.12	ug/L		08/25/16 14:55	09/10/16 13:07	1
Trichloronate	ND		1.4	0.23	ug/L		08/25/16 14:55	09/10/16 13:07	1
Ethoprop	ND		1.4	0.17	ug/L		08/25/16 14:55	09/10/16 13:07	1
Propazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*78*		*49 - 171*	*08/25/16 14:55*	*09/10/16 13:07*	*1*
Triphenylphosphate	*104*		*60 - 154*	*08/25/16 14:55*	*09/10/16 13:07*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		08/29/16 09:40	09/01/16 13:00	1
2,4-D	ND		3.9	0.20	ug/L		08/29/16 09:40	09/01/16 13:00	1
2,4-DB	ND		3.9	0.35	ug/L		08/29/16 09:40	09/01/16 13:00	1
Dalapon	ND		1.9	0.88	ug/L		08/29/16 09:40	09/01/16 13:00	1
Dicamba	ND		1.9	0.15	ug/L		08/29/16 09:40	09/01/16 13:00	1

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Lab Sample ID: 590-4284-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.9	0.63	ug/L		08/29/16 09:40	09/01/16 13:00	1
MCPA	ND		390	16	ug/L		08/29/16 09:40	09/01/16 13:00	1
MCPP	ND		390	32	ug/L		08/29/16 09:40	09/01/16 13:00	1
Silvex (2,4,5-TP)	ND		0.97	0.16	ug/L		08/29/16 09:40	09/01/16 13:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*85*		*39 - 135*	*08/29/16 09:40*	*09/01/16 13:00*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		08/26/16 10:57	08/26/16 13:49	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		08/26/16 10:57	08/26/16 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:49*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:49*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37**		0.80	0.42	mg/L			08/23/16 14:23	1
Nitrate as N	**0.74**		0.20	0.039	mg/L			08/23/16 14:23	1
Nitrite as N	ND		0.20	0.069	mg/L			08/23/16 14:23	1
Sulfate	**19**		0.50	0.13	mg/L			08/23/16 14:23	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.27	pg/L		09/15/16 09:07	09/22/16 04:40	1
2,3,7,8-TCDF	ND		9.9	0.20	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,7,8-PeCDD	ND		49	0.38	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,7,8-PeCDF	ND		49	0.25	pg/L		09/15/16 09:07	09/22/16 04:40	1
2,3,4,7,8-PeCDF	ND		49	0.26	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,4,7,8-HxCDD	ND		49	0.25	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,6,7,8-HxCDD	**0.22**	**J q**	49	0.22	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,7,8,9-HxCDD	ND		49	0.19	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,4,7,8-HxCDF	ND		49	0.19	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,6,7,8-HxCDF	**0.40**	**J ***	49	0.17	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,7,8,9-HxCDF	ND		49	0.18	pg/L		09/15/16 09:07	09/22/16 04:40	1
2,3,4,6,7,8-HxCDF	**0.33**	**J**	49	0.18	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,4,6,7,8-HpCDD	**0.61**	**J q**	49	0.23	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,4,6,7,8-HpCDF	**0.46**	**J**	49	0.12	pg/L		09/15/16 09:07	09/22/16 04:40	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.15	pg/L		09/15/16 09:07	09/22/16 04:40	1
OCDD	**3.4**	**J B**	99	0.31	pg/L		09/15/16 09:07	09/22/16 04:40	1
OCDF	ND		99	0.89	pg/L		09/15/16 09:07	09/22/16 04:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-2,3,7,8-TCDF	*94*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-1,2,3,7,8-PeCDF	*86*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*

Client Sample ID: MW-4A-082216

Date Collected: 08/22/16 11:02
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-1

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*88*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*
13C-OCDD	*69*		*40 - 135*	*09/15/16 09:07*	*09/22/16 04:40*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 02:12	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 02:12	1
Barium	**0.031**		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 02:12	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 02:12	1
Cadmium	**0.000030**	**J**	0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 02:12	1
Chromium	**0.00015**	**J**	0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 02:12	1
Copper	**0.0043**		0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 02:12	1
Iron	**0.072**		0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 02:12	1
Lead	**0.00013**	**J**	0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 02:12	1
Manganese	**0.00080**	**J**	0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 02:12	1
Nickel	**0.00072**	**J**	0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 02:12	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 02:12	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 02:12	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 02:12	1
Vanadium	**0.0068**		0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 02:12	1
Zinc	**0.0019**	**J**	0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 02:12	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:28	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:28	1
Barium	**0.032**		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:28	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:28	1
Cadmium	**0.000029**	**J**	0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:28	1
Chromium	**0.00032**	**J**	0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:28	1
Copper	**0.0046**		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:28	1
Iron	**0.031**	**J**	0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:28	1
Lead	**0.00037**	**J**	0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:28	1
Manganese	**0.0010**	**J**	0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:28	1
Nickel	**0.00072**	**J**	0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:28	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:28	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:28	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:28	1
Vanadium	**0.0065**		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:28	1
Zinc	**0.0022**	**J**	0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:28	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/26/16 10:03	08/26/16 16:06	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:45	1

Client Sample ID: MW-4A-082216

Lab Sample ID: 590-4284-1

Date Collected: 08/22/16 11:02

Matrix: Water

Date Received: 08/23/16 09:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 20:12	1
Ammonia (as N)	**0.22**		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:26	1
Chemical Oxygen Demand	**10**	**J**	20	4.0	mg/L			08/26/16 12:06	1
Total Organic Carbon	**4.3**		1.0	0.50	mg/L			08/29/16 16:45	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**7.5**				MPN/100mL			08/23/16 14:00	1
Escherichia coli	**0.00**				MPN/100mL			08/23/16 14:00	1

Client Sample ID: MW-16A-082216

Lab Sample ID: 590-4284-2

Date Collected: 08/22/16 12:20

Matrix: Water

Date Received: 08/23/16 09:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/24/16 00:12	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/24/16 00:12	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/24/16 00:12	1
o-Xylene	ND		1.0	0.16	ug/L			08/24/16 00:12	1
Toluene	ND		1.0	0.31	ug/L			08/24/16 00:12	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/24/16 00:12	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/24/16 00:12	1
Naphthalene	ND		2.0	0.63	ug/L			08/24/16 00:12	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/24/16 00:12	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/24/16 00:12	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/24/16 00:12	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/24/16 00:12	1
Bromoform	ND		2.0	0.80	ug/L			08/24/16 00:12	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/24/16 00:12	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/24/16 00:12	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/24/16 00:12	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/24/16 00:12	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/24/16 00:12	1
Acetone	ND	*	25	4.1	ug/L			08/24/16 00:12	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/24/16 00:12	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/24/16 00:12	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/24/16 00:12	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/24/16 00:12	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/24/16 00:12	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/24/16 00:12	1
Chloromethane	ND		3.0	0.22	ug/L			08/24/16 00:12	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/24/16 00:12	1
Bromomethane	ND		5.0	0.22	ug/L			08/24/16 00:12	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/24/16 00:12	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/24/16 00:12	1
Dibromomethane	ND		1.0	0.50	ug/L			08/24/16 00:12	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/24/16 00:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/24/16 00:12	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/24/16 00:12	1

Client Sample ID: MW-16A-082216
Date Collected: 08/22/16 12:20
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/24/16 00:12	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/24/16 00:12	1
Hexane	ND		1.0	0.084	ug/L			08/24/16 00:12	1
Styrene	ND		1.0	0.10	ug/L			08/24/16 00:12	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/24/16 00:12	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/24/16 00:12	1
Bromobenzene	ND		1.0	0.28	ug/L			08/24/16 00:12	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/24/16 00:12	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/24/16 00:12	1
Chloroethane	ND		2.0	1.1	ug/L			08/24/16 00:12	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/24/16 00:12	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/24/16 00:12	1
Trichloroethene	ND		1.0	0.44	ug/L			08/24/16 00:12	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/24/16 00:12	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/24/16 00:12	1
2-Hexanone	ND		10	0.75	ug/L			08/24/16 00:12	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/24/16 00:12	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/24/16 00:12	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/24/16 00:12	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/24/16 00:12	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/24/16 00:12	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/24/16 00:12	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/24/16 00:12	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/24/16 00:12	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/24/16 00:12	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/24/16 00:12	1
Chloroform	ND		1.0	0.41	ug/L			08/24/16 00:12	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/24/16 00:12	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/24/16 00:12	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/24/16 00:12	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/24/16 00:12	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/24/16 00:12	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/24/16 00:12	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/24/16 00:12	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/24/16 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*08/24/16 00:12*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*08/24/16 00:12*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/24/16 00:12*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/24/16 00:12*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/24/16 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*08/24/16 00:12*	*1*

Client Sample ID: MW-16A-082216
Date Collected: 08/22/16 12:20
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
1,2-Dichlorobenzene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
1,3-Dichlorobenzene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
1,4-Dichlorobenzene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,4,5-Trichlorophenol	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,4,6-Trichlorophenol	ND		0.57	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,4-Dichlorophenol	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,4-Dinitrophenol	ND		4.7	0.94	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,4-Dinitrotoluene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2,6-Dinitrotoluene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
2-Chlorophenol	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
2-Methylphenol	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2-Nitroaniline	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
2-Nitrophenol	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
3 & 4 Methylphenol	ND		0.75	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 15:38	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.94	ug/L		08/26/16 14:41	08/30/16 15:38	1
4-Bromophenyl phenyl ether	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
4-Chloro-3-methylphenol	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
4-Chloroaniline	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
4-Chlorophenyl phenyl ether	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
4-Nitroaniline	ND	*	0.57	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
4-Nitrophenol	ND		2.8	0.94	ug/L		08/26/16 14:41	08/30/16 15:38	1
Acenaphthene	ND		0.094	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Acenaphthylene	ND		0.075	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Anthracene	ND		0.038	0.0094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzo[b]fluoranthene	ND		0.075	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzoic acid	ND		2.8	0.57	ug/L		08/26/16 14:41	08/30/16 15:38	1
Benzyl alcohol	**0.095**	**J B ***	0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
bis (2-chloroisopropyl) ether	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Bis(2-chloroethoxy)methane	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Bis(2-chloroethyl)ether	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Bis(2-ethylhexyl) phthalate	**4.1**	**B ***	2.8	1.1	ug/L		08/26/16 14:41	08/30/16 15:38	1
Butyl benzyl phthalate	**0.39**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 15:38	1
Carbazole	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 15:38	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Dibenzofuran	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Diethyl phthalate	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Dimethyl phthalate	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-16A-082216
Date Collected: 08/22/16 12:20
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		08/26/16 14:41	08/30/16 15:38	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 15:38	1
Fluoranthene	ND		0.047	0.012	ug/L		08/26/16 14:41	08/30/16 15:38	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Hexachlorobenzene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Hexachlorobutadiene	ND		0.57	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Hexachlorocyclopentadiene	ND		1.9	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Hexachloroethane	ND		0.57	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Isophorone	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Naphthalene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Nitrobenzene	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
N-Nitrosodi-n-propylamine	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
N-Nitrosodiphenylamine	ND		0.38	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Pentachlorophenol	ND		0.66	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Phenanthrene	ND		0.075	0.019	ug/L		08/26/16 14:41	08/30/16 15:38	1
Phenol	ND		0.57	0.094	ug/L		08/26/16 14:41	08/30/16 15:38	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*99*		*57 - 132*	*08/26/16 14:41*	*08/30/16 15:38*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*08/26/16 14:41*	*08/30/16 15:38*	*1*
2-Fluorophenol	*82*		*50 - 113*	*08/26/16 14:41*	*08/30/16 15:38*	*1*
Nitrobenzene-d5	*93*		*59 - 120*	*08/26/16 14:41*	*08/30/16 15:38*	*1*
Phenol-d5	*87*		*52 - 120*	*08/26/16 14:41*	*08/30/16 15:38*	*1*
Terphenyl-d14	*95*		*72 - 140*	*08/26/16 14:41*	*08/30/16 15:38*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 12:46	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		08/26/16 15:29	08/29/16 19:53	1
4,4'-DDE	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 19:53	1
4,4'-DDT	ND		0.029	0.0048	ug/L		08/26/16 15:29	08/29/16 19:53	1
Aldrin	ND		0.029	0.0068	ug/L		08/26/16 15:29	08/29/16 19:53	1
alpha-BHC	ND		0.029	0.0068	ug/L		08/26/16 15:29	08/29/16 19:53	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 19:53	1
beta-BHC	ND		0.048	0.012	ug/L		08/26/16 15:29	08/29/16 19:53	1
delta-BHC	ND		0.048	0.0096	ug/L		08/26/16 15:29	08/29/16 19:53	1
Dieldrin	ND		0.029	0.0048	ug/L		08/26/16 15:29	08/29/16 19:53	1
Endosulfan I	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 19:53	1
Endosulfan II	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 19:53	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 19:53	1
Endrin	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 19:53	1
Endrin aldehyde	ND		0.19	0.033	ug/L		08/26/16 15:29	08/29/16 19:53	1
Endrin ketone	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 19:53	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		08/26/16 15:29	08/29/16 19:53	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 19:53	1

Client Sample ID: MW-16A-082216
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Lab Sample ID: 590-4284-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0039	ug/L		08/26/16 15:29	08/29/16 19:53	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 19:53	1
Methoxychlor	ND		0.096	0.0019	ug/L		08/26/16 15:29	08/29/16 19:53	1
Toxaphene	ND		0.96	0.21	ug/L		08/26/16 15:29	08/29/16 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*83*		*22 - 150*	*08/26/16 15:29*	*08/29/16 19:53*	*1*
Tetrachloro-m-xylene	*88*		*40 - 113*	*08/26/16 15:29*	*08/29/16 19:53*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 20:40	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 20:40	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 20:40	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 20:40	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 20:40	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 20:40	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 20:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*20 - 120*	*08/30/16 13:27*	*08/30/16 20:40*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*36 - 138*	*08/30/16 13:27*	*08/30/16 20:40*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.30	ug/L		08/25/16 14:55	09/10/16 13:37	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/25/16 14:55	09/10/16 13:37	1
Bolstar	ND		1.0	0.32	ug/L		08/25/16 14:55	09/10/16 13:37	1
Chlorpyrifos	ND		1.5	0.37	ug/L		08/25/16 14:55	09/10/16 13:37	1
Coumaphos	ND		1.0	0.14	ug/L		08/25/16 14:55	09/10/16 13:37	1
Demeton, Total	ND		3.1	0.21	ug/L		08/25/16 14:55	09/10/16 13:37	1
Diazinon	ND		0.51	0.15	ug/L		08/25/16 14:55	09/10/16 13:37	1
Dichlorvos	ND		0.51	0.16	ug/L		08/25/16 14:55	09/10/16 13:37	1
Dimethoate	ND		1.5	0.46	ug/L		08/25/16 14:55	09/10/16 13:37	1
Disulfoton	ND		1.0	0.33	ug/L		08/25/16 14:55	09/10/16 13:37	1
EPN	ND		1.2	0.15	ug/L		08/25/16 14:55	09/10/16 13:37	1
Famphur	ND		1.0	0.18	ug/L		08/25/16 14:55	09/10/16 13:37	1
Fensulfothion	ND		2.5	0.55	ug/L		08/25/16 14:55	09/10/16 13:37	1
Fenthion	ND		2.5	0.16	ug/L		08/25/16 14:55	09/10/16 13:37	1
Malathion	ND		2.0	0.14	ug/L		08/25/16 14:55	09/10/16 13:37	1
Merphos	ND		5.1	0.18	ug/L		08/25/16 14:55	09/10/16 13:37	1
Methyl parathion	ND		4.1	0.14	ug/L		08/25/16 14:55	09/10/16 13:37	1
Mevinphos	ND		6.3	0.47	ug/L		08/25/16 14:55	09/10/16 13:37	1
Ethyl Parathion	ND		1.0	0.15	ug/L		08/25/16 14:55	09/10/16 13:37	1
Phorate	ND		1.2	0.16	ug/L		08/25/16 14:55	09/10/16 13:37	1
Ronnel	ND		10	0.12	ug/L		08/25/16 14:55	09/10/16 13:37	1
Simazine	ND		10	0.23	ug/L		08/25/16 14:55	09/10/16 13:37	1
Sulfotepp	ND		1.5	0.17	ug/L		08/25/16 14:55	09/10/16 13:37	1
Thionazin	ND		1.0	0.32	ug/L		08/25/16 14:55	09/10/16 13:37	1
Tokuthion	ND		1.6	0.13	ug/L		08/25/16 14:55	09/10/16 13:37	1

Client Sample ID: MW-16A-082216

Date Collected: 08/22/16 12:20
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2

Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.5	0.25	ug/L		08/25/16 14:55	09/10/16 13:37	1
Ethoprop	ND		1.5	0.18	ug/L		08/25/16 14:55	09/10/16 13:37	1
Propazine	ND		10	0.30	ug/L		08/25/16 14:55	09/10/16 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*77*		*49 - 171*	*08/25/16 14:55*	*09/10/16 13:37*	*1*
Triphenylphosphate	*96*		*60 - 154*	*08/25/16 14:55*	*09/10/16 13:37*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		08/26/16 10:50	09/01/16 22:49	1
2,4-D	ND		3.8	0.20	ug/L		08/26/16 10:50	09/01/16 22:49	1
2,4-DB	ND		3.8	0.34	ug/L		08/26/16 10:50	09/01/16 22:49	1
Dalapon	ND		1.9	0.87	ug/L		08/26/16 10:50	09/01/16 22:49	1
Dicamba	ND		1.9	0.14	ug/L		08/26/16 10:50	09/01/16 22:49	1
Dichlorprop	ND		3.8	0.62	ug/L		08/26/16 10:50	09/01/16 22:49	1
MCPA	ND		380	16	ug/L		08/26/16 10:50	09/01/16 22:49	1
MCPP	ND		380	31	ug/L		08/26/16 10:50	09/01/16 22:49	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		08/26/16 10:50	09/01/16 22:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*39 - 135*	*08/26/16 10:50*	*09/01/16 22:49*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 14:07	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*08/26/16 10:57*	*08/26/16 14:07*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*08/26/16 10:57*	*08/26/16 14:07*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45**		0.80	0.42	mg/L			08/23/16 14:35	1
Nitrate as N	**0.24**		0.20	0.039	mg/L			08/23/16 14:35	1
Nitrite as N	ND		0.20	0.069	mg/L			08/23/16 14:35	1
Sulfate	**18**		0.50	0.13	mg/L			08/23/16 14:35	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.33	pg/L		09/15/16 09:07	09/22/16 05:26	1
2,3,7,8-TCDF	ND		9.5	0.19	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,7,8-PeCDD	ND		47	0.35	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,7,8-PeCDF	ND		47	0.23	pg/L		09/15/16 09:07	09/22/16 05:26	1
2,3,4,7,8-PeCDF	ND		47	0.24	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,4,7,8-HxCDD	ND		47	0.26	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,6,7,8-HxCDD	ND		47	0.23	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,7,8,9-HxCDD	ND		47	0.20	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,4,7,8-HxCDF	ND		47	0.39	pg/L		09/15/16 09:07	09/22/16 05:26	1

Client Sample ID: MW-16A-082216
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Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND	*	47	0.35	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,7,8,9-HxCDF	ND		47	0.37	pg/L		09/15/16 09:07	09/22/16 05:26	1
2,3,4,6,7,8-HxCDF	ND		47	0.38	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,4,6,7,8-HpCDD	ND		47	0.35	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,4,6,7,8-HpCDF	**0.30**	**J**	47	0.25	pg/L		09/15/16 09:07	09/22/16 05:26	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.29	pg/L		09/15/16 09:07	09/22/16 05:26	1
OCDD	**2.4**	**J B**	95	0.37	pg/L		09/15/16 09:07	09/22/16 05:26	1
OCDF	ND		95	0.64	pg/L		09/15/16 09:07	09/22/16 05:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*72*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-2,3,7,8-TCDF	*83*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-1,2,3,4,7,8-HxCDF	*71*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*
13C-OCDD	*57*		*40 - 135*	*09/15/16 09:07*	*09/22/16 05:26*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0026**		0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 02:17	1
Antimony	**0.00017**	**J**	0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 02:17	1
Barium	**0.040**		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 02:17	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 02:17	1
Cadmium	ND		0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 02:17	1
Chromium	**0.00052**		0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 02:17	1
Copper	**0.0039**		0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 02:17	1
Iron	**0.26**		0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 02:17	1
Lead	**0.00021**	**J**	0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 02:17	1
Manganese	**0.0023**		0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 02:17	1
Nickel	**0.0016**	**J**	0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 02:17	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 02:17	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 02:17	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 02:17	1
Vanadium	**0.0071**		0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 02:17	1
Zinc	**0.0024**	**J**	0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 02:17	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0027**		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:37	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:37	1
Barium	**0.039**		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:37	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:37	1
Cadmium	**0.000031**	**J**	0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:37	1
Chromium	**0.00023**	**J**	0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:37	1
Copper	**0.0044**		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:37	1
Iron	**0.029**	**J**	0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:37	1
Lead	**0.00036**	**J**	0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:37	1
Manganese	**0.0019**	**J**	0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:37	1

Client Sample ID: MW-16A-082216

Date Collected: 08/22/16 12:20
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0016**	**J**	0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:37	1
Selenium	**0.00036**	**J**	0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:37	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:37	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:37	1
Vanadium	**0.0066**		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:37	1
Zinc	**0.0024**	**J**	0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:37	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:32	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 20:13	1
Ammonia (as N)	**0.20**		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:27	1
Chemical Oxygen Demand	**15**	**J**	20	4.0	mg/L			08/26/16 12:06	1
Total Organic Carbon	**5.0**		1.0	0.50	mg/L			08/29/16 16:45	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/23/16 14:00	1
Escherichia coli	**0.00**				MPN/100mL			08/23/16 14:00	1

Client Sample ID: MW-2A-082216

Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/24/16 00:33	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/24/16 00:33	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/24/16 00:33	1
o-Xylene	ND		1.0	0.16	ug/L			08/24/16 00:33	1
Toluene	ND		1.0	0.31	ug/L			08/24/16 00:33	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/24/16 00:33	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/24/16 00:33	1
Naphthalene	ND		2.0	0.63	ug/L			08/24/16 00:33	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/24/16 00:33	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/24/16 00:33	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/24/16 00:33	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/24/16 00:33	1
Bromoform	ND		2.0	0.80	ug/L			08/24/16 00:33	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/24/16 00:33	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/24/16 00:33	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/24/16 00:33	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/24/16 00:33	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/24/16 00:33	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-2A-082216
Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	25	4.1	ug/L			08/24/16 00:33	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/24/16 00:33	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/24/16 00:33	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/24/16 00:33	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/24/16 00:33	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/24/16 00:33	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/24/16 00:33	1
Chloromethane	ND		3.0	0.22	ug/L			08/24/16 00:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/24/16 00:33	1
Bromomethane	ND		5.0	0.22	ug/L			08/24/16 00:33	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/24/16 00:33	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/24/16 00:33	1
Dibromomethane	ND		1.0	0.50	ug/L			08/24/16 00:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/24/16 00:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/24/16 00:33	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/24/16 00:33	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/24/16 00:33	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/24/16 00:33	1
Hexane	ND		1.0	0.084	ug/L			08/24/16 00:33	1
Styrene	ND		1.0	0.10	ug/L			08/24/16 00:33	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/24/16 00:33	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/24/16 00:33	1
Bromobenzene	ND		1.0	0.28	ug/L			08/24/16 00:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/24/16 00:33	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/24/16 00:33	1
Chloroethane	ND		2.0	1.1	ug/L			08/24/16 00:33	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/24/16 00:33	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/24/16 00:33	1
Trichloroethene	ND		1.0	0.44	ug/L			08/24/16 00:33	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/24/16 00:33	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/24/16 00:33	1
2-Hexanone	ND		10	0.75	ug/L			08/24/16 00:33	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/24/16 00:33	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/24/16 00:33	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/24/16 00:33	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/24/16 00:33	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/24/16 00:33	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/24/16 00:33	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/24/16 00:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/24/16 00:33	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/24/16 00:33	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/24/16 00:33	1
Chloroform	ND		1.0	0.41	ug/L			08/24/16 00:33	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/24/16 00:33	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/24/16 00:33	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/24/16 00:33	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/24/16 00:33	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/24/16 00:33	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/24/16 00:33	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-2A-082216
Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/24/16 00:33	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/24/16 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*08/24/16 00:33*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*08/24/16 00:33*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*08/24/16 00:33*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/24/16 00:33*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/24/16 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*08/24/16 00:33*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 16:04	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 16:04	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
4-Nitrophenol	ND		2.9	0.95	ug/L		08/26/16 14:41	08/30/16 16:04	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1

Client Sample ID: MW-2A-082216

Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Benzoic acid	ND		2.9	0.57	ug/L		08/26/16 14:41	08/30/16 16:04	1
Benzyl alcohol	**0.14**	**J B ***	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Bis(2-ethylhexyl) phthalate	**2.7**	**J B ***	2.9	1.1	ug/L		08/26/16 14:41	08/30/16 16:04	1
Butyl benzyl phthalate	**0.51**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 16:04	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 16:04	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Di-n-butyl phthalate	**0.17**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 16:04	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 16:04	1
Fluoranthene	ND		0.048	0.012	ug/L		08/26/16 14:41	08/30/16 16:04	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Pentachlorophenol	ND		0.67	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 16:04	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:04	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*109*		*57 - 132*	*08/26/16 14:41*	*08/30/16 16:04*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*08/26/16 14:41*	*08/30/16 16:04*	*1*
2-Fluorophenol	*83*		*50 - 113*	*08/26/16 14:41*	*08/30/16 16:04*	*1*
Nitrobenzene-d5	*98*		*59 - 120*	*08/26/16 14:41*	*08/30/16 16:04*	*1*
Phenol-d5	*88*		*52 - 120*	*08/26/16 14:41*	*08/30/16 16:04*	*1*
Terphenyl-d14	*101*		*72 - 140*	*08/26/16 14:41*	*08/30/16 16:04*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 13:02	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-2A-082216
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Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0057	ug/L		08/26/16 15:29	08/29/16 20:10	1
4,4'-DDE	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 20:10	1
4,4'-DDT	ND		0.029	0.0048	ug/L		08/26/16 15:29	08/29/16 20:10	1
Aldrin	ND		0.029	0.0067	ug/L		08/26/16 15:29	08/29/16 20:10	1
alpha-BHC	ND		0.029	0.0067	ug/L		08/26/16 15:29	08/29/16 20:10	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 20:10	1
beta-BHC	ND		0.048	0.011	ug/L		08/26/16 15:29	08/29/16 20:10	1
delta-BHC	ND		0.048	0.0095	ug/L		08/26/16 15:29	08/29/16 20:10	1
Dieldrin	ND		0.029	0.0048	ug/L		08/26/16 15:29	08/29/16 20:10	1
Endosulfan I	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 20:10	1
Endosulfan II	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 20:10	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 20:10	1
Endrin	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 20:10	1
Endrin aldehyde	ND		0.19	0.032	ug/L		08/26/16 15:29	08/29/16 20:10	1
Endrin ketone	ND		0.019	0.0019	ug/L		08/26/16 15:29	08/29/16 20:10	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		08/26/16 15:29	08/29/16 20:10	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 20:10	1
Heptachlor	ND		0.019	0.0038	ug/L		08/26/16 15:29	08/29/16 20:10	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		08/26/16 15:29	08/29/16 20:10	1
Methoxychlor	ND		0.095	0.0019	ug/L		08/26/16 15:29	08/29/16 20:10	1
Toxaphene	ND		0.95	0.21	ug/L		08/26/16 15:29	08/29/16 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*77*		*22 - 150*	*08/26/16 15:29*	*08/29/16 20:10*	*1*
Tetrachloro-m-xylene	*77*		*40 - 113*	*08/26/16 15:29*	*08/29/16 20:10*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.095	0.059	ug/L		08/30/16 13:27	08/30/16 20:59	1
PCB-1221	ND		0.095	0.059	ug/L		08/30/16 13:27	08/30/16 20:59	1
PCB-1232	ND		0.095	0.059	ug/L		08/30/16 13:27	08/30/16 20:59	1
PCB-1242	ND		0.095	0.059	ug/L		08/30/16 13:27	08/30/16 20:59	1
PCB-1248	ND		0.095	0.059	ug/L		08/30/16 13:27	08/30/16 20:59	1
PCB-1254	ND		0.095	0.059	ug/L		08/30/16 13:27	08/30/16 20:59	1
PCB-1260	ND		0.095	0.041	ug/L		08/30/16 13:27	08/30/16 20:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*20 - 120*	*08/30/16 13:27*	*08/30/16 20:59*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*36 - 138*	*08/30/16 13:27*	*08/30/16 20:59*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 14:08	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/25/16 14:55	09/10/16 14:08	1
Bolstar	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 14:08	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/25/16 14:55	09/10/16 14:08	1
Coumaphos	ND		0.95	0.13	ug/L		08/25/16 14:55	09/10/16 14:08	1
Demeton, Total	ND		2.8	0.20	ug/L		08/25/16 14:55	09/10/16 14:08	1
Diazinon	ND		0.47	0.14	ug/L		08/25/16 14:55	09/10/16 14:08	1
Dichlorvos	ND		0.47	0.15	ug/L		08/25/16 14:55	09/10/16 14:08	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

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Lab Sample ID: 590-4284-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		08/25/16 14:55	09/10/16 14:08	1
Disulfoton	ND		0.95	0.31	ug/L		08/25/16 14:55	09/10/16 14:08	1
EPN	ND		1.1	0.14	ug/L		08/25/16 14:55	09/10/16 14:08	1
Famphur	ND		0.95	0.17	ug/L		08/25/16 14:55	09/10/16 14:08	1
Fensulfothion	ND		2.4	0.52	ug/L		08/25/16 14:55	09/10/16 14:08	1
Fenthion	ND		2.4	0.15	ug/L		08/25/16 14:55	09/10/16 14:08	1
Malathion	ND		1.9	0.13	ug/L		08/25/16 14:55	09/10/16 14:08	1
Merphos	ND		4.7	0.16	ug/L		08/25/16 14:55	09/10/16 14:08	1
Methyl parathion	ND		3.8	0.13	ug/L		08/25/16 14:55	09/10/16 14:08	1
Mevinphos	ND		5.9	0.44	ug/L		08/25/16 14:55	09/10/16 14:08	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/25/16 14:55	09/10/16 14:08	1
Phorate	ND		1.1	0.15	ug/L		08/25/16 14:55	09/10/16 14:08	1
Ronnel	ND		9.5	0.11	ug/L		08/25/16 14:55	09/10/16 14:08	1
Simazine	ND		9.5	0.21	ug/L		08/25/16 14:55	09/10/16 14:08	1
Sulfotepp	ND		1.4	0.16	ug/L		08/25/16 14:55	09/10/16 14:08	1
Thionazin	ND		0.95	0.30	ug/L		08/25/16 14:55	09/10/16 14:08	1
Tokuthion	ND		1.5	0.12	ug/L		08/25/16 14:55	09/10/16 14:08	1
Trichloronate	ND		1.4	0.23	ug/L		08/25/16 14:55	09/10/16 14:08	1
Ethoprop	ND		1.4	0.17	ug/L		08/25/16 14:55	09/10/16 14:08	1
Propazine	ND		9.5	0.28	ug/L		08/25/16 14:55	09/10/16 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*75*		*49 - 171*	*08/25/16 14:55*	*09/10/16 14:08*	*1*
Triphenylphosphate	*99*		*60 - 154*	*08/25/16 14:55*	*09/10/16 14:08*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.19	ug/L		08/26/16 10:50	09/01/16 23:11	1
2,4-D	ND		3.9	0.20	ug/L		08/26/16 10:50	09/01/16 23:11	1
2,4-DB	ND		3.9	0.35	ug/L		08/26/16 10:50	09/01/16 23:11	1
Dalapon	ND		1.9	0.89	ug/L		08/26/16 10:50	09/01/16 23:11	1
Dicamba	ND		1.9	0.15	ug/L		08/26/16 10:50	09/01/16 23:11	1
Dichlorprop	ND		3.9	0.63	ug/L		08/26/16 10:50	09/01/16 23:11	1
MCPA	ND		390	17	ug/L		08/26/16 10:50	09/01/16 23:11	1
MCPP	ND		390	32	ug/L		08/26/16 10:50	09/01/16 23:11	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		08/26/16 10:50	09/01/16 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*88*		*39 - 135*	*08/26/16 10:50*	*09/01/16 23:11*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		08/26/16 10:57	08/26/16 14:26	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		08/26/16 10:57	08/26/16 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*50 - 150*	*08/26/16 10:57*	*08/26/16 14:26*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*08/26/16 10:57*	*08/26/16 14:26*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-2A-082216
Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46		0.80	0.42	mg/L			08/23/16 14:48	1
Nitrate as N	0.066	J	0.20	0.039	mg/L			08/23/16 14:48	1
Nitrite as N	ND		0.20	0.069	mg/L			08/23/16 14:48	1
Sulfate	13		0.50	0.13	mg/L			08/23/16 14:48	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.30	pg/L		09/15/16 09:07	09/22/16 10:13	1
2,3,7,8-TCDF	ND		9.5	0.21	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,7,8-PeCDD	ND		47	0.44	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,7,8-PeCDF	ND		47	0.23	pg/L		09/15/16 09:07	09/22/16 10:13	1
2,3,4,7,8-PeCDF	ND		47	0.24	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,4,7,8-HxCDD	ND		47	0.25	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,6,7,8-HxCDD	ND		47	0.23	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,7,8,9-HxCDD	ND		47	0.20	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,4,7,8-HxCDF	ND		47	0.37	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,6,7,8-HxCDF	ND	*	47	0.33	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,7,8,9-HxCDF	ND		47	0.35	pg/L		09/15/16 09:07	09/22/16 10:13	1
2,3,4,6,7,8-HxCDF	ND		47	0.35	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,4,6,7,8-HpCDD	ND		47	0.32	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.18	pg/L		09/15/16 09:07	09/22/16 10:13	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.22	pg/L		09/15/16 09:07	09/22/16 10:13	1
OCDD	1.5	J q B	95	0.65	pg/L		09/15/16 09:07	09/22/16 10:13	1
OCDF	ND		95	0.97	pg/L		09/15/16 09:07	09/22/16 10:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*75*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-2,3,7,8-TCDF	*84*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-1,2,3,7,8-PeCDD	*61*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-1,2,3,6,7,8-HxCDD	*93*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*
13C-OCDD	*57*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:13*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0028		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:36	1
Antimony	0.00016	J	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:36	1
Barium	0.046		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:36	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:36	1
Cadmium	0.000040	J	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:36	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:36	1
Copper	0.0044		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:36	1
Iron	0.014	J	0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:36	1
Lead	0.000067	J	0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:36	1
Manganese	0.00058	J	0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:36	1
Nickel	0.0013	J	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:36	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:36	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:36	1

Client Sample ID: MW-2A-082216

Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:36	1
Vanadium	**0.0081**		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:36	1
Zinc	**0.0047**	**J**	0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:36	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0030**		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:41	1
Antimony	**0.00019**	**J**	0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:41	1
Barium	**0.047**		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:41	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:41	1
Cadmium	**0.000050**	**J**	0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:41	1
Chromium	**0.00019**	**J**	0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:41	1
Copper	**0.0053**		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:41	1
Iron	**0.027**	**J**	0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:41	1
Lead	**0.00036**	**J**	0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:41	1
Manganese	**0.00093**	**J**	0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:41	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:41	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:41	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:41	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:41	1
Vanadium	**0.0084**		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:41	1
Zinc	**0.0021**	**J**	0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:41	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:34	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 20:14	1
Ammonia (as N)	**0.20**		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:28	1
Chemical Oxygen Demand	**8.9**	**J**	20	4.0	mg/L			08/26/16 12:06	1
Total Organic Carbon	**5.6**		1.0	0.50	mg/L			08/29/16 16:45	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/23/16 14:00	1
Escherichia coli	**0.00**				MPN/100mL			08/23/16 14:00	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8229/6
Matrix: Water
Analysis Batch: 8229

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20	0.093	ug/L			08/23/16 17:20	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/23/16 17:20	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/23/16 17:20	1
o-Xylene	ND		1.0	0.16	ug/L			08/23/16 17:20	1
Toluene	ND		1.0	0.31	ug/L			08/23/16 17:20	1
Xylenes, Total	ND		3.0	0.44	ug/L			08/23/16 17:20	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/23/16 17:20	1
Naphthalene	ND		2.0	0.63	ug/L			08/23/16 17:20	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/23/16 17:20	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/23/16 17:20	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/23/16 17:20	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/23/16 17:20	1
Bromoform	ND		2.0	0.80	ug/L			08/23/16 17:20	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/23/16 17:20	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/23/16 17:20	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/23/16 17:20	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/23/16 17:20	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/23/16 17:20	1
Acetone	ND		25	4.1	ug/L			08/23/16 17:20	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/23/16 17:20	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/23/16 17:20	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/23/16 17:20	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/23/16 17:20	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/23/16 17:20	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/23/16 17:20	1
Chloromethane	ND		3.0	0.22	ug/L			08/23/16 17:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/23/16 17:20	1
Bromomethane	ND		5.0	0.22	ug/L			08/23/16 17:20	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/23/16 17:20	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/23/16 17:20	1
Dibromomethane	ND		1.0	0.50	ug/L			08/23/16 17:20	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/23/16 17:20	1
1,2,4-Trichlorobenzene	0.291	J	1.0	0.16	ug/L			08/23/16 17:20	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/23/16 17:20	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/23/16 17:20	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/23/16 17:20	1
Hexane	ND		1.0	0.084	ug/L			08/23/16 17:20	1
Styrene	ND		1.0	0.10	ug/L			08/23/16 17:20	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/23/16 17:20	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/23/16 17:20	1
Bromobenzene	ND		1.0	0.28	ug/L			08/23/16 17:20	1
1,2,3-Trichlorobenzene	0.518	J	1.0	0.16	ug/L			08/23/16 17:20	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/23/16 17:20	1
Chloroethane	ND		2.0	1.1	ug/L			08/23/16 17:20	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/23/16 17:20	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/23/16 17:20	1
Trichloroethene	ND		1.0	0.44	ug/L			08/23/16 17:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/23/16 17:20	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8229/6
Matrix: Water
Analysis Batch: 8229

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/23/16 17:20	1
2-Hexanone	ND		10	0.75	ug/L			08/23/16 17:20	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/23/16 17:20	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/23/16 17:20	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/23/16 17:20	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/23/16 17:20	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/23/16 17:20	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/23/16 17:20	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/23/16 17:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/23/16 17:20	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/23/16 17:20	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/23/16 17:20	1
Chloroform	ND		1.0	0.41	ug/L			08/23/16 17:20	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/23/16 17:20	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/23/16 17:20	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/23/16 17:20	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/23/16 17:20	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/23/16 17:20	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/23/16 17:20	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/23/16 17:20	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/23/16 17:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*08/23/16 17:20*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*08/23/16 17:20*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/23/16 17:20*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/23/16 17:20*	*1*

Lab Sample ID: LCS 590-8229/1005
Matrix: Water
Analysis Batch: 8229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.2		ug/L		102	80 - 120
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120
m,p-Xylene	10.0	10.5		ug/L		105	80 - 120
o-Xylene	10.0	10.7		ug/L		107	80 - 120
Toluene	10.0	10.4		ug/L		104	80 - 123
Methyl tert-butyl ether	10.0	10.3		ug/L		103	71 - 128
Naphthalene	10.0	10.0		ug/L		100	63 - 124
1,1,1-Trichloroethane	10.0	9.73		ug/L		97	71 - 130
cis-1,3-Dichloropropene	10.0	9.76		ug/L		98	72 - 120
Carbon disulfide	10.0	10.1		ug/L		101	67 - 129
Bromochloromethane	10.0	9.98		ug/L		100	70 - 126
Bromoform	10.0	8.92		ug/L		89	60 - 122
Tetrachloroethene	10.0	9.85		ug/L		99	71 - 132
1,1-Dichloroethane	10.0	9.92		ug/L		99	79 - 121
1,2-Dichloroethane	10.0	9.95		ug/L		100	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8229/1005
Matrix: Water
Analysis Batch: 8229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.3		ug/L		103	76 - 121
1,1,2-Trichloroethane	10.0	9.82		ug/L		98	76 - 120
Acetone	50.0	83.2	*	ug/L		166	20 - 150
Dichlorodifluoromethane	10.0	8.83		ug/L		88	32 - 150
4-Methyl-2-pentanone (MIBK)	50.0	48.4		ug/L		97	60 - 127
1,1,2-Trichlorotrifluoroethane	10.0	11.0		ug/L		110	70 - 127
Methylene Chloride	10.0	10.3		ug/L		103	20 - 150
Hexachlorobutadiene	10.0	10.3		ug/L		103	62 - 132
n-Butylbenzene	10.0	10.2		ug/L		102	71 - 120
Chloromethane	10.0	9.00		ug/L		90	51 - 150
1,2,4-Trimethylbenzene	10.0	11.0		ug/L		110	77 - 120
Bromomethane	10.0	10.5		ug/L		105	45 - 150
2-Chlorotoluene	10.0	10.9		ug/L		109	75 - 121
Dibromochloromethane	10.0	9.75		ug/L		97	72 - 120
Dibromomethane	10.0	9.35		ug/L		93	71 - 120
1,1-Dichloropropene	10.0	9.94		ug/L		99	76 - 125
1,2,4-Trichlorobenzene	10.0	10.7		ug/L		107	66 - 124
Chlorobenzene	10.0	10.4		ug/L		104	79 - 125
1,2-Dibromo-3-Chloropropane	10.0	8.90	J	ug/L		89	36 - 140
1,3-Dichlorobenzene	10.0	10.5		ug/L		105	77 - 120
Hexane	10.0	9.61		ug/L		96	68 - 125
Styrene	10.0	9.74		ug/L		97	73 - 120
4-Chlorotoluene	10.0	11.2		ug/L		112	74 - 120
trans-1,2-Dichloroethene	10.0	9.86		ug/L		99	75 - 124
Bromobenzene	10.0	10.6		ug/L		106	74 - 121
1,2,3-Trichlorobenzene	10.0	10.2		ug/L		102	60 - 125
1,1,2,2-Tetrachloroethane	10.0	10.6		ug/L		106	66 - 122
Chloroethane	10.0	10.1		ug/L		101	48 - 150
1,1-Dichloroethene	10.0	9.74		ug/L		97	69 - 127
1,2-Dichlorobenzene	10.0	10.5		ug/L		105	78 - 120
Trichloroethene	10.0	9.58		ug/L		96	75 - 129
1,1,1,2-Tetrachloroethane	10.0	10.1		ug/L		101	75 - 124
sec-Butylbenzene	10.0	10.8		ug/L		108	74 - 121
2-Hexanone	50.0	50.1		ug/L		100	46 - 146
2-Butanone (MEK)	50.0	61.3		ug/L		123	40 - 150
Isopropylbenzene	10.0	10.4		ug/L		104	77 - 123
2,2-Dichloropropane	10.0	10.2		ug/L		102	49 - 147
N-Propylbenzene	10.0	10.9		ug/L		109	76 - 120
Trichlorofluoromethane	10.0	10.0		ug/L		100	60 - 140
p-Isopropyltoluene	10.0	10.7		ug/L		107	77 - 120
1,2,3-Trichloropropane	10.0	9.69		ug/L		97	60 - 124
1,3,5-Trimethylbenzene	10.0	10.9		ug/L		109	75 - 122
trans-1,3-Dichloropropene	10.0	9.50		ug/L		95	70 - 121
cis-1,2-Dichloroethene	10.0	9.93		ug/L		99	76 - 121
Chloroform	10.0	9.73		ug/L		97	73 - 126
Dichlorofluoromethane	10.0	10.4		ug/L		104	60 - 140
Vinyl chloride	10.0	8.90		ug/L		89	42 - 150
1,2-Dibromoethane (EDB)	10.0	9.36		ug/L		94	70 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8229/1005
Matrix: Water
Analysis Batch: 8229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
tert-Butylbenzene	10.0	11.1		ug/L		111	79 - 120
Carbon tetrachloride	10.0	9.80		ug/L		98	68 - 134
1,4-Dichlorobenzene	10.0	10.8		ug/L		108	77 - 121
1,3-Dichloropropane	10.0	9.78		ug/L		98	75 - 120
Bromodichloromethane	10.0	9.90		ug/L		99	67 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8228/6
Matrix: Water
Analysis Batch: 8228

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/23/16 17:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*08/23/16 17:20*	*1*

Lab Sample ID: LCS 590-8228/1001
Matrix: Water
Analysis Batch: 8228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	1080		ug/L		108	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitrophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3-Nitroaniline	ND		0.40	0.12	ug/L		08/26/16 14:41	08/30/16 10:29	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitroaniline	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitrophenol	ND		3.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthene	ND		0.10	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthylene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Anthracene	ND		0.040	0.010	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzoic acid	ND		3.0	0.60	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzyl alcohol	0.193	J	0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-ethylhexyl) phthalate	2.02	J	3.0	1.2	ug/L		08/26/16 14:41	08/30/16 10:29	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		08/26/16 14:41	08/30/16 10:29	1
Carbazole	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Chrysene	ND		0.040	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenzofuran	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Diethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluoranthene	ND		0.050	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluorene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachloroethane	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Isophorone	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Naphthalene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Nitrobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pentachlorophenol	ND		0.70	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenanthrene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pyrene	ND		0.060	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*57 - 132*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorobiphenyl	*68*		*50 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorophenol	*74*		*50 - 113*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Nitrobenzene-d5	*88*		*59 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Phenol-d5	*81*		*52 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Terphenyl-d14	*97*		*72 - 140*	*08/26/16 14:41*	*08/30/16 10:29*	*1*

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.31		ug/L		65	40 - 115
1,2-Dichlorobenzene	2.00	1.27		ug/L		64	44 - 119
1,3-Dichlorobenzene	2.00	1.12		ug/L		56	34 - 116
1,4-Dichlorobenzene	2.00	1.10		ug/L		55	40 - 118
1-Methylnaphthalene	2.00	1.51		ug/L		75	54 - 119
2,4,5-Trichlorophenol	2.00	1.80		ug/L		90	56 - 122
2,4,6-Trichlorophenol	2.00	1.63		ug/L		82	55 - 134
2,4-Dichlorophenol	2.00	1.65		ug/L		83	50 - 125
2,4-Dimethylphenol	2.00	1.30	J	ug/L		65	20 - 106
2,4-Dinitrophenol	4.00	3.22	J	ug/L		81	24 - 139
2,4-Dinitrotoluene	2.00	1.85		ug/L		92	40 - 143
2,6-Dinitrotoluene	2.00	1.75		ug/L		87	45 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	55 - 125
2-Chlorophenol	2.00	1.71		ug/L		86	57 - 125
2-Methylnaphthalene	2.00	1.50		ug/L		75	56 - 117
2-Methylphenol	2.00	1.46		ug/L		73	53 - 118
2-Nitroaniline	2.00	2.01		ug/L		101	58 - 124
2-Nitrophenol	2.00	1.73		ug/L		87	20 - 150
3 & 4 Methylphenol	2.00	1.54		ug/L		77	54 - 112
3,3'-Dichlorobenzidine	4.00	1.91	J	ug/L		48	20 - 121
3-Nitroaniline	2.00	1.17		ug/L		58	22 - 124

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,6-Dinitro-2-methylphenol	4.00	3.39	J	ug/L		85	20 - 150
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	62 - 132
4-Chloro-3-methylphenol	2.00	1.70		ug/L		85	56 - 133
4-Chloroaniline	2.00	1.11		ug/L		55	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.50		ug/L		75	59 - 125
4-Nitroaniline	2.00	1.09		ug/L		55	40 - 118
4-Nitrophenol	4.00	2.77	J	ug/L		69	20 - 150
Acenaphthene	2.00	1.41		ug/L		71	55 - 113
Acenaphthylene	2.00	1.52		ug/L		76	24 - 135
Anthracene	2.00	1.41		ug/L		70	20 - 125
Benzo[a]anthracene	2.00	1.88		ug/L		94	49 - 115
Benzo[a]pyrene	2.00	1.39		ug/L		69	20 - 115
Benzo[b]fluoranthene	2.00	1.71		ug/L		85	63 - 129
Benzo[g,h,i]perylene	2.00	1.77		ug/L		89	58 - 127
Benzo[k]fluoranthene	2.00	1.71		ug/L		86	60 - 134
Benzoic acid	4.00	4.33		ug/L		108	20 - 150
Benzyl alcohol	2.00	2.95	*	ug/L		147	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.45		ug/L		72	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.64		ug/L		82	59 - 125
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.62	J	ug/L		131	22 - 150
Butyl benzyl phthalate	2.00	2.86		ug/L		143	46 - 150
Carbazole	2.00	2.06		ug/L		103	68 - 142
Chrysene	2.00	1.86		ug/L		93	57 - 131
Dibenz(a,h)anthracene	2.00	1.79		ug/L		90	56 - 124
Dibenzofuran	2.00	1.55		ug/L		77	60 - 125
Diethyl phthalate	2.00	1.79		ug/L		90	60 - 134
Dimethyl phthalate	2.00	1.82		ug/L		91	65 - 134
Di-n-butyl phthalate	2.00	2.28		ug/L		114	67 - 140
Di-n-octyl phthalate	2.00	2.08		ug/L		104	55 - 150
Fluoranthene	2.00	1.95		ug/L		97	70 - 135
Fluorene	2.00	1.57		ug/L		78	57 - 125
Hexachlorobenzene	2.00	1.55		ug/L		78	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.698	J	ug/L		35	20 - 110
Hexachloroethane	2.00	0.928		ug/L		46	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.91		ug/L		95	54 - 124
Isophorone	2.00	1.64		ug/L		82	64 - 125
Naphthalene	2.00	1.45		ug/L		72	56 - 119
Nitrobenzene	2.00	1.74		ug/L		87	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.68		ug/L		84	54 - 120
N-Nitrosodiphenylamine	2.00	1.44		ug/L		72	40 - 124
Pentachlorophenol	4.00	2.61		ug/L		65	30 - 122
Phenanthrene	2.00	1.76		ug/L		88	57 - 125
Phenol	2.00	1.80		ug/L		90	53 - 113
Pyrene	2.00	1.70		ug/L		85	64 - 128

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*57 - 132*
2-Fluorobiphenyl	*72*		*50 - 120*
2-Fluorophenol	*74*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*76*		*52 - 120*
Terphenyl-d14	*87*		*72 - 140*

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.46		ug/L		73	40 - 115	11	20
1,2-Dichlorobenzene			2.00	1.36		ug/L		68	44 - 119	7	20
1,3-Dichlorobenzene			2.00	1.22		ug/L		61	34 - 116	8	29
1,4-Dichlorobenzene			2.00	1.19		ug/L		59	40 - 118	8	20
1-Methylnaphthalene			2.00	1.54		ug/L		77	54 - 119	2	20
2,4,5-Trichlorophenol			2.00	1.80		ug/L		90	56 - 122	0	20
2,4,6-Trichlorophenol			2.00	1.59		ug/L		79	55 - 134	3	20
2,4-Dichlorophenol			2.00	1.66		ug/L		83	50 - 125	0	26
2,4-Dimethylphenol			2.00	1.50	J	ug/L		75	20 - 106	14	35
2,4-Dinitrophenol			4.00	3.37	J	ug/L		84	24 - 139	5	35
2,4-Dinitrotoluene			2.00	1.79		ug/L		89	40 - 143	3	29
2,6-Dinitrotoluene			2.00	1.74		ug/L		87	45 - 134	0	31
2-Chloronaphthalene			2.00	1.57		ug/L		79	55 - 125	4	20
2-Chlorophenol			2.00	1.76		ug/L		88	57 - 125	3	20
2-Methylnaphthalene			2.00	1.56		ug/L		78	56 - 117	4	20
2-Methylphenol			2.00	1.41		ug/L		70	53 - 118	4	33
2-Nitroaniline			2.00	1.98		ug/L		99	58 - 124	2	20
2-Nitrophenol			2.00	1.77		ug/L		89	20 - 150	2	35
3 & 4 Methylphenol			2.00	1.59		ug/L		79	54 - 112	3	20
3,3'-Dichlorobenzidine			4.00	2.81	*	ug/L		70	20 - 121	38	35
3-Nitroaniline			2.00	1.42		ug/L		71	22 - 124	19	35
4,6-Dinitro-2-methylphenol			4.00	3.56	J	ug/L		89	20 - 150	5	30
4-Bromophenyl phenyl ether			2.00	1.80		ug/L		90	62 - 132	0	20
4-Chloro-3-methylphenol			2.00	1.77		ug/L		89	56 - 133	4	20
4-Chloroaniline			2.00	1.29		ug/L		64	20 - 110	15	35
4-Chlorophenyl phenyl ether			2.00	1.51		ug/L		76	59 - 125	0	20
4-Nitroaniline			2.00	1.38	*	ug/L		69	40 - 118	24	20
4-Nitrophenol			4.00	3.50		ug/L		87	20 - 150	23	29
Acenaphthene			2.00	1.44		ug/L		72	55 - 113	2	20
Acenaphthylene			2.00	1.56		ug/L		78	24 - 135	3	20
Anthracene			2.00	1.40		ug/L		70	20 - 125	0	26
Benzo[a]anthracene			2.00	1.90		ug/L		95	49 - 115	1	20
Benzo[a]pyrene			2.00	1.41		ug/L		70	20 - 115	2	35
Benzo[b]fluoranthene			2.00	1.76		ug/L		88	63 - 129	3	20
Benzo[g,h,i]perylene			2.00	1.73		ug/L		86	58 - 127	3	20
Benzo[k]fluoranthene			2.00	1.62		ug/L		81	60 - 134	6	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzoic acid			4.00	3.55		ug/L		89	20 - 150	20	35
Benzyl alcohol			2.00	1.99	*	ug/L		100	52 - 124	39	20
bis (2-chloroisopropyl) ether			2.00	1.52		ug/L		76	44 - 123	5	20
Bis(2-chloroethoxy)methane			2.00	1.64		ug/L		82	59 - 125	0	20
Bis(2-chloroethyl)ether			2.00	1.71		ug/L		86	55 - 125	3	20
Bis(2-ethylhexyl) phthalate			2.00	3.62	*	ug/L		181	22 - 150	32	20
Butyl benzyl phthalate			2.00	2.65		ug/L		132	46 - 150	8	20
Carbazole			2.00	2.07		ug/L		103	68 - 142	0	20
Chrysene			2.00	1.83		ug/L		91	57 - 131	2	20
Dibenz(a,h)anthracene			2.00	1.75		ug/L		87	56 - 124	2	20
Dibenzofuran			2.00	1.57		ug/L		78	60 - 125	1	20
Diethyl phthalate			2.00	1.59		ug/L		80	60 - 134	12	20
Dimethyl phthalate			2.00	1.80		ug/L		90	65 - 134	1	20
Di-n-butyl phthalate			2.00	2.14		ug/L		107	67 - 140	6	20
Di-n-octyl phthalate			2.00	2.05		ug/L		103	55 - 150	1	20
Fluoranthene			2.00	1.98		ug/L		99	70 - 135	1	20
Fluorene			2.00	1.57		ug/L		79	57 - 125	0	20
Hexachlorobenzene			2.00	1.57		ug/L		78	55 - 135	1	20
Hexachlorobutadiene			2.00	1.21		ug/L		61	25 - 125	18	31
Hexachlorocyclopentadiene			2.00	0.766	J	ug/L		38	20 - 110	9	35
Hexachloroethane			2.00	1.04		ug/L		52	24 - 125	11	35
Indeno[1,2,3-cd]pyrene			2.00	1.86		ug/L		93	54 - 124	2	20
Isophorone			2.00	1.65		ug/L		83	64 - 125	1	20
Naphthalene			2.00	1.51		ug/L		76	56 - 119	4	20
Nitrobenzene			2.00	1.70		ug/L		85	62 - 125	2	20
N-Nitrosodi-n-propylamine			2.00	1.77		ug/L		89	54 - 120	5	20
N-Nitrosodiphenylamine			2.00	1.41		ug/L		71	40 - 124	2	20
Pentachlorophenol			4.00	2.64		ug/L		66	30 - 122	1	35
Phenanthrene			2.00	1.73		ug/L		87	57 - 125	2	20
Phenol			2.00	1.58		ug/L		79	53 - 113	13	20
Pyrene			2.00	1.70		ug/L		85	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*91*		*57 - 132*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol	*71*		*50 - 113*
Nitrobenzene-d5	*83*		*59 - 120*
Phenol-d5	*74*		*52 - 120*
Terphenyl-d14	*83*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Lab Sample ID: LCS 590-8317/3-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.135		ug/L		108	60 - 140

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226041/1-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 17:56	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 17:56	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*22 - 150*	*08/26/16 15:29*	*08/29/16 17:56*	*1*
Tetrachloro-m-xylene	*95*		*40 - 113*	*08/26/16 15:29*	*08/29/16 17:56*	*1*

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.194		ug/L		97	32 - 133
4,4'-DDE	0.200	0.190		ug/L		95	30 - 138
4,4'-DDT	0.200	0.213		ug/L		107	34 - 131
Aldrin	0.200	0.187		ug/L		93	35 - 124
alpha-BHC	0.200	0.185		ug/L		92	39 - 126
alpha-Chlordane	0.200	0.185		ug/L		93	37 - 133
beta-BHC	0.200	0.181		ug/L		91	38 - 114
delta-BHC	0.200	0.184		ug/L		92	20 - 138
Dieldrin	0.200	0.190		ug/L		95	39 - 140
Endosulfan I	0.200	0.190		ug/L		95	23 - 142

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endosulfan II	0.200	0.192		ug/L		96	20 - 150
Endosulfan sulfate	0.200	0.192		ug/L		96	36 - 130
Endrin	0.200	0.225		ug/L		113	32 - 130
Endrin aldehyde	0.200	0.209		ug/L		105	37 - 139
Endrin ketone	0.200	0.188		ug/L		94	32 - 136
gamma-BHC (Lindane)	0.200	0.171		ug/L		85	40 - 121
gamma-Chlordane	0.200	0.187		ug/L		93	38 - 136
Heptachlor	0.200	0.191		ug/L		95	39 - 129
Heptachlor epoxide	0.200	0.178		ug/L		89	34 - 135
Methoxychlor	0.200	0.213		ug/L		106	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*105*		*22 - 150*
Tetrachloro-m-xylene	*100*		*40 - 113*

Lab Sample ID: LCSD 580-226041/3-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.178		ug/L		89	32 - 133	8	35
4,4'-DDE	0.200	0.174		ug/L		87	30 - 138	8	35
4,4'-DDT	0.200	0.197		ug/L		99	34 - 131	8	35
Aldrin	0.200	0.173		ug/L		86	35 - 124	8	35
alpha-BHC	0.200	0.173		ug/L		86	39 - 126	7	35
alpha-Chlordane	0.200	0.171		ug/L		85	37 - 133	8	35
beta-BHC	0.200	0.170		ug/L		85	38 - 114	7	35
delta-BHC	0.200	0.170		ug/L		85	20 - 138	8	35
Dieldrin	0.200	0.176		ug/L		88	39 - 140	8	35
Endosulfan I	0.200	0.176		ug/L		88	23 - 142	8	35
Endosulfan II	0.200	0.177		ug/L		89	20 - 150	8	35
Endosulfan sulfate	0.200	0.177		ug/L		89	36 - 130	8	35
Endrin	0.200	0.208		ug/L		104	32 - 130	8	35
Endrin aldehyde	0.200	0.200		ug/L		100	37 - 139	5	35
Endrin ketone	0.200	0.174		ug/L		87	32 - 136	7	35
gamma-BHC (Lindane)	0.200	0.164		ug/L		82	40 - 121	4	35
gamma-Chlordane	0.200	0.174		ug/L		87	38 - 136	7	35
Heptachlor	0.200	0.180		ug/L		90	39 - 129	6	35
Heptachlor epoxide	0.200	0.168		ug/L		84	34 - 135	6	35
Methoxychlor	0.200	0.199		ug/L		99	33 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*92*		*22 - 150*
Tetrachloro-m-xylene	*95*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.60	1.56		ug/L		98	23 - 140
PCB-1260	1.60	1.47		ug/L		92	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-339570/1-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/25/16 13:43	09/10/16 11:35	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/25/16 13:43	09/10/16 11:35	1
Bolstar	ND		1.0	0.31	ug/L		08/25/16 13:43	09/10/16 11:35	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/25/16 13:43	09/10/16 11:35	1
Coumaphos	ND		1.0	0.14	ug/L		08/25/16 13:43	09/10/16 11:35	1
Demeton, Total	ND		3.0	0.21	ug/L		08/25/16 13:43	09/10/16 11:35	1
Diazinon	ND		0.50	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Dichlorvos	ND		0.50	0.16	ug/L		08/25/16 13:43	09/10/16 11:35	1
Dimethoate	ND		1.5	0.45	ug/L		08/25/16 13:43	09/10/16 11:35	1
Disulfoton	ND		1.0	0.32	ug/L		08/25/16 13:43	09/10/16 11:35	1
EPN	ND		1.2	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Famphur	ND		1.0	0.18	ug/L		08/25/16 13:43	09/10/16 11:35	1
Fensulfothion	ND		2.5	0.54	ug/L		08/25/16 13:43	09/10/16 11:35	1
Fenthion	ND		2.5	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Malathion	ND		2.0	0.13	ug/L		08/25/16 13:43	09/10/16 11:35	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-339570/1-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Merphos	ND		5.0	0.17	ug/L		08/25/16 13:43	09/10/16 11:35	1
Methyl parathion	ND		4.0	0.14	ug/L		08/25/16 13:43	09/10/16 11:35	1
Mevinphos	ND		6.2	0.46	ug/L		08/25/16 13:43	09/10/16 11:35	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/25/16 13:43	09/10/16 11:35	1
Phorate	ND		1.2	0.15	ug/L		08/25/16 13:43	09/10/16 11:35	1
Ronnel	ND		10	0.12	ug/L		08/25/16 13:43	09/10/16 11:35	1
Simazine	ND		10	0.22	ug/L		08/25/16 13:43	09/10/16 11:35	1
Sulfotepp	ND		1.5	0.17	ug/L		08/25/16 13:43	09/10/16 11:35	1
Thionazin	ND		1.0	0.31	ug/L		08/25/16 13:43	09/10/16 11:35	1
Tokuthion	ND		1.6	0.12	ug/L		08/25/16 13:43	09/10/16 11:35	1
Trichloronate	ND		1.5	0.24	ug/L		08/25/16 13:43	09/10/16 11:35	1
Ethoprop	ND		1.5	0.18	ug/L		08/25/16 13:43	09/10/16 11:35	1
Propazine	ND		10	0.29	ug/L		08/25/16 13:43	09/10/16 11:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*68*		*49 - 171*	*08/25/16 13:43*	*09/10/16 11:35*	*1*
Triphenylphosphate	*97*		*60 - 154*	*08/25/16 13:43*	*09/10/16 11:35*	*1*

Lab Sample ID: LCS 280-339570/2-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	3.71	J	ug/L		93	52 - 115
Azinphos-methyl	4.00	3.69		ug/L		92	59 - 115
Chlorpyrifos	4.00	3.76		ug/L		94	54 - 115
Coumaphos	4.00	4.15		ug/L		104	63 - 118
Demeton, Total	4.00	2.16	J	ug/L		54	44 - 115
Diazinon	4.00	3.24		ug/L		81	47 - 115
Dichlorvos	4.00	4.66		ug/L		116	53 - 128
Dimethoate	4.00	2.89		ug/L		72	42 - 115
Disulfoton	4.00	3.17		ug/L		79	45 - 115
EPN	4.00	3.66		ug/L		92	56 - 115
Famphur	4.00	3.83		ug/L		96	62 - 115
Fensulfothion	4.00	4.01		ug/L		100	50 - 115
Fenthion	4.00	3.62		ug/L		91	55 - 115
Malathion	4.00	3.25		ug/L		81	52 - 115
Merphos	4.00	2.03	J	ug/L		51	31 - 115
Methyl parathion	4.00	3.84	J	ug/L		96	58 - 115
Mevinphos	4.00	3.04	J	ug/L		76	42 - 115
Ethyl Parathion	4.00	3.79		ug/L		95	55 - 115
Phorate	4.00	2.76		ug/L		69	40 - 115
Ronnel	4.00	3.80	J	ug/L		95	55 - 115
Simazine	4.00	3.67	J	ug/L		92	39 - 115
Sulfotepp	4.00	3.44		ug/L		86	53 - 115
Thionazin	4.00	3.55		ug/L		89	54 - 115
Trichloronate	4.00	3.32		ug/L		83	48 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-339570/2-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethoprop	4.00	3.47		ug/L		87	50 - 115
BolstarFamphur	4.00	7.97		ug/L		199	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*93*		*49 - 171*
Triphenylphosphate	*112*		*60 - 154*

Lab Sample ID: LCSD 280-339570/3-A
Matrix: Water
Analysis Batch: 341530

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	3.45	J	ug/L		86	52 - 115	7	45
Azinphos-methyl	4.00	3.50		ug/L		88	59 - 115	5	20
Chlorpyrifos	4.00	3.49		ug/L		87	54 - 115	7	24
Coumaphos	4.00	3.85		ug/L		96	63 - 118	7	20
Demeton, Total	4.00	1.93	J	ug/L		48	44 - 115	11	38
Diazinon	4.00	3.04		ug/L		76	47 - 115	6	37
Dichlorvos	4.00	4.24		ug/L		106	53 - 128	9	37
Dimethoate	4.00	2.91		ug/L		73	42 - 115	0	38
Disulfoton	4.00	2.93		ug/L		73	45 - 115	8	31
EPN	4.00	3.42		ug/L		86	56 - 115	7	20
Famphur	4.00	3.62		ug/L		91	62 - 115	6	20
Fensulfothion	4.00	3.82		ug/L		96	50 - 115	5	27
Fenthion	4.00	3.37		ug/L		84	55 - 115	7	22
Malathion	4.00	3.04		ug/L		76	52 - 115	7	20
Merphos	4.00	1.91	J	ug/L		48	31 - 115	6	25
Methyl parathion	4.00	3.44	J	ug/L		86	58 - 115	11	20
Mevinphos	4.00	2.74	J	ug/L		68	42 - 115	10	27
Ethyl Parathion	4.00	3.54		ug/L		89	55 - 115	7	20
Phorate	4.00	2.56		ug/L		64	40 - 115	8	32
Ronnel	4.00	3.53	J	ug/L		88	55 - 115	8	28
Simazine	4.00	3.38	J	ug/L		84	39 - 115	8	53
Sulfotepp	4.00	3.18		ug/L		79	53 - 115	8	27
Thionazin	4.00	3.15		ug/L		79	54 - 115	12	27
Trichloronate	4.00	3.09		ug/L		77	48 - 115	7	26
Ethoprop	4.00	3.05		ug/L		76	50 - 115	13	29
BolstarFamphur	4.00	7.43		ug/L		186		7	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*76*		*49 - 171*
Triphenylphosphate	*104*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-339693/1-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/26/16 10:50	09/01/16 18:17	1
2,4-D	ND		4.0	0.21	ug/L		08/26/16 10:50	09/01/16 18:17	1
2,4-DB	ND		4.0	0.36	ug/L		08/26/16 10:50	09/01/16 18:17	1
Dalapon	ND		2.0	0.91	ug/L		08/26/16 10:50	09/01/16 18:17	1
Dicamba	ND		2.0	0.15	ug/L		08/26/16 10:50	09/01/16 18:17	1
Dichlorprop	ND		4.0	0.65	ug/L		08/26/16 10:50	09/01/16 18:17	1
MCPA	ND		400	17	ug/L		08/26/16 10:50	09/01/16 18:17	1
MCPP	ND		400	33	ug/L		08/26/16 10:50	09/01/16 18:17	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/26/16 10:50	09/01/16 18:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*81*		*39 - 135*	*08/26/16 10:50*	*09/01/16 18:17*	*1*

Lab Sample ID: LCS 280-339693/2-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.78		ug/L		76	45 - 135
2,4-D	5.00	3.75	J	ug/L		75	46 - 126
2,4-DB	5.00	3.65	J	ug/L		73	18 - 135
Dalapon	5.00	3.77		ug/L		75	52 - 119
Dicamba	5.00	3.93		ug/L		79	50 - 128
Dichlorprop	5.00	3.90	J	ug/L		78	44 - 121
MCPA	500	376	J	ug/L		75	43 - 118
MCPP	500	438		ug/L		88	45 - 121
Silvex (2,4,5-TP)	5.00	4.21		ug/L		84	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Lab Sample ID: LCSD 280-339693/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339693

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.88		ug/L		78	45 - 135	3	30
2,4-D	5.00	3.85	J	ug/L		77	46 - 126	3	30
2,4-DB	5.00	4.05		ug/L		81	18 - 135	11	30
Dalapon	5.00	4.03		ug/L		81	52 - 119	7	30
Dicamba	5.00	3.91		ug/L		78	50 - 128	1	30
Dichlorprop	5.00	3.89	J	ug/L		78	44 - 121	0	30
MCPA	500	392	J	ug/L		78	43 - 118	4	30
MCPP	500	444		ug/L		89	45 - 121	2	30
Silvex (2,4,5-TP)	5.00	4.23		ug/L		85	48 - 127	0	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-339693/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339693

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	82		39 - 135

Lab Sample ID: MB 280-339876/1-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339876

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/29/16 09:40	09/01/16 15:15	1
2,4-D	ND		4.0	0.21	ug/L		08/29/16 09:40	09/01/16 15:15	1
2,4-DB	ND		4.0	0.36	ug/L		08/29/16 09:40	09/01/16 15:15	1
Dalapon	ND		2.0	0.91	ug/L		08/29/16 09:40	09/01/16 15:15	1
Dicamba	ND		2.0	0.15	ug/L		08/29/16 09:40	09/01/16 15:15	1
Dichlorprop	ND		4.0	0.65	ug/L		08/29/16 09:40	09/01/16 15:15	1
MCPA	ND		400	17	ug/L		08/29/16 09:40	09/01/16 15:15	1
MCPP	ND		400	33	ug/L		08/29/16 09:40	09/01/16 15:15	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/29/16 09:40	09/01/16 15:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	83		39 - 135	08/29/16 09:40	09/01/16 15:15	1

Lab Sample ID: LCS 280-339876/2-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.71		ug/L		74	45 - 135
2,4-D	5.00	3.77	J	ug/L		75	46 - 126
2,4-DB	5.00	3.99	J	ug/L		80	18 - 135
Dalapon	5.00	3.34		ug/L		67	52 - 119
Dicamba	5.00	3.72		ug/L		74	50 - 128
Dichlorprop	5.00	3.66	J	ug/L		73	44 - 121
MCPA	500	373	J	ug/L		75	43 - 118
MCPP	500	425		ug/L		85	45 - 121
Silvex (2,4,5-TP)	5.00	4.02		ug/L		80	48 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	78		39 - 135

Lab Sample ID: LCSD 280-339876/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.97		ug/L		79	45 - 135	7	30
2,4-D	5.00	3.89	J	ug/L		78	46 - 126	3	30
2,4-DB	5.00	3.73	J	ug/L		75	18 - 135	7	30
Dalapon	5.00	3.52		ug/L		70	52 - 119	5	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-339876/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339876

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dicamba			5.00	3.91		ug/L		78	50 - 128	5	30
Dichlorprop			5.00	3.87	J	ug/L		77	44 - 121	5	30
MCPA			500	389	J	ug/L		78	43 - 118	4	30
MCPP			500	446		ug/L		89	45 - 121	5	30
Silvex (2,4,5-TP)			5.00	4.16		ug/L		83	48 - 127	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8283/1-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 13:12	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*

Lab Sample ID: LCS 590-8283/2-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)			1.61	1.24		mg/L		77	50 - 150
Residual Range Organics (RRO) (C25-C36)			1.60	1.58		mg/L		99	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*80*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8223/1013
Matrix: Water
Analysis Batch: 8223

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/23/16 12:59	1
Sulfate	ND		0.50	0.13	mg/L			08/23/16 12:59	1

Lab Sample ID: LCS 590-8223/1012
Matrix: Water
Analysis Batch: 8223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	12.8		mg/L		103	90 - 110
Sulfate	12.5	12.9		mg/L		103	90 - 110

Lab Sample ID: MB 590-8224/1013
Matrix: Water
Analysis Batch: 8224

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/23/16 12:59	1
Nitrite as N	ND		0.20	0.069	mg/L			08/23/16 12:59	1

Lab Sample ID: LCS 590-8224/1012
Matrix: Water
Analysis Batch: 8224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.13		mg/L		103	90 - 110
Nitrite as N	5.00	5.01		mg/L		100	90 - 110

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-127279/1-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127279

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.26	pg/L		09/15/16 09:07	09/22/16 00:50	1
2,3,7,8-TCDF	ND		10	0.16	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8-PeCDD	ND		50	0.37	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8-PeCDF	ND		50	0.21	pg/L		09/15/16 09:07	09/22/16 00:50	1
2,3,4,7,8-PeCDF	ND		50	0.22	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,7,8-HxCDD	ND		50	0.19	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,6,7,8-HxCDD	ND		50	0.18	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8,9-HxCDD	ND		50	0.15	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,7,8-HxCDF	ND		50	0.22	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,6,7,8-HxCDF	ND		50	0.19	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8,9-HxCDF	ND		50	0.21	pg/L		09/15/16 09:07	09/22/16 00:50	1
2,3,4,6,7,8-HxCDF	ND		50	0.21	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.30	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,6,7,8-HpCDF	ND		50	0.13	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.16	pg/L		09/15/16 09:07	09/22/16 00:50	1
OCDD	2.63	J	100	0.45	pg/L		09/15/16 09:07	09/22/16 00:50	1
OCDF	ND		100	0.51	pg/L		09/15/16 09:07	09/22/16 00:50	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-2,3,7,8-TCDF	*97*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-127279/1-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127279

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	69		40 - 135	09/15/16 09:07	09/22/16 00:50	1
13C-1,2,3,4,6,7,8-HpCDF	77		40 - 135	09/15/16 09:07	09/22/16 00:50	1
13C-OCDD	64		40 - 135	09/15/16 09:07	09/22/16 00:50	1

Lab Sample ID: LCS 320-127279/2-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	221		pg/L		110	64 - 142
2,3,7,8-TCDF	200	200		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1220		pg/L		122	71 - 140
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	76 - 135
2,3,4,7,8-PeCDF	1000	1120		pg/L		112	74 - 137
1,2,3,4,7,8-HxCDD	1000	1020		pg/L		102	56 - 146
1,2,3,6,7,8-HxCDD	1000	1200		pg/L		120	73 - 144
1,2,3,7,8,9-HxCDD	1000	1050		pg/L		105	71 - 151
1,2,3,4,7,8-HxCDF	1000	1200		pg/L		120	75 - 131
1,2,3,6,7,8-HxCDF	1000	1340	*	pg/L		134	76 - 133
1,2,3,7,8,9-HxCDF	1000	1190		pg/L		119	77 - 142
2,3,4,6,7,8-HxCDF	1000	1270		pg/L		127	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	1180		pg/L		118	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1190		pg/L		119	79 - 133
1,2,3,4,7,8,9-HpCDF	1000	1160		pg/L		116	83 - 130
OCDD	2000	2130		pg/L		107	80 - 132
OCDF	2000	2310		pg/L		115	72 - 140

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	85		40 - 135
13C-2,3,7,8-TCDF	93		40 - 135
13C-1,2,3,7,8-PeCDD	68		40 - 135
13C-1,2,3,7,8-PeCDF	83		40 - 135
13C-1,2,3,6,7,8-HxCDD	92		40 - 135
13C-1,2,3,4,7,8-HxCDF	85		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	69		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	78		40 - 135
13C-OCDD	66		40 - 135

Lab Sample ID: LCSD 320-127279/3-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127279

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	200	223		pg/L		111	64 - 142	1	20
2,3,7,8-TCDF	200	195		pg/L		98	71 - 142	2	20
1,2,3,7,8-PeCDD	1000	1130		pg/L		113	71 - 140	8	20
1,2,3,7,8-PeCDF	1000	1110		pg/L		111	76 - 135	5	20
2,3,4,7,8-PeCDF	1000	1110		pg/L		111	74 - 137	1	20
1,2,3,4,7,8-HxCDD	1000	990		pg/L		99	56 - 146	3	20

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-127279/3-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127279

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,6,7,8-HxCDD			1000	1120		pg/L		112	73 - 144	7	20
1,2,3,7,8,9-HxCDD			1000	1040		pg/L		104	71 - 151	1	20
1,2,3,4,7,8-HxCDF			1000	1160		pg/L		116	75 - 131	4	20
1,2,3,6,7,8-HxCDF			1000	1250		pg/L		125	76 - 133	7	20
1,2,3,7,8,9-HxCDF			1000	1140		pg/L		114	77 - 142	4	20
2,3,4,6,7,8-HxCDF			1000	1210		pg/L		121	80 - 137	5	20
1,2,3,4,6,7,8-HpCDD			1000	1150		pg/L		115	78 - 139	3	20
1,2,3,4,6,7,8-HpCDF			1000	1160		pg/L		116	79 - 133	2	20
1,2,3,4,7,8,9-HpCDF			1000	1150		pg/L		115	83 - 130	1	20
OCDD			2000	2150		pg/L		108	80 - 132	1	20
OCDF			2000	2290		pg/L		114	72 - 140	1	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*87*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*68*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*82*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*76*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*40 - 135*
13C-OCDD	*60*		*40 - 135*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-225973/14-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225973

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/26/16 10:51	08/30/16 01:13	1
Antimony	ND		0.00040	0.000080	mg/L		08/26/16 10:51	08/30/16 01:13	1
Barium	ND		0.0012	0.000054	mg/L		08/26/16 10:51	08/30/16 01:13	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 10:51	08/30/16 01:13	1
Cadmium	ND		0.00040	0.000028	mg/L		08/26/16 10:51	08/30/16 01:13	1
Chromium	ND		0.00040	0.00014	mg/L		08/26/16 10:51	08/30/16 01:13	1
Copper	ND		0.0020	0.00060	mg/L		08/26/16 10:51	08/30/16 01:13	1
Iron	ND		0.040	0.0058	mg/L		08/26/16 10:51	08/30/16 01:13	1
Lead	ND		0.00040	0.000034	mg/L		08/26/16 10:51	08/30/16 01:13	1
Manganese	ND		0.0020	0.00035	mg/L		08/26/16 10:51	08/30/16 01:13	1
Nickel	ND		0.0030	0.00040	mg/L		08/26/16 10:51	08/30/16 01:13	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 10:51	08/30/16 01:13	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 10:51	08/30/16 01:13	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 10:51	08/30/16 01:13	1
Vanadium	ND		0.0040	0.00098	mg/L		08/26/16 10:51	08/30/16 01:13	1
Zinc	ND		0.0070	0.0019	mg/L		08/26/16 10:51	08/30/16 01:13	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-225973/15-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.105		mg/L		105	85 - 115
Antimony	0.100	0.107		mg/L		107	85 - 115
Barium	0.100	0.110		mg/L		110	85 - 115
Beryllium	0.100	0.106		mg/L		106	85 - 115
Cadmium	0.100	0.104		mg/L		104	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.106		mg/L		106	85 - 115
Iron	10.0	10.1		mg/L		101	85 - 115
Lead	0.100	0.108		mg/L		108	85 - 115
Manganese	0.100	0.103		mg/L		103	85 - 115
Nickel	0.100	0.106		mg/L		106	85 - 115
Selenium	0.100	0.104		mg/L		104	85 - 115
Silver	0.100	0.105		mg/L		105	85 - 115
Thallium	0.100	0.108		mg/L		108	85 - 115
Vanadium	0.100	0.103		mg/L		103	85 - 115
Zinc	0.100	0.108		mg/L		108	85 - 115

Lab Sample ID: LCSD 580-225973/16-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 225973

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.105		mg/L		105	85 - 115	0	20
Antimony	0.100	0.106		mg/L		106	85 - 115	1	20
Barium	0.100	0.109		mg/L		109	85 - 115	0	20
Beryllium	0.100	0.106		mg/L		106	85 - 115	0	20
Cadmium	0.100	0.104		mg/L		104	85 - 115	1	20
Chromium	0.100	0.102		mg/L		102	85 - 115	0	20
Copper	0.100	0.106		mg/L		106	85 - 115	0	20
Iron	10.0	10.1		mg/L		101	85 - 115	0	20
Lead	0.100	0.107		mg/L		107	85 - 115	1	20
Manganese	0.100	0.103		mg/L		103	85 - 115	0	20
Nickel	0.100	0.107		mg/L		107	85 - 115	0	20
Selenium	0.100	0.103		mg/L		103	85 - 115	1	20
Silver	0.100	0.105		mg/L		105	85 - 115	0	20
Thallium	0.100	0.108		mg/L		108	85 - 115	0	20
Vanadium	0.100	0.104		mg/L		104	85 - 115	1	20
Zinc	0.100	0.107		mg/L		107	85 - 115	0	20

Lab Sample ID: MB 580-226123/11-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226123

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:23	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:23	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:23	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:23	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226123/11-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226123

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:23	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:23	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:23	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:23	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:23	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:23	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:23	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:23	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:23	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:23	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:23	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:23	1

Lab Sample ID: LCS 580-226123/12-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226123

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.104		mg/L		104	85 - 115
Antimony	0.100	0.104		mg/L		104	85 - 115
Barium	0.100	0.109		mg/L		109	85 - 115
Beryllium	0.100	0.102		mg/L		102	85 - 115
Cadmium	0.100	0.102		mg/L		102	85 - 115
Chromium	0.100	0.0983		mg/L		98	85 - 115
Copper	0.100	0.102		mg/L		102	85 - 115
Iron	10.0	9.83		mg/L		98	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.101		mg/L		101	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.101		mg/L		101	85 - 115
Silver	0.100	0.102		mg/L		102	85 - 115
Thallium	0.100	0.104		mg/L		104	85 - 115
Vanadium	0.100	0.100		mg/L		100	85 - 115
Zinc	0.100	0.103		mg/L		103	85 - 115

Lab Sample ID: LCSD 580-226123/13-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226123

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.103		mg/L		103	85 - 115	0	20
Antimony	0.100	0.106		mg/L		106	85 - 115	2	20
Barium	0.100	0.110		mg/L		110	85 - 115	1	20
Beryllium	0.100	0.102		mg/L		102	85 - 115	0	20
Cadmium	0.100	0.102		mg/L		102	85 - 115	0	20
Chromium	0.100	0.0996		mg/L		100	85 - 115	1	20
Copper	0.100	0.103		mg/L		103	85 - 115	1	20
Iron	10.0	10.0		mg/L		100	85 - 115	2	20
Lead	0.100	0.102		mg/L		102	85 - 115	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-226123/13-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226123

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	0.100	0.101		mg/L		101	85 - 115	0	20
Nickel	0.100	0.100		mg/L		100	85 - 115	1	20
Selenium	0.100	0.100		mg/L		100	85 - 115	1	20
Silver	0.100	0.102		mg/L		102	85 - 115	0	20
Thallium	0.100	0.104		mg/L		104	85 - 115	0	20
Vanadium	0.100	0.101		mg/L		101	85 - 115	0	20
Zinc	0.100	0.101		mg/L		101	85 - 115	2	20

Lab Sample ID: MB 580-226150/14-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226150

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 19:20	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 19:20	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 19:20	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 19:20	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 19:20	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 19:20	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 19:20	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 19:20	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 19:20	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 19:20	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 19:20	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 19:20	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 19:20	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 19:20	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 19:20	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 19:20	1

Lab Sample ID: LCS 580-226150/15-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.107		mg/L		107	85 - 115
Antimony	0.100	0.110		mg/L		110	85 - 115
Barium	0.100	0.112		mg/L		112	85 - 115
Beryllium	0.100	0.106		mg/L		106	85 - 115
Cadmium	0.100	0.105		mg/L		105	85 - 115
Chromium	0.100	0.103		mg/L		103	85 - 115
Copper	0.100	0.105		mg/L		105	85 - 115
Iron	10.0	10.3		mg/L		103	85 - 115
Lead	0.100	0.106		mg/L		106	85 - 115
Manganese	0.100	0.105		mg/L		105	85 - 115
Nickel	0.100	0.105		mg/L		105	85 - 115
Selenium	0.100	0.105		mg/L		105	85 - 115
Silver	0.100	0.106		mg/L		106	85 - 115
Thallium	0.100	0.108		mg/L		108	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226150/15-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.100	0.104		mg/L		104	85 - 115
Zinc	0.100	0.105		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226150/16-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226150

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.106		mg/L		106	85 - 115	1	20
Antimony	0.100	0.109		mg/L		109	85 - 115	1	20
Barium	0.100	0.111		mg/L		111	85 - 115	1	20
Beryllium	0.100	0.105		mg/L		105	85 - 115	1	20
Cadmium	0.100	0.105		mg/L		105	85 - 115	1	20
Chromium	0.100	0.103		mg/L		103	85 - 115	0	20
Copper	0.100	0.104		mg/L		104	85 - 115	1	20
Iron	10.0	10.3		mg/L		103	85 - 115	1	20
Lead	0.100	0.106		mg/L		106	85 - 115	0	20
Manganese	0.100	0.105		mg/L		105	85 - 115	1	20
Nickel	0.100	0.104		mg/L		104	85 - 115	1	20
Selenium	0.100	0.105		mg/L		105	85 - 115	0	20
Silver	0.100	0.105		mg/L		105	85 - 115	1	20
Thallium	0.100	0.108		mg/L		108	85 - 115	1	20
Vanadium	0.100	0.105		mg/L		105	85 - 115	1	20
Zinc	0.100	0.104		mg/L		104	85 - 115	1	20

Lab Sample ID: MB 580-225830/4-B
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226123

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 10:19	08/31/16 17:19	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 10:19	08/31/16 17:19	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 10:19	08/31/16 17:19	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:19	08/31/16 17:19	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 10:19	08/31/16 17:19	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 10:19	08/31/16 17:19	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 10:19	08/31/16 17:19	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 10:19	08/31/16 17:19	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 10:19	08/31/16 17:19	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 10:19	08/31/16 17:19	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 10:19	08/31/16 17:19	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:19	08/31/16 17:19	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:19	08/31/16 17:19	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:19	08/31/16 17:19	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 10:19	08/31/16 17:19	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 10:19	08/31/16 17:19	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-4284-1 DU — **Client Sample ID: MW-4A-082216**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 226420 — **Prep Batch: 226123**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0025		0.00249		mg/L		1	20
Antimony	0.00014	J	0.000138	J	mg/L		0	20
Barium	0.032		0.0318		mg/L		0	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	0.000029	J	0.0000383	J F5	mg/L		27	20
Chromium	0.00032	J	0.000250	J F5	mg/L		24	20
Copper	0.0046		0.00469		mg/L		1	20
Iron	0.031	J	0.0290	J	mg/L		7	20
Lead	0.00037	J	0.000341	J	mg/L		9	20
Manganese	0.0010	J	0.000919	J	mg/L		13	20
Nickel	0.00072	J	0.000747	J	mg/L		4	20
Selenium	ND		0.000354	J	mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0065		0.00647		mg/L		0.7	20
Zinc	0.0022	J	0.00257	J	mg/L		14	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-225962/18-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226060 — **Prep Batch: 225962**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/26/16 10:03	08/26/16 15:23	1

Lab Sample ID: LCS 580-225962/19-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226060 — **Prep Batch: 225962**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00201		mg/L		100	85 - 115

Lab Sample ID: LCSD 580-225962/20-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226060 — **Prep Batch: 225962**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00204		mg/L		102	85 - 115	2	20

Lab Sample ID: LCSSRM 580-225962/21-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226060 — **Prep Batch: 225962**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00198		mg/L		99	75 - 125

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-226222/9-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00209		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226222/10-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00206		mg/L		103	85 - 115	2	20

Lab Sample ID: MB 580-226226/19-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 14:56	1

Lab Sample ID: LCS 580-226226/20-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00210		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226226/21-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00202		mg/L		101	85 - 115	4	20

Lab Sample ID: MB 580-225830/4-D
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226222

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:47	08/30/16 14:29	1

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-365923/1-A
Matrix: Water
Analysis Batch: 365936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		08/26/16 16:16	08/26/16 19:59	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 490-365923/2-A
Matrix: Water
Analysis Batch: 365936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.100		mg/L		100	90 - 110

Lab Sample ID: LCSD 490-365923/3-A
Matrix: Water
Analysis Batch: 365936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 365923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.108		mg/L		108	90 - 110	8	20

Lab Sample ID: 590-4284-3 MS
Matrix: Water
Analysis Batch: 365936

Client Sample ID: MW-2A-082216
Prep Type: Total/NA
Prep Batch: 365923

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	ND	F1	mg/L		0	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-365836/1-A
Matrix: Water
Analysis Batch: 366333

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		08/26/16 14:02	08/29/16 12:17	1

Lab Sample ID: LCS 490-365836/2-A
Matrix: Water
Analysis Batch: 366333

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.57		mg/L		91	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-365785/3
Matrix: Water
Analysis Batch: 365785

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/26/16 12:01	1

Lab Sample ID: LCS 490-365785/4
Matrix: Water
Analysis Batch: 365785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.5		mg/L		97	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-365785/5
Matrix: Water
Analysis Batch: 365785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	47.9		mg/L		96	90 - 110	1	20

Lab Sample ID: 590-4284-3 DU
Matrix: Water
Analysis Batch: 365785

Client Sample ID: MW-2A-082216
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chemical Oxygen Demand	8.9	J		9.76	J	mg/L				9	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-366492/1
Matrix: Water
Analysis Batch: 366492

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			08/29/16 16:45	1

Lab Sample ID: LCS 490-366492/4
Matrix: Water
Analysis Batch: 366492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.2		mg/L		102	90 - 110		
TOC Result 1			10.0	10.1		mg/L		101	90 - 110		
TOC Result 2			10.0	10.4		mg/L		104	90 - 110		

Lab Sample ID: 590-4284-1 MS
Matrix: Water
Analysis Batch: 366492

Client Sample ID: MW-4A-082216
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	4.3		20.0	23.7		mg/L		97	75 - 122		
TOC Result 1	4.4		20.0	23.5		mg/L		95	75 - 122		
TOC Result 2	4.2		20.0	23.9		mg/L		98	75 - 122		

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-4A-082216

Date Collected: 08/22/16 11:02
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8229	08/23/16 23:50	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8228	08/23/16 23:50	MRS	TAL SPK
Total/NA	Prep	3520C			1053.8 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 15:12	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 12:30	NMI	TAL SPK
Total/NA	Prep	3510C			248.8 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 19:37	JCP	TAL SEA
Total/NA	Prep	3510C			245.3 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 20:20	NMI	TAL SPK
Total/NA	Prep	3510C			1051.8 mL	2 mL	339570	08/25/16 14:55	KI	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	341530	09/10/16 13:07	TEM	TAL DEN
Total/NA	Prep	8151A			1030.4 mL	10 mL	339876	08/29/16 09:40	JRA	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 13:00	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			244.6 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 13:49	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8223	08/23/16 14:23	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8224	08/23/16 14:23	MRS	TAL SPK
Total/NA	Prep	8290			1011.7 mL	20 uL	127279	09/15/16 09:07	DXD	TAL SAC
Total/NA	Analysis	8290A		1			128409	09/22/16 04:40	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:02	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226123	08/29/16 10:19		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 17:28	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	225973	08/26/16 10:51		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 02:12	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:02	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226222	08/30/16 10:47	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 14:45	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	225962	08/26/16 10:03	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226060	08/26/16 16:06	PAB	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	365923	08/26/16 16:16	ADJ	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	365936	08/26/16 20:12	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	365836	08/26/16 14:02	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366333	08/29/16 12:26	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	365785	08/26/16 12:06	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	366492	08/29/16 16:45	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8232	08/23/16 14:00	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-16A-082216

Date Collected: 08/22/16 12:20
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8229	08/24/16 00:12	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8228	08/24/16 00:12	MRS	TAL SPK
Total/NA	Prep	3520C			1060.1 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 15:38	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 12:46	NMI	TAL SPK
Total/NA	Prep	3510C			259.1 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 19:53	JCP	TAL SEA
Total/NA	Prep	3510C			248.5 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 20:40	NMI	TAL SPK
Total/NA	Prep	3510C			982.6 mL	2 mL	339570	08/25/16 14:55	KI	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	341530	09/10/16 13:37	TEM	TAL DEN
Total/NA	Prep	8151A			1051 mL	10 mL	339693	08/26/16 10:50	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 22:49	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			249.9 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 14:07	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8223	08/23/16 14:35	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8224	08/23/16 14:35	MRS	TAL SPK
Total/NA	Prep	8290			1053.1 mL	20 uL	127279	09/15/16 09:07	DXD	TAL SAC
Total/NA	Analysis	8290A		1			128409	09/22/16 05:26	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:02	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226123	08/29/16 10:19		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 17:37	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	225973	08/26/16 10:51		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 02:17	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:02	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226222	08/30/16 10:47	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 14:47	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:32	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	365923	08/26/16 16:16	ADJ	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	365936	08/26/16 20:13	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	365836	08/26/16 14:02	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366333	08/29/16 12:27	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	365785	08/26/16 12:06	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	366492	08/29/16 16:45	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8232	08/23/16 14:00	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Client Sample ID: MW-2A-082216

Date Collected: 08/22/16 15:30
Date Received: 08/23/16 09:50

Lab Sample ID: 590-4284-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8229	08/24/16 00:33	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8228	08/24/16 00:33	MRS	TAL SPK
Total/NA	Prep	3520C			1051.5 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 16:04	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 13:02	NMI	TAL SPK
Total/NA	Prep	3510C			262.3 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 20:10	JCP	TAL SEA
Total/NA	Prep	3510C			263.7 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 20:59	NMI	TAL SPK
Total/NA	Prep	3510C			1055.2 mL	2 mL	339570	08/25/16 14:55	KI	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	341530	09/10/16 14:08	TEM	TAL DEN
Total/NA	Prep	8151A			1026.9 mL	10 mL	339693	08/26/16 10:50	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 23:11	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			239.2 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 14:26	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8223	08/23/16 14:48	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8224	08/23/16 14:48	MRS	TAL SPK
Total/NA	Prep	8290			1053.7 mL	20 uL	127279	09/15/16 09:07	DXD	TAL SAC
Total/NA	Analysis	8290A		1			128413	09/22/16 10:13	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:02	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226123	08/29/16 10:19		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 17:41	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:36	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225830	08/24/16 16:02	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226222	08/30/16 10:47	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 14:49	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:34	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	365923	08/26/16 16:16	ADJ	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	365936	08/26/16 20:14	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	365836	08/26/16 14:02	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366333	08/29/16 12:28	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	365785	08/26/16 12:06	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	366492	08/29/16 16:45	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8232	08/23/16 14:00	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4284-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			Other:
Email: jmiller@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Acidic)	8290A - Dioxins (HRGC/HRMS Low)	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_DW_ORGFM	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-4A:082316	8/23/16	1102	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-16A:082316	↓	1220	↓	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-2A:082316	↓	1530	↓	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4284 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/23/16 0800	GEI	Sherien Kraly	8/23/16 950	TAL SPK
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.6 °C IR003

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

9/29/2016

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			Other:
Email: jmlee@geoengineers.com	WO #			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site	SSOW#			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC E coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-4A:082316	8/23/16	1102	G	Water	N		X	X	X	X	3	
MW-16A:082316	↓	1220	↓	Water	N		X	X	X	X	3	
MW-2A:082316	↓	1530	↓	Water	N		X	X	X	X	3	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/23/16 0800	GEI	Sheila Khatz	8/23/16 0950	TAS Spok
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.6 CTR003

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1947.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4284-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/2/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-4A-082216 (590-4284-1)	8/22/16	11:02 Pacific		Water			X	X	4	
MW-16A-082216 (590-4284-2)	8/22/16	12:20 Pacific		Water			X	X	4	
MW-2A-082216 (590-4284-3)	8/22/16	15:30 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Shreela Trask	8/23/16 1430	TAS200K	Reed FedEx	8-24-16 0946	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.3, 0.2 IR 5 0.0 IR 8-24-16

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1948.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4284-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/7/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-4A-082216 (590-4284-1)	8/22/16	11:02 Pacific		Water			X	2	
MW-16A-082216 (590-4284-2)	8/22/16	12:20 Pacific		Water			X	2	
MW-2A-082216 (590-4284-3)	8/22/16	15:30 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Krak	8/23/16 1445	TA Spok	Wayne Sue-Sang	8/24/16 0930	TAS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.6

9/29/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-4284 Chain of Custody

Cooler Received/Opened On 8/24/2016 @ 0915

Time Samples Removed From Cooler 1100 Time Samples Placed In Storage 1155 (2 Hour Window)

1. Tracking # 1471 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960353 pH Strip Lot HC58117 Chlorine Strip Lot 71130

2. Temperature of rep. sample or temp blank when opened: 3.0 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: NA

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) SH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) AES

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) AES

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) AES

I certify that I attached a label with the unique LIMS number to each container (intial) AES

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# NA

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	COC No: 590-1950.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc			Job #: 590-4284-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 9/2/2016		
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
Z - other (specify)
Other:

Loc: 590
4284

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	350.1/Distill_Ammonia Ammonia	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-4A-082216 (590-4284-1)	8/22/16	11:02 Pacific		Water			X	X	X	X	3	
MW-16A-082216 (590-4284-2)	8/22/16	12:20 Pacific		Water			X	X	X	X	3	
MW-2A-082216 (590-4284-3)	8/22/16	15:30 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Sheila Krack	Date/Time: 8/23/16 1530	Company TA SPK	Received by:	Date/Time: 8/24/16 0915	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 3.0		

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1949.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 590-4284-1
Address: 5755 8th Street East,	Due Date Requested: 9/2/2016			Preservation Codes:
City: Tacoma	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-4A-082216 (590-4284-1)	8/22/16	11:02 Pacific		Water			X	X	X	X	6	
MW-16A-082216 (590-4284-2)	8/22/16	12:20 Pacific		Water			X	X	X	X	6	
MW-2A-082216 (590-4284-3)	8/22/16	15:30 Pacific		Water			X	X	X	X	6	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Sheila Tody	8/23/16 1000	TA/SEA	B. Hall	8.24.16 1013	SEATA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR2 = 0.0/0.1 w/c.f.

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4284-1

Login Number: 4284
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4284-1

Login Number: 4284
List Number: 3
Creator: Muniz, Ashley T

List Source: TestAmerica Denver
List Creation: 08/24/16 12:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	1 of 2 coolers had no seal, tape was intact
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4284-1

Login Number: 4284
List Number: 2
Creator: Stvartak, Anthony Q

List Source: TestAmerica Nashville
List Creation: 08/24/16 11:51 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4284-1

Login Number: 4284
List Number: 4
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 08/24/16 01:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4284-1

Login Number: 4284
List Number: 5
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 08/24/16 03:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4291-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/27/2016 3:26:32 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Job ID: 590-4291-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/24/2016 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.5º C.

GC/MS VOA
Method NWTPH-Gx: The matrix spike (MS) recoveries for analytical batch 590-8292 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8293 recovered above the upper control limit for Acetone and 2-Butanone (MEK). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the recovery for Acetone was greater than 40%D, results for this analyte are estimates. The following samples are impacted: MW-3:082316 (590-4291-1), MW-5-082316 (590-4291-2), MW-5A-082316 (590-4291-3), MW-15-082316 (590-4291-4) and MW-15A-082316 (590-4291-5).

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8293 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 590-8293 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The laboratory control sample (LCS) for analytical batch 590-8293 recovered outside control limits for the following analyte: Acetone. This analyte was biased high in the LCS and not detected above the reporting limit in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226191 recovered above the upper control limit for 3,3'-Dichlorobenzidine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-3:082316 (590-4291-1), MW-5-082316 (590-4291-2), MW-5A-082316 (590-4291-3), MW-15-082316 (590-4291-4), MW-15A-082316 (590-4291-5) and (CCVIS 580-226191/3).

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-226191 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-226029 and analytical batch 580-226191 recovered outside control limits for the following analytes: Benzyl alcohol (LCS only) and Bis(2-ethylhexyl) phthalate (LCSD only). These analytes were biased high in the LCS. The affected samples were either not detected for this analyte or had hits below the reporting limit but above the detection limit. Bis(2-ethylhexyl) phthalate is a common lab contaminant.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226029 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, Bis(2-ethylhexyl) phthalate, 4-Nitroaniline and Benzyl alcohol.

Method 8270D: The method blank for preparation batch 580-226029 and analytical batch 580-226191 contained Benzyl alcohol and Bis(2-ethylhexyl) phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) for 2,4-DB and Dalapon associated with analytical batch 280-340437

Job ID: 590-4291-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

recovered outside the control limit on the back/confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the front/primary column which is in control.

Method 8141B: The initial calibration verification (ICV) for 8141 exceeded control criteria for mevinphos on the back (confirmation) column. The impacted samples were ND for mevinphos and are reported from the front, in control, column. Per the laboratory's SOP the ICV is acceptable if the average of the percent differences (%D) values for all of the analytes is within +/- 15% and the %D for all individual analytes is within +/- 30%. The data has been qualified and reported.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-343654 recovered below the lower control limit for Simazine on the confirmation column. The client samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the column in control (front). The following samples are impacted: MW-3:082316 (590-4291-1), MW-5-082316 (590-4291-2), MW-5A-082316 (590-4291-3), MW-15-082316 (590-4291-4) and MW-15A-082316 (590-4291-5).

IC

Method 300.0: The method blank for analytical batch 590-8241 contained Nitrate as N above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method 200.8: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-225917 and 580-226122.

Method 245.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-225917 and 580-226207.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-339876.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-339916.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4291-1	MW-3:082316	Water	08/23/16 10:30	08/24/16 09:50
590-4291-2	MW-5-082316	Water	08/23/16 11:32	08/24/16 09:50
590-4291-3	MW-5A-082316	Water	08/23/16 12:55	08/24/16 09:50
590-4291-4	MW-15-082316	Water	08/23/16 14:15	08/24/16 09:50
590-4291-5	MW-15A-082316	Water	08/23/16 15:55	08/24/16 09:50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-3:082316
Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	F1	1.0	0.14	ug/L			08/26/16 16:34	1
1,1,1-Trichloroethane	ND	F1	1.0	0.29	ug/L			08/26/16 16:34	1
1,1,2,2-Tetrachloroethane	ND	F1	2.0	0.80	ug/L			08/26/16 16:34	1
1,1,2-Trichloroethane	ND	F1	1.0	0.43	ug/L			08/26/16 16:34	1
1,1,2-Trichlorotrifluoroethane	ND	F1	1.0	0.20	ug/L			08/26/16 16:34	1
1,1-Dichloroethane	ND	F1	1.0	0.10	ug/L			08/26/16 16:34	1
1,1-Dichloroethene	ND	F1	1.0	0.50	ug/L			08/26/16 16:34	1
1,1-Dichloropropene	ND	F1	1.0	0.50	ug/L			08/26/16 16:34	1
1,2,3-Trichlorobenzene	ND	F1	1.0	0.16	ug/L			08/26/16 16:34	1
1,2,3-Trichloropropane	ND	F1	1.0	0.50	ug/L			08/26/16 16:34	1
1,2,4-Trichlorobenzene	ND	F1	1.0	0.16	ug/L			08/26/16 16:34	1
1,2,4-Trimethylbenzene	ND	F1	1.0	0.13	ug/L			08/26/16 16:34	1
1,2-Dibromo-3-Chloropropane	ND	F1	10	3.3	ug/L			08/26/16 16:34	1
1,2-Dibromoethane (EDB)	ND	F1	1.0	0.50	ug/L			08/26/16 16:34	1
1,2-Dichlorobenzene	ND	F1	1.0	0.30	ug/L			08/26/16 16:34	1
1,2-Dichloroethane	ND	F1	1.0	0.13	ug/L			08/26/16 16:34	1
1,2-Dichloropropane	ND	F1	1.0	0.098	ug/L			08/26/16 16:34	1
1,3,5-Trimethylbenzene	ND	F1	1.0	0.074	ug/L			08/26/16 16:34	1
1,3-Dichlorobenzene	ND	F1	1.0	0.14	ug/L			08/26/16 16:34	1
1,3-Dichloropropane	ND	F1	1.0	0.057	ug/L			08/26/16 16:34	1
1,4-Dichlorobenzene	ND	F1	1.0	0.13	ug/L			08/26/16 16:34	1
2,2-Dichloropropane	ND	F1	2.0	0.66	ug/L			08/26/16 16:34	1
2-Butanone (MEK)	ND	F1	10	4.4	ug/L			08/26/16 16:34	1
2-Chlorotoluene	ND	F1	1.0	0.36	ug/L			08/26/16 16:34	1
2-Hexanone	ND	F1	10	0.75	ug/L			08/26/16 16:34	1
4-Chlorotoluene	ND	F1	1.0	0.13	ug/L			08/26/16 16:34	1
4-Methyl-2-pentanone (MIBK)	ND	F1	10	0.67	ug/L			08/26/16 16:34	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 16:34	1
Benzene	ND	F1	0.20	0.093	ug/L			08/26/16 16:34	1
Bromobenzene	ND	F1	1.0	0.28	ug/L			08/26/16 16:34	1
Bromochloromethane	ND	F1	1.0	0.44	ug/L			08/26/16 16:34	1
Bromodichloromethane	ND	F1	1.0	0.43	ug/L			08/26/16 16:34	1
Bromoform	ND	F1	2.0	0.80	ug/L			08/26/16 16:34	1
Bromomethane	ND	F1	5.0	0.22	ug/L			08/26/16 16:34	1
Carbon disulfide	ND	F1	1.0	0.052	ug/L			08/26/16 16:34	1
Carbon tetrachloride	ND	F1	1.0	0.12	ug/L			08/26/16 16:34	1
Chlorobenzene	ND	F1	1.0	0.14	ug/L			08/26/16 16:34	1
Chloroethane	ND	F1	2.0	1.1	ug/L			08/26/16 16:34	1
Chloroform	ND	F1	1.0	0.41	ug/L			08/26/16 16:34	1
Chloromethane	ND	F1	3.0	0.22	ug/L			08/26/16 16:34	1
cis-1,2-Dichloroethene	ND	F1	1.0	0.075	ug/L			08/26/16 16:34	1
cis-1,3-Dichloropropene	ND	F1	1.0	0.098	ug/L			08/26/16 16:34	1
Dibromochloromethane	ND	F1	1.0	0.35	ug/L			08/26/16 16:34	1
Dibromomethane	ND	F1	1.0	0.50	ug/L			08/26/16 16:34	1
Dichlorodifluoromethane	ND	F1	2.0	0.90	ug/L			08/26/16 16:34	1
Dichlorofluoromethane	ND	F1	1.0	0.30	ug/L			08/26/16 16:34	1
Ethylbenzene	ND	F1	1.0	0.20	ug/L			08/26/16 16:34	1
Hexachlorobutadiene	ND	F1	2.0	0.62	ug/L			08/26/16 16:34	1
Hexane	ND	F1	1.0	0.084	ug/L			08/26/16 16:34	1

Client Sample ID: MW-3:082316
Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND	F1	1.0	0.063	ug/L			08/26/16 16:34	1
m,p-Xylene	ND	F1	2.0	0.28	ug/L			08/26/16 16:34	1
Methyl tert-butyl ether	ND	F1	1.0	0.27	ug/L			08/26/16 16:34	1
Methylene Chloride	ND	F1	5.0	3.4	ug/L			08/26/16 16:34	1
Naphthalene	ND	F1	2.0	0.63	ug/L			08/26/16 16:34	1
n-Butylbenzene	ND	F1	1.0	0.20	ug/L			08/26/16 16:34	1
N-Propylbenzene	ND	F1	1.0	0.063	ug/L			08/26/16 16:34	1
o-Xylene	ND	F1	1.0	0.16	ug/L			08/26/16 16:34	1
p-Isopropyltoluene	ND	F1	1.0	0.070	ug/L			08/26/16 16:34	1
sec-Butylbenzene	ND	F1	1.0	0.072	ug/L			08/26/16 16:34	1
Styrene	ND	F1	1.0	0.10	ug/L			08/26/16 16:34	1
tert-Butylbenzene	ND	F1	1.0	0.12	ug/L			08/26/16 16:34	1
Tetrachloroethene	ND	F1	1.0	0.45	ug/L			08/26/16 16:34	1
Toluene	ND	F1	1.0	0.31	ug/L			08/26/16 16:34	1
trans-1,2-Dichloroethene	ND	F1	1.0	0.46	ug/L			08/26/16 16:34	1
trans-1,3-Dichloropropene	ND	F1	1.0	0.45	ug/L			08/26/16 16:34	1
Trichloroethene	ND	F1	1.0	0.44	ug/L			08/26/16 16:34	1
Trichlorofluoromethane	ND	F1	1.0	0.20	ug/L			08/26/16 16:34	1
Vinyl chloride	ND	F1	0.20	0.13	ug/L			08/26/16 16:34	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*08/26/16 16:34*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*08/26/16 16:34*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/26/16 16:34*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 16:34*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*08/26/16 16:34*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-3:082316
Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 16:29	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 16:29	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
4-Nitrophenol	ND		2.9	0.95	ug/L		08/26/16 14:41	08/30/16 16:29	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzoic acid	**0.60**	**J**	2.9	0.57	ug/L		08/26/16 14:41	08/30/16 16:29	1
Benzyl alcohol	**0.13**	**J B ***	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		08/26/16 14:41	08/30/16 16:29	1
Butyl benzyl phthalate	**0.56**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 16:29	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 16:29	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Di-n-butyl phthalate	**0.13**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 16:29	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 16:29	1
Fluoranthene	ND		0.048	0.012	ug/L		08/26/16 14:41	08/30/16 16:29	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1

Client Sample ID: MW-3:082316
Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 16:29	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 16:29	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*57 - 132*	*08/26/16 14:41*	*08/30/16 16:29*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*08/26/16 14:41*	*08/30/16 16:29*	*1*
2-Fluorophenol	*76*		*50 - 113*	*08/26/16 14:41*	*08/30/16 16:29*	*1*
Nitrobenzene-d5	*96*		*59 - 120*	*08/26/16 14:41*	*08/30/16 16:29*	*1*
Phenol-d5	*83*		*52 - 120*	*08/26/16 14:41*	*08/30/16 16:29*	*1*
Terphenyl-d14	*97*		*72 - 140*	*08/26/16 14:41*	*08/30/16 16:29*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 13:18	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.033	0.0066	ug/L		08/26/16 15:29	08/29/16 20:27	1
4,4'-DDE	ND		0.022	0.0033	ug/L		08/26/16 15:29	08/29/16 20:27	1
4,4'-DDT	ND		0.033	0.0055	ug/L		08/26/16 15:29	08/29/16 20:27	1
Aldrin	ND		0.033	0.0077	ug/L		08/26/16 15:29	08/29/16 20:27	1
alpha-BHC	ND		0.033	0.0077	ug/L		08/26/16 15:29	08/29/16 20:27	1
alpha-Chlordane	ND		0.022	0.0033	ug/L		08/26/16 15:29	08/29/16 20:27	1
beta-BHC	ND		0.055	0.013	ug/L		08/26/16 15:29	08/29/16 20:27	1
delta-BHC	ND		0.055	0.011	ug/L		08/26/16 15:29	08/29/16 20:27	1
Dieldrin	ND		0.033	0.0055	ug/L		08/26/16 15:29	08/29/16 20:27	1
Endosulfan I	ND		0.022	0.0033	ug/L		08/26/16 15:29	08/29/16 20:27	1
Endosulfan II	ND		0.022	0.0022	ug/L		08/26/16 15:29	08/29/16 20:27	1
Endosulfan sulfate	ND		0.022	0.0022	ug/L		08/26/16 15:29	08/29/16 20:27	1
Endrin	ND		0.022	0.0033	ug/L		08/26/16 15:29	08/29/16 20:27	1
Endrin aldehyde	ND		0.22	0.037	ug/L		08/26/16 15:29	08/29/16 20:27	1
Endrin ketone	ND		0.022	0.0022	ug/L		08/26/16 15:29	08/29/16 20:27	1
gamma-BHC (Lindane)	ND		0.033	0.0055	ug/L		08/26/16 15:29	08/29/16 20:27	1
gamma-Chlordane	ND		0.022	0.0033	ug/L		08/26/16 15:29	08/29/16 20:27	1
Heptachlor	ND		0.022	0.0044	ug/L		08/26/16 15:29	08/29/16 20:27	1
Heptachlor epoxide	ND		0.022	0.0033	ug/L		08/26/16 15:29	08/29/16 20:27	1
Methoxychlor	ND		0.11	0.0022	ug/L		08/26/16 15:29	08/29/16 20:27	1
Toxaphene	ND		1.1	0.24	ug/L		08/26/16 15:29	08/29/16 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*22 - 150*	*08/26/16 15:29*	*08/29/16 20:27*	*1*
Tetrachloro-m-xylene	*82*		*40 - 113*	*08/26/16 15:29*	*08/29/16 20:27*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 21:18	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 21:18	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 21:18	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 21:18	1

Client Sample ID: MW-3:082316
Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 21:18	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 21:18	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*20 - 120*	*08/30/16 13:27*	*08/30/16 21:18*	*1*
DCB Decachlorobiphenyl (Surr)	*100*		*36 - 138*	*08/30/16 13:27*	*08/30/16 21:18*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		11	0.33	ug/L		08/29/16 13:00	09/25/16 17:16	1
Azinphos-methyl	ND		2.8	0.19	ug/L		08/29/16 13:00	09/25/16 17:16	1
Bolstar	ND		1.1	0.35	ug/L		08/29/16 13:00	09/25/16 17:16	1
Chlorpyrifos	ND		1.7	0.40	ug/L		08/29/16 13:00	09/25/16 17:16	1
Coumaphos	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 17:16	1
Demeton, Total	ND		3.4	0.23	ug/L		08/29/16 13:00	09/25/16 17:16	1
Diazinon	ND		0.56	0.17	ug/L		08/29/16 13:00	09/25/16 17:16	1
Dichlorvos	ND		0.56	0.18	ug/L		08/29/16 13:00	09/25/16 17:16	1
Dimethoate	ND		1.7	0.50	ug/L		08/29/16 13:00	09/25/16 17:16	1
Disulfoton	ND		1.1	0.36	ug/L		08/29/16 13:00	09/25/16 17:16	1
EPN	ND		1.3	0.17	ug/L		08/29/16 13:00	09/25/16 17:16	1
Famphur	ND		1.1	0.20	ug/L		08/29/16 13:00	09/25/16 17:16	1
Fensulfothion	ND		2.8	0.61	ug/L		08/29/16 13:00	09/25/16 17:16	1
Fenthion	ND		2.8	0.17	ug/L		08/29/16 13:00	09/25/16 17:16	1
Malathion	ND		2.2	0.15	ug/L		08/29/16 13:00	09/25/16 17:16	1
Merphos	ND		5.6	0.20	ug/L		08/29/16 13:00	09/25/16 17:16	1
Methyl parathion	ND		4.5	0.16	ug/L		08/29/16 13:00	09/25/16 17:16	1
Mevinphos	ND		7.0	0.52	ug/L		08/29/16 13:00	09/25/16 17:16	1
Ethyl Parathion	ND		1.1	0.16	ug/L		08/29/16 13:00	09/25/16 17:16	1
Phorate	ND		1.3	0.17	ug/L		08/29/16 13:00	09/25/16 17:16	1
Ronnel	ND		11	0.13	ug/L		08/29/16 13:00	09/25/16 17:16	1
Simazine	ND		11	0.25	ug/L		08/29/16 13:00	09/25/16 17:16	1
Sulfotepp	ND		1.7	0.19	ug/L		08/29/16 13:00	09/25/16 17:16	1
Thionazin	ND		1.1	0.35	ug/L		08/29/16 13:00	09/25/16 17:16	1
Tokuthion	ND		1.8	0.14	ug/L		08/29/16 13:00	09/25/16 17:16	1
Trichloronate	ND		1.7	0.27	ug/L		08/29/16 13:00	09/25/16 17:16	1
Ethoprop	ND		1.7	0.20	ug/L		08/29/16 13:00	09/25/16 17:16	1
Propazine	ND		11	0.33	ug/L		08/29/16 13:00	09/25/16 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*69*		*49 - 171*	*08/29/16 13:00*	*09/25/16 17:16*	*1*
Triphenylphosphate	*98*		*60 - 154*	*08/29/16 13:00*	*09/25/16 17:16*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		08/29/16 09:40	09/01/16 13:22	1
2,4-D	ND		3.8	0.20	ug/L		08/29/16 09:40	09/01/16 13:22	1
2,4-DB	ND		3.8	0.35	ug/L		08/29/16 09:40	09/01/16 13:22	1
Dalapon	ND		1.9	0.87	ug/L		08/29/16 09:40	09/01/16 13:22	1
Dicamba	ND		1.9	0.14	ug/L		08/29/16 09:40	09/01/16 13:22	1

Client Sample ID: MW-3:082316
Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		08/29/16 09:40	09/01/16 13:22	1
MCPA	ND		380	16	ug/L		08/29/16 09:40	09/01/16 13:22	1
MCPP	ND		380	32	ug/L		08/29/16 09:40	09/01/16 13:22	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		08/29/16 09:40	09/01/16 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*92*		*39 - 135*	*08/29/16 09:40*	*09/01/16 13:22*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 14:44	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*08/26/16 10:57*	*08/26/16 14:44*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*08/26/16 10:57*	*08/26/16 14:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45**		0.80	0.42	mg/L			08/24/16 15:07	1
Nitrate as N	**0.11**	**J B**	0.20	0.039	mg/L			08/24/16 15:07	1
Nitrite as N	ND		0.20	0.069	mg/L			08/24/16 15:07	1
Sulfate	**15**		0.50	0.13	mg/L			08/24/16 15:07	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0024**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:14	1
Antimony	**0.00022**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:14	1
Barium	**0.044**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:14	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:14	1
Cadmium	**0.000057**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:14	1
Chromium	**0.00018**	**J**	0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:14	1
Copper	**0.0053**		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:14	1
Iron	**0.29**		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:14	1
Lead	**0.00076**		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:14	1
Manganese	**0.010**		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:14	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:14	1
Selenium	**0.00036**	**J**	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:14	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:14	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:14	1
Vanadium	**0.0058**		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:14	1
Zinc	**0.0035**	**J**	0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:14	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:31	1
Antimony	**0.00016**	**J**	0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:31	1
Barium	**0.045**		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:31	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:31	1

Client Sample ID: MW-3:082316

Lab Sample ID: 590-4291-1

Date Collected: 08/23/16 10:30

Matrix: Water

Date Received: 08/24/16 09:50

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000029	J	0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:31	1
Chromium	0.00047		0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:31	1
Copper	0.0058		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:31	1
Iron	0.035	J	0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:31	1
Lead	0.00049		0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:31	1
Manganese	0.00097	J	0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:31	1
Nickel	0.0016	J	0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:31	1
Selenium	0.00030	J	0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:31	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:31	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:31	1
Vanadium	0.0057		0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:31	1
Zinc	0.0023	J	0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:31	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:16	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:02	08/30/16 13:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:31	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:12	1
Chemical Oxygen Demand	4.1	J F1	20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	4.9		1.0	0.50	mg/L			09/01/16 17:47	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	0.00				MPN/100mL			08/24/16 11:10	1
Escherichia coli	0.00				MPN/100mL			08/24/16 11:10	1

Client Sample ID: MW-5-082316

Lab Sample ID: 590-4291-2

Date Collected: 08/23/16 11:32

Matrix: Water

Date Received: 08/24/16 09:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 17:17	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 17:17	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 17:17	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 17:17	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 17:17	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 17:17	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 17:17	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 17:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 17:17	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 17:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 17:17	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 17:17	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-5-082316
Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 17:17	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 17:17	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 17:17	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 17:17	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 17:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 17:17	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 17:17	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 17:17	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 17:17	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 17:17	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 17:17	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 17:17	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 17:17	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 17:17	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 17:17	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 17:17	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 17:17	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 17:17	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 17:17	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 17:17	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 17:17	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 17:17	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 17:17	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 17:17	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 17:17	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 17:17	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 17:17	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 17:17	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 17:17	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 17:17	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 17:17	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 17:17	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 17:17	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 17:17	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 17:17	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 17:17	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 17:17	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 17:17	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 17:17	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 17:17	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 17:17	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 17:17	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 17:17	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 17:17	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 17:17	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 17:17	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 17:17	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 17:17	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 17:17	1

Client Sample ID: MW-5-082316
Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.0		1.0	0.45	ug/L			08/26/16 17:17	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 17:17	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 17:17	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 17:17	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 17:17	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 17:17	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 17:17	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*08/26/16 17:17*	*1*
4-Bromofluorobenzene (Surr)	*94*		*69 - 120*		*08/26/16 17:17*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/26/16 17:17*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/26/16 17:17*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND	F1	100	18	ug/L			08/26/16 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*68.7 - 141*		*08/26/16 17:17*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
1,2-Dichlorobenzene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
1,3-Dichlorobenzene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
1,4-Dichlorobenzene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
1-Methylnaphthalene	ND		0.062	0.031	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,4,5-Trichlorophenol	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,4,6-Trichlorophenol	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,4-Dichlorophenol	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,4-Dimethylphenol	ND		2.1	0.31	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,4-Dinitrophenol	ND		5.1	1.0	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,4-Dinitrotoluene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2,6-Dinitrotoluene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2-Chloronaphthalene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
2-Chlorophenol	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2-Methylnaphthalene	ND		0.21	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
2-Methylphenol	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2-Nitroaniline	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
2-Nitrophenol	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
3 & 4 Methylphenol	ND		0.82	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
3,3'-Dichlorobenzidine	ND	*	2.1	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
3-Nitroaniline	ND		0.41	0.12	ug/L		08/26/16 14:41	08/30/16 16:55	1
4,6-Dinitro-2-methylphenol	ND		4.1	1.0	ug/L		08/26/16 14:41	08/30/16 16:55	1
4-Bromophenyl phenyl ether	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
4-Chloro-3-methylphenol	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
4-Chloroaniline	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
4-Chlorophenyl phenyl ether	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1

Client Sample ID: MW-5-082316
Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND	*	0.62	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
4-Nitrophenol	ND		3.1	1.0	ug/L		08/26/16 14:41	08/30/16 16:55	1
Acenaphthene	ND		0.10	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Acenaphthylene	ND		0.082	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Anthracene	ND		0.041	0.010	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzo[a]anthracene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzo[a]pyrene	ND		0.041	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzo[b]fluoranthene	ND		0.082	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzo[g,h,i]perylene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzo[k]fluoranthene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzoic acid	**0.87**	**J**	3.1	0.62	ug/L		08/26/16 14:41	08/30/16 16:55	1
Benzyl alcohol	ND	*	0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
bis (2-chloroisopropyl) ether	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Bis(2-chloroethoxy)methane	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Bis(2-chloroethyl)ether	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Butyl benzyl phthalate	**0.52**	**J**	0.62	0.21	ug/L		08/26/16 14:41	08/30/16 16:55	1
Carbazole	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Chrysene	ND		0.041	0.013	ug/L		08/26/16 14:41	08/30/16 16:55	1
Dibenz(a,h)anthracene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Dibenzofuran	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Diethyl phthalate	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Dimethyl phthalate	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Di-n-butyl phthalate	**0.17**	**J**	0.41	0.13	ug/L		08/26/16 14:41	08/30/16 16:55	1
Di-n-octyl phthalate	ND		0.41	0.18	ug/L		08/26/16 14:41	08/30/16 16:55	1
Fluoranthene	ND		0.051	0.013	ug/L		08/26/16 14:41	08/30/16 16:55	1
Fluorene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Hexachlorobenzene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Hexachlorobutadiene	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Hexachlorocyclopentadiene	ND		2.1	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Hexachloroethane	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Indeno[1,2,3-cd]pyrene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Isophorone	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Naphthalene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Nitrobenzene	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
N-Nitrosodi-n-propylamine	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
N-Nitrosodiphenylamine	ND		0.41	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Pentachlorophenol	ND		0.72	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Phenanthrene	ND		0.082	0.021	ug/L		08/26/16 14:41	08/30/16 16:55	1
Phenol	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 16:55	1
Pyrene	ND		0.062	0.013	ug/L		08/26/16 14:41	08/30/16 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*57 - 132*	*08/26/16 14:41*	*08/30/16 16:55*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*08/26/16 14:41*	*08/30/16 16:55*	*1*
2-Fluorophenol	*75*		*50 - 113*	*08/26/16 14:41*	*08/30/16 16:55*	*1*
Nitrobenzene-d5	*94*		*59 - 120*	*08/26/16 14:41*	*08/30/16 16:55*	*1*
Phenol-d5	*83*		*52 - 120*	*08/26/16 14:41*	*08/30/16 16:55*	*1*
Terphenyl-d14	*96*		*72 - 140*	*08/26/16 14:41*	*08/30/16 16:55*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-5-082316
Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	29	J	31	12	ug/L		08/26/16 14:41	08/31/16 13:50	10

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 13:33	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 20:44	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 20:44	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 20:44	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 20:44	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 20:44	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 20:44	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 20:44	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 20:44	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 20:44	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 20:44	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 20:44	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 20:44	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 20:44	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 20:44	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 20:44	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 20:44	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 20:44	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 20:44	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 20:44	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 20:44	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*22 - 150*	*08/26/16 15:29*	*08/29/16 20:44*	*1*
Tetrachloro-m-xylene	*69*		*40 - 113*	*08/26/16 15:29*	*08/29/16 20:44*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 21:38	1
PCB-1221	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 21:38	1
PCB-1232	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 21:38	1
PCB-1242	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 21:38	1
PCB-1248	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 21:38	1
PCB-1254	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 21:38	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*20 - 120*	*08/30/16 13:27*	*08/30/16 21:38*	*1*
DCB Decachlorobiphenyl (Surr)	*98*		*36 - 138*	*08/30/16 13:27*	*08/30/16 21:38*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 17:47	1

Client Sample ID: MW-5-082316
Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 17:47	1
Bolstar	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 17:47	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 17:47	1
Coumaphos	ND		0.95	0.13	ug/L		08/29/16 13:00	09/25/16 17:47	1
Demeton, Total	ND		2.9	0.20	ug/L		08/29/16 13:00	09/25/16 17:47	1
Diazinon	ND		0.48	0.14	ug/L		08/29/16 13:00	09/25/16 17:47	1
Dichlorvos	ND		0.48	0.15	ug/L		08/29/16 13:00	09/25/16 17:47	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 17:47	1
Disulfoton	ND		0.95	0.31	ug/L		08/29/16 13:00	09/25/16 17:47	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 17:47	1
Famphur	ND		0.95	0.17	ug/L		08/29/16 13:00	09/25/16 17:47	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 17:47	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 17:47	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 17:47	1
Merphos	ND		4.8	0.17	ug/L		08/29/16 13:00	09/25/16 17:47	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 17:47	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 17:47	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/29/16 13:00	09/25/16 17:47	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 17:47	1
Ronnel	ND		9.5	0.11	ug/L		08/29/16 13:00	09/25/16 17:47	1
Simazine	ND		9.5	0.21	ug/L		08/29/16 13:00	09/25/16 17:47	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 17:47	1
Thionazin	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 17:47	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 17:47	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 17:47	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 17:47	1
Propazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*75*		*49 - 171*	*08/29/16 13:00*	*09/25/16 17:47*	*1*
Triphenylphosphate	*106*		*60 - 154*	*08/29/16 13:00*	*09/25/16 17:47*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		08/29/16 09:40	09/01/16 13:45	1
2,4-D	ND		3.9	0.20	ug/L		08/29/16 09:40	09/01/16 13:45	1
2,4-DB	ND		3.9	0.35	ug/L		08/29/16 09:40	09/01/16 13:45	1
Dalapon	ND		1.9	0.89	ug/L		08/29/16 09:40	09/01/16 13:45	1
Dicamba	ND		1.9	0.15	ug/L		08/29/16 09:40	09/01/16 13:45	1
Dichlorprop	ND		3.9	0.63	ug/L		08/29/16 09:40	09/01/16 13:45	1
MCPA	ND		390	17	ug/L		08/29/16 09:40	09/01/16 13:45	1
MCPP	ND		390	32	ug/L		08/29/16 09:40	09/01/16 13:45	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		08/29/16 09:40	09/01/16 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*39 - 135*	*08/29/16 09:40*	*09/01/16 13:45*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 15:03	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-5-082316
Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:03*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:03*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50**		0.80	0.42	mg/L			08/24/16 15:19	1
Nitrate as N	**2.9**	**B**	0.20	0.039	mg/L			08/24/16 15:19	1
Nitrite as N	ND		0.20	0.069	mg/L			08/24/16 15:19	1
Sulfate	**28**		0.50	0.13	mg/L			08/24/16 15:19	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0017**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:18	1
Antimony	**0.00027**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:18	1
Barium	**0.12**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:18	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:18	1
Cadmium	**0.000031**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:18	1
Chromium	**0.00017**	**J**	0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:18	1
Copper	**0.0028**		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:18	1
Iron	**0.027**	**J**	0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:18	1
Lead	**0.00010**	**J**	0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:18	1
Manganese	**0.0010**	**J**	0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:18	1
Nickel	**0.0011**	**J**	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:18	1
Selenium	**0.00031**	**J**	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:18	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:18	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:18	1
Vanadium	**0.0022**	**J**	0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:18	1
Zinc	**0.0024**	**J**	0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:18	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:39	1
Antimony	**0.00027**	**J**	0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:39	1
Barium	**0.12**		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:39	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:39	1
Cadmium	**0.000046**	**J**	0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:39	1
Chromium	**0.00029**	**J**	0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:39	1
Copper	**0.0035**		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:39	1
Iron	**0.032**	**J**	0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:39	1
Lead	**0.00068**		0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:39	1
Manganese	**0.0011**	**J**	0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:39	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:39	1
Selenium	**0.00031**	**J**	0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:39	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:39	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:39	1
Vanadium	**0.0022**	**J**	0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:39	1
Zinc	**0.0027**	**J**	0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:39	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:23	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:02	08/30/16 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**0.015**		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:33	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:13	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	**2.8**		1.0	0.50	mg/L			09/01/16 18:03	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/24/16 11:10	1
Escherichia coli	**0.00**				MPN/100mL			08/24/16 11:10	1

Client Sample ID: MW-5A-082316

Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 17:59	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 17:59	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 17:59	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 17:59	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 17:59	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 17:59	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 17:59	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 17:59	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 17:59	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 17:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 17:59	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 17:59	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 17:59	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 17:59	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 17:59	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 17:59	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 17:59	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 17:59	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 17:59	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 17:59	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 17:59	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 17:59	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 17:59	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 17:59	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 17:59	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 17:59	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 17:59	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 17:59	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 17:59	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 17:59	1

Client Sample ID: MW-5A-082316
Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 17:59	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 17:59	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 17:59	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 17:59	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 17:59	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 17:59	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 17:59	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 17:59	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 17:59	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 17:59	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 17:59	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 17:59	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 17:59	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 17:59	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 17:59	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 17:59	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 17:59	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 17:59	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 17:59	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 17:59	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 17:59	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 17:59	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 17:59	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 17:59	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 17:59	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 17:59	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 17:59	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 17:59	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 17:59	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 17:59	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 17:59	1
Tetrachloroethene	**0.97**	**J**	1.0	0.45	ug/L			08/26/16 17:59	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 17:59	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 17:59	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 17:59	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 17:59	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 17:59	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 17:59	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*08/26/16 17:59*	*1*
4-Bromofluorobenzene (Surr)	*93*		*69 - 120*		*08/26/16 17:59*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/26/16 17:59*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 17:59*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 17:59	1

Client Sample ID: MW-5A-082316

Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*68.7 - 141*		*08/26/16 17:59*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 17:21	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 17:21	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
4-Nitrophenol	ND		2.9	0.95	ug/L		08/26/16 14:41	08/30/16 17:21	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzoic acid	**0.66**	**J**	2.9	0.57	ug/L		08/26/16 14:41	08/30/16 17:21	1
Benzyl alcohol	**0.095**	**J B ***	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		08/26/16 14:41	08/30/16 17:21	1
Butyl benzyl phthalate	**0.47**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 17:21	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 17:21	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1

Client Sample ID: MW-5A-082316
Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Di-n-butyl phthalate	**0.18**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 17:21	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 17:21	1
Fluoranthene	ND		0.048	0.012	ug/L		08/26/16 14:41	08/30/16 17:21	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Pentachlorophenol	ND		0.67	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 17:21	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 17:21	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*57 - 132*	*08/26/16 14:41*	*08/30/16 17:21*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*08/26/16 14:41*	*08/30/16 17:21*	*1*
2-Fluorophenol	*76*		*50 - 113*	*08/26/16 14:41*	*08/30/16 17:21*	*1*
Nitrobenzene-d5	*91*		*59 - 120*	*08/26/16 14:41*	*08/30/16 17:21*	*1*
Phenol-d5	*79*		*52 - 120*	*08/26/16 14:41*	*08/30/16 17:21*	*1*
Terphenyl-d14	*101*		*72 - 140*	*08/26/16 14:41*	*08/30/16 17:21*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 14:05	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0059	ug/L		08/26/16 15:29	08/29/16 21:01	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:01	1
4,4'-DDT	ND		0.030	0.0049	ug/L		08/26/16 15:29	08/29/16 21:01	1
Aldrin	ND		0.030	0.0069	ug/L		08/26/16 15:29	08/29/16 21:01	1
alpha-BHC	ND		0.030	0.0069	ug/L		08/26/16 15:29	08/29/16 21:01	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:01	1
beta-BHC	ND		0.049	0.012	ug/L		08/26/16 15:29	08/29/16 21:01	1
delta-BHC	ND		0.049	0.0099	ug/L		08/26/16 15:29	08/29/16 21:01	1
Dieldrin	ND		0.030	0.0049	ug/L		08/26/16 15:29	08/29/16 21:01	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:01	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:01	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:01	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:01	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 21:01	1

Client Sample ID: MW-5A-082316
Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:01	1
gamma-BHC (Lindane)	ND		0.030	0.0049	ug/L		08/26/16 15:29	08/29/16 21:01	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:01	1
Heptachlor	ND		0.020	0.0039	ug/L		08/26/16 15:29	08/29/16 21:01	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:01	1
Methoxychlor	ND		0.099	0.0020	ug/L		08/26/16 15:29	08/29/16 21:01	1
Toxaphene	ND		0.99	0.22	ug/L		08/26/16 15:29	08/29/16 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*86*		*22 - 150*	*08/26/16 15:29*	*08/29/16 21:01*	*1*
Tetrachloro-m-xylene	*88*		*40 - 113*	*08/26/16 15:29*	*08/29/16 21:01*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 21:57	1
PCB-1221	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 21:57	1
PCB-1232	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 21:57	1
PCB-1242	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 21:57	1
PCB-1248	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 21:57	1
PCB-1254	ND		0.096	0.060	ug/L		08/30/16 13:27	08/30/16 21:57	1
PCB-1260	ND		0.096	0.042	ug/L		08/30/16 13:27	08/30/16 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*42*		*20 - 120*	*08/30/16 13:27*	*08/30/16 21:57*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*36 - 138*	*08/30/16 13:27*	*08/30/16 21:57*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 18:19	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 18:19	1
Bolstar	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 18:19	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 18:19	1
Coumaphos	ND		0.95	0.13	ug/L		08/29/16 13:00	09/25/16 18:19	1
Demeton, Total	ND		2.8	0.20	ug/L		08/29/16 13:00	09/25/16 18:19	1
Diazinon	ND		0.47	0.14	ug/L		08/29/16 13:00	09/25/16 18:19	1
Dichlorvos	ND		0.47	0.15	ug/L		08/29/16 13:00	09/25/16 18:19	1
Dimethoate	ND		1.4	0.42	ug/L		08/29/16 13:00	09/25/16 18:19	1
Disulfoton	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 18:19	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 18:19	1
Famphur	ND		0.95	0.17	ug/L		08/29/16 13:00	09/25/16 18:19	1
Fensulfothion	ND		2.4	0.51	ug/L		08/29/16 13:00	09/25/16 18:19	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 18:19	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 18:19	1
Merphos	ND		4.7	0.16	ug/L		08/29/16 13:00	09/25/16 18:19	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 18:19	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 18:19	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/29/16 13:00	09/25/16 18:19	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 18:19	1
Ronnel	ND		9.5	0.11	ug/L		08/29/16 13:00	09/25/16 18:19	1
Simazine	ND		9.5	0.21	ug/L		08/29/16 13:00	09/25/16 18:19	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-5A-082316
Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 18:19	1
Thionazin	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 18:19	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 18:19	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 18:19	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 18:19	1
Propazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*72*		*49 - 171*	*08/29/16 13:00*	*09/25/16 18:19*	*1*
Triphenylphosphate	*104*		*60 - 154*	*08/29/16 13:00*	*09/25/16 18:19*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		08/29/16 09:40	09/01/16 14:07	1
2,4-D	ND		3.9	0.20	ug/L		08/29/16 09:40	09/01/16 14:07	1
2,4-DB	ND		3.9	0.35	ug/L		08/29/16 09:40	09/01/16 14:07	1
Dalapon	ND		1.9	0.88	ug/L		08/29/16 09:40	09/01/16 14:07	1
Dicamba	ND		1.9	0.14	ug/L		08/29/16 09:40	09/01/16 14:07	1
Dichlorprop	ND		3.9	0.63	ug/L		08/29/16 09:40	09/01/16 14:07	1
MCPA	ND		390	16	ug/L		08/29/16 09:40	09/01/16 14:07	1
MCPP	ND		390	32	ug/L		08/29/16 09:40	09/01/16 14:07	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		08/29/16 09:40	09/01/16 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*97*		*39 - 135*	*08/29/16 09:40*	*09/01/16 14:07*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		08/26/16 10:57	08/26/16 15:21	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		08/26/16 10:57	08/26/16 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:21*	*1*
n-Triacontane-d62	*89*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:21*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53**		0.80	0.42	mg/L			08/24/16 15:31	1
Nitrate as N	**4.4**	**B**	0.20	0.039	mg/L			08/24/16 15:31	1
Nitrite as N	ND		0.20	0.069	mg/L			08/24/16 15:31	1
Sulfate	**31**		0.50	0.13	mg/L			08/24/16 15:31	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:41	1
Antimony	**0.00023**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:41	1
Barium	**0.18**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:41	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:41	1
Cadmium	**0.000052**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:41	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:41	1

Client Sample ID: MW-5A-082316

Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.0019	J	0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:41	1
Iron	0.010	J	0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:41	1
Lead	0.000093	J	0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:41	1
Manganese	0.00039	J	0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:41	1
Nickel	0.0012	J	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:41	1
Selenium	0.00039	J	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:41	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:41	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:41	1
Vanadium	0.0022	J	0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:41	1
Zinc	0.0027	J	0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:41	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0022		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:44	1
Antimony	0.00026	J	0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:44	1
Barium	0.19		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:44	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:44	1
Cadmium	0.000078	J	0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:44	1
Chromium	0.00032	J	0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:44	1
Copper	0.0029		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:44	1
Iron	0.030	J	0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:44	1
Lead	0.00044		0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:44	1
Manganese	0.0014	J	0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:44	1
Nickel	0.0014	J	0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:44	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:44	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:44	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:44	1
Vanadium	0.0024	J	0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:44	1
Zinc	0.0049	J	0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:44	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:25	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:02	08/30/16 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:34	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:14	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	2.5		1.0	0.50	mg/L			09/01/16 18:20	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	0.00				MPN/100mL			08/24/16 11:10	1
Escherichia coli	0.00				MPN/100mL			08/24/16 11:10	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15-082316
Date Collected: 08/23/16 14:15
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 18:21	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 18:21	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 18:21	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 18:21	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 18:21	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 18:21	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 18:21	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 18:21	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 18:21	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 18:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 18:21	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 18:21	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 18:21	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 18:21	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 18:21	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 18:21	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 18:21	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 18:21	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 18:21	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 18:21	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 18:21	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 18:21	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 18:21	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 18:21	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 18:21	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 18:21	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 18:21	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 18:21	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 18:21	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 18:21	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 18:21	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 18:21	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 18:21	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 18:21	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 18:21	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 18:21	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 18:21	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 18:21	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 18:21	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 18:21	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 18:21	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 18:21	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 18:21	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 18:21	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 18:21	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 18:21	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 18:21	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 18:21	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 18:21	1

Client Sample ID: MW-15-082316
Date Collected: 08/23/16 14:15
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 18:21	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 18:21	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 18:21	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 18:21	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 18:21	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 18:21	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 18:21	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 18:21	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 18:21	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 18:21	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 18:21	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 18:21	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 18:21	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 18:21	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 18:21	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 18:21	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 18:21	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 18:21	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 18:21	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*08/26/16 18:21*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*08/26/16 18:21*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/26/16 18:21*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/26/16 18:21*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*08/26/16 18:21*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
2-Chlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15-082316
Date Collected: 08/23/16 14:15
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
2-Methylphenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2-Nitroaniline	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
2-Nitrophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
3-Nitroaniline	ND		0.38	0.12	ug/L		08/26/16 14:41	08/30/16 17:47	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		08/26/16 14:41	08/30/16 17:47	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
4-Chloroaniline	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
4-Nitroaniline	ND	*	0.58	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
4-Nitrophenol	ND		2.9	0.96	ug/L		08/26/16 14:41	08/30/16 17:47	1
Acenaphthene	ND		0.096	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Acenaphthylene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Anthracene	ND		0.038	0.0096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzoic acid	**0.64**	**J**	2.9	0.58	ug/L		08/26/16 14:41	08/30/16 17:47	1
Benzyl alcohol	ND	*	0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Bis(2-ethylhexyl) phthalate	**2.2**	**J B ***	2.9	1.1	ug/L		08/26/16 14:41	08/30/16 17:47	1
Butyl benzyl phthalate	**0.34**	**J**	0.58	0.19	ug/L		08/26/16 14:41	08/30/16 17:47	1
Carbazole	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Chrysene	ND		0.038	0.013	ug/L		08/26/16 14:41	08/30/16 17:47	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Dibenzofuran	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Diethyl phthalate	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Di-n-butyl phthalate	**0.18**	**J**	0.38	0.13	ug/L		08/26/16 14:41	08/30/16 17:47	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 17:47	1
Fluoranthene	ND		0.048	0.013	ug/L		08/26/16 14:41	08/30/16 17:47	1
Fluorene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Hexachloroethane	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Isophorone	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Naphthalene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Nitrobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1

Client Sample ID: MW-15-082316
Date Collected: 08/23/16 14:15
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Phenanthrene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 17:47	1
Phenol	ND		0.58	0.096	ug/L		08/26/16 14:41	08/30/16 17:47	1
Pyrene	ND		0.058	0.013	ug/L		08/26/16 14:41	08/30/16 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*105*		*57 - 132*	*08/26/16 14:41*	*08/30/16 17:47*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*08/26/16 14:41*	*08/30/16 17:47*	*1*
2-Fluorophenol	*84*		*50 - 113*	*08/26/16 14:41*	*08/30/16 17:47*	*1*
Nitrobenzene-d5	*94*		*59 - 120*	*08/26/16 14:41*	*08/30/16 17:47*	*1*
Phenol-d5	*87*		*52 - 120*	*08/26/16 14:41*	*08/30/16 17:47*	*1*
Terphenyl-d14	*101*		*72 - 140*	*08/26/16 14:41*	*08/30/16 17:47*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 14:21	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 21:18	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:18	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:18	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 21:18	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 21:18	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:18	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 21:18	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 21:18	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:18	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:18	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:18	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:18	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:18	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 21:18	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:18	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:18	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:18	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 21:18	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:18	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 21:18	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*90*		*22 - 150*	*08/26/16 15:29*	*08/29/16 21:18*	*1*
Tetrachloro-m-xylene	*87*		*40 - 113*	*08/26/16 15:29*	*08/29/16 21:18*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:16	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:16	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:16	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:16	1

Client Sample ID: MW-15-082316
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Lab Sample ID: 590-4291-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:16	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:16	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*20 - 120*	*08/30/16 13:27*	*08/30/16 22:16*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*36 - 138*	*08/30/16 13:27*	*08/30/16 22:16*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		08/29/16 13:00	09/25/16 19:53	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 19:53	1
Bolstar	ND		0.96	0.30	ug/L		08/29/16 13:00	09/25/16 19:53	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 19:53	1
Coumaphos	ND		0.96	0.13	ug/L		08/29/16 13:00	09/25/16 19:53	1
Demeton, Total	ND		2.9	0.20	ug/L		08/29/16 13:00	09/25/16 19:53	1
Diazinon	ND		0.48	0.14	ug/L		08/29/16 13:00	09/25/16 19:53	1
Dichlorvos	ND		0.48	0.15	ug/L		08/29/16 13:00	09/25/16 19:53	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 19:53	1
Disulfoton	ND		0.96	0.31	ug/L		08/29/16 13:00	09/25/16 19:53	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 19:53	1
Famphur	ND		0.96	0.17	ug/L		08/29/16 13:00	09/25/16 19:53	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 19:53	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 19:53	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 19:53	1
Merphos	ND		4.8	0.17	ug/L		08/29/16 13:00	09/25/16 19:53	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 19:53	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 19:53	1
Ethyl Parathion	ND		0.96	0.14	ug/L		08/29/16 13:00	09/25/16 19:53	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 19:53	1
Ronnel	ND		9.6	0.11	ug/L		08/29/16 13:00	09/25/16 19:53	1
Simazine	ND		9.6	0.21	ug/L		08/29/16 13:00	09/25/16 19:53	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 19:53	1
Thionazin	ND		0.96	0.30	ug/L		08/29/16 13:00	09/25/16 19:53	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 19:53	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 19:53	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 19:53	1
Propazine	ND		9.6	0.28	ug/L		08/29/16 13:00	09/25/16 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*08/29/16 13:00*	*09/25/16 19:53*	*1*
Triphenylphosphate	*107*		*60 - 154*	*08/29/16 13:00*	*09/25/16 19:53*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.1	0.20	ug/L		08/29/16 09:40	09/01/16 14:30	1
2,4-D	ND		4.2	0.22	ug/L		08/29/16 09:40	09/01/16 14:30	1
2,4-DB	ND		4.2	0.38	ug/L		08/29/16 09:40	09/01/16 14:30	1
Dalapon	ND		2.1	0.96	ug/L		08/29/16 09:40	09/01/16 14:30	1
Dicamba	ND		2.1	0.16	ug/L		08/29/16 09:40	09/01/16 14:30	1

Client Sample ID: MW-15-082316
Date Collected: 08/23/16 14:15
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-4
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		4.2	0.68	ug/L		08/29/16 09:40	09/01/16 14:30	1
MCPA	ND		420	18	ug/L		08/29/16 09:40	09/01/16 14:30	1
MCPP	ND		420	35	ug/L		08/29/16 09:40	09/01/16 14:30	1
Silvex (2,4,5-TP)	ND		1.1	0.18	ug/L		08/29/16 09:40	09/01/16 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*08/29/16 09:40*	*09/01/16 14:30*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		08/26/16 10:57	08/26/16 15:40	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		08/26/16 10:57	08/26/16 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:40*	*1*
n-Triacontane-d62	*84*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:40*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45**		0.80	0.42	mg/L			08/24/16 15:43	1
Nitrate as N	**0.47**	**B**	0.20	0.039	mg/L			08/24/16 15:43	1
Nitrite as N	ND		0.20	0.069	mg/L			08/24/16 15:43	1
Sulfate	**23**		0.50	0.13	mg/L			08/24/16 15:43	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:45	1
Antimony	**0.00018**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:45	1
Barium	**0.042**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:45	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:45	1
Cadmium	**0.000054**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:45	1
Chromium	**0.00033**	**J**	0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:45	1
Copper	**0.0054**		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:45	1
Iron	**0.12**		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:45	1
Lead	**0.00012**	**J**	0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:45	1
Manganese	**0.0027**		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:45	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:45	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:45	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:45	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:45	1
Vanadium	**0.0028**	**J**	0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:45	1
Zinc	**0.0040**	**J**	0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:45	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:48	1
Antimony	**0.00019**	**J**	0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:48	1
Barium	**0.042**		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:48	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:48	1

Client Sample ID: MW-15-082316

Lab Sample ID: 590-4291-4

Date Collected: 08/23/16 14:15

Matrix: Water

Date Received: 08/24/16 09:50

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.000062**	**J**	0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:48	1
Chromium	**0.00035**	**J**	0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:48	1
Copper	**0.0057**		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:48	1
Iron	**0.019**	**J**	0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:48	1
Lead	**0.00029**	**J**	0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:48	1
Manganese	**0.0018**	**J**	0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:48	1
Nickel	**0.0016**	**J**	0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:48	1
Selenium	**0.00030**	**J**	0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:48	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:48	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:48	1
Vanadium	**0.0028**	**J**	0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:48	1
Zinc	**0.0025**	**J**	0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:48	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:28	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:02	08/30/16 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:35	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:15	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	**4.1**		1.0	0.50	mg/L			09/01/16 18:37	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/24/16 11:10	1
Escherichia coli	**0.00**				MPN/100mL			08/24/16 11:10	1

Client Sample ID: MW-15A-082316

Lab Sample ID: 590-4291-5

Date Collected: 08/23/16 15:55

Matrix: Water

Date Received: 08/24/16 09:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 18:43	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 18:43	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 18:43	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 18:43	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 18:43	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 18:43	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 18:43	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 18:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 18:43	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 18:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 18:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 18:43	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15A-082316
Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 18:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 18:43	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 18:43	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 18:43	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 18:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 18:43	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 18:43	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 18:43	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 18:43	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 18:43	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 18:43	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 18:43	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 18:43	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 18:43	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 18:43	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 18:43	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 18:43	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 18:43	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 18:43	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 18:43	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 18:43	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 18:43	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 18:43	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 18:43	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 18:43	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 18:43	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 18:43	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 18:43	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 18:43	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 18:43	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 18:43	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 18:43	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 18:43	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 18:43	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 18:43	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 18:43	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 18:43	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 18:43	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 18:43	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 18:43	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 18:43	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 18:43	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 18:43	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 18:43	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 18:43	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 18:43	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 18:43	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 18:43	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 18:43	1

Client Sample ID: MW-15A-082316
Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 18:43	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 18:43	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 18:43	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 18:43	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 18:43	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 18:43	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 18:43	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*08/26/16 18:43*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*08/26/16 18:43*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/26/16 18:43*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/26/16 18:43*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*08/26/16 18:43*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
1,2-Dichlorobenzene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
1,3-Dichlorobenzene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
1,4-Dichlorobenzene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
1-Methylnaphthalene	ND		0.059	0.029	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,4-Dichlorophenol	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,4-Dimethylphenol	ND		2.0	0.29	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,4-Dinitrotoluene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2,6-Dinitrotoluene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2-Chloronaphthalene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
2-Chlorophenol	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
2-Methylphenol	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2-Nitroaniline	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
2-Nitrophenol	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
3 & 4 Methylphenol	ND		0.78	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
3,3'-Dichlorobenzidine	ND	*	2.0	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
3-Nitroaniline	ND		0.39	0.12	ug/L		08/26/16 14:41	08/30/16 18:12	1
4,6-Dinitro-2-methylphenol	ND		3.9	0.98	ug/L		08/26/16 14:41	08/30/16 18:12	1
4-Bromophenyl phenyl ether	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
4-Chloro-3-methylphenol	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
4-Chloroaniline	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
4-Chlorophenyl phenyl ether	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15A-082316
Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND	*	0.59	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
4-Nitrophenol	ND		2.9	0.98	ug/L		08/26/16 14:41	08/30/16 18:12	1
Acenaphthene	ND		0.098	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Acenaphthylene	ND		0.078	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Anthracene	ND		0.039	0.0098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzo[a]anthracene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzo[a]pyrene	ND		0.039	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzo[b]fluoranthene	ND		0.078	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzo[g,h,i]perylene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzo[k]fluoranthene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzoic acid	**0.69**	**J**	2.9	0.59	ug/L		08/26/16 14:41	08/30/16 18:12	1
Benzyl alcohol	**0.14**	**J B ***	0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
bis (2-chloroisopropyl) ether	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Bis(2-chloroethoxy)methane	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Bis(2-chloroethyl)ether	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Bis(2-ethylhexyl) phthalate	**3.4**	**B ***	2.9	1.2	ug/L		08/26/16 14:41	08/30/16 18:12	1
Butyl benzyl phthalate	**0.70**		0.59	0.20	ug/L		08/26/16 14:41	08/30/16 18:12	1
Carbazole	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Chrysene	ND		0.039	0.013	ug/L		08/26/16 14:41	08/30/16 18:12	1
Dibenz(a,h)anthracene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Dibenzofuran	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Diethyl phthalate	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Dimethyl phthalate	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Di-n-butyl phthalate	**0.18**	**J**	0.39	0.13	ug/L		08/26/16 14:41	08/30/16 18:12	1
Di-n-octyl phthalate	ND		0.39	0.18	ug/L		08/26/16 14:41	08/30/16 18:12	1
Fluoranthene	ND		0.049	0.013	ug/L		08/26/16 14:41	08/30/16 18:12	1
Fluorene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Hexachlorobenzene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Hexachlorobutadiene	ND		0.59	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Hexachlorocyclopentadiene	ND		2.0	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Hexachloroethane	ND		0.59	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Indeno[1,2,3-cd]pyrene	ND		0.059	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Isophorone	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Naphthalene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Nitrobenzene	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
N-Nitrosodi-n-propylamine	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
N-Nitrosodiphenylamine	ND		0.39	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Pentachlorophenol	ND		0.68	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Phenanthrene	ND		0.078	0.020	ug/L		08/26/16 14:41	08/30/16 18:12	1
Phenol	ND		0.59	0.098	ug/L		08/26/16 14:41	08/30/16 18:12	1
Pyrene	ND		0.059	0.013	ug/L		08/26/16 14:41	08/30/16 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*104*		*57 - 132*	*08/26/16 14:41*	*08/30/16 18:12*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*08/26/16 14:41*	*08/30/16 18:12*	*1*
2-Fluorophenol	*83*		*50 - 113*	*08/26/16 14:41*	*08/30/16 18:12*	*1*
Nitrobenzene-d5	*100*		*59 - 120*	*08/26/16 14:41*	*08/30/16 18:12*	*1*
Phenol-d5	*86*		*52 - 120*	*08/26/16 14:41*	*08/30/16 18:12*	*1*
Terphenyl-d14	*104*		*72 - 140*	*08/26/16 14:41*	*08/30/16 18:12*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15A-082316
Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5
Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 14:36	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 21:35	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:35	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:35	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 21:35	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 21:35	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:35	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 21:35	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 21:35	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:35	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:35	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:35	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:35	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:35	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 21:35	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:35	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:35	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:35	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 21:35	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:35	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 21:35	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*95*		*22 - 150*	*08/26/16 15:29*	*08/29/16 21:35*	*1*
Tetrachloro-m-xylene	*94*		*40 - 113*	*08/26/16 15:29*	*08/29/16 21:35*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:36	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:36	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:36	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:36	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:36	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 22:36	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*		*20 - 120*	*08/30/16 13:27*	*08/30/16 22:36*	*1*
DCB Decachlorobiphenyl (Surr)	*107*		*36 - 138*	*08/30/16 13:27*	*08/30/16 22:36*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		08/29/16 13:00	09/25/16 20:24	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 20:24	1
Bolstar	ND		0.96	0.30	ug/L		08/29/16 13:00	09/25/16 20:24	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 20:24	1
Coumaphos	ND		0.96	0.13	ug/L		08/29/16 13:00	09/25/16 20:24	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15A-082316
Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Demeton, Total	ND		2.9	0.20	ug/L		08/29/16 13:00	09/25/16 20:24	1
Diazinon	ND		0.48	0.14	ug/L		08/29/16 13:00	09/25/16 20:24	1
Dichlorvos	ND		0.48	0.15	ug/L		08/29/16 13:00	09/25/16 20:24	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 20:24	1
Disulfoton	ND		0.96	0.31	ug/L		08/29/16 13:00	09/25/16 20:24	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 20:24	1
Famphur	ND		0.96	0.17	ug/L		08/29/16 13:00	09/25/16 20:24	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 20:24	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 20:24	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 20:24	1
Merphos	ND		4.8	0.17	ug/L		08/29/16 13:00	09/25/16 20:24	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 20:24	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 20:24	1
Ethyl Parathion	ND		0.96	0.14	ug/L		08/29/16 13:00	09/25/16 20:24	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 20:24	1
Ronnel	ND		9.6	0.11	ug/L		08/29/16 13:00	09/25/16 20:24	1
Simazine	ND		9.6	0.21	ug/L		08/29/16 13:00	09/25/16 20:24	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 20:24	1
Thionazin	ND		0.96	0.30	ug/L		08/29/16 13:00	09/25/16 20:24	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 20:24	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 20:24	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 20:24	1
Propazine	ND		9.6	0.28	ug/L		08/29/16 13:00	09/25/16 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*69*		*49 - 171*	*08/29/16 13:00*	*09/25/16 20:24*	*1*
Triphenylphosphate	*95*		*60 - 154*	*08/29/16 13:00*	*09/25/16 20:24*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		08/29/16 09:40	09/01/16 14:53	1
2,4-D	ND		3.9	0.20	ug/L		08/29/16 09:40	09/01/16 14:53	1
2,4-DB	ND		3.9	0.35	ug/L		08/29/16 09:40	09/01/16 14:53	1
Dalapon	ND		1.9	0.88	ug/L		08/29/16 09:40	09/01/16 14:53	1
Dicamba	ND		1.9	0.15	ug/L		08/29/16 09:40	09/01/16 14:53	1
Dichlorprop	ND		3.9	0.63	ug/L		08/29/16 09:40	09/01/16 14:53	1
MCPA	ND		390	17	ug/L		08/29/16 09:40	09/01/16 14:53	1
MCPP	ND		390	32	ug/L		08/29/16 09:40	09/01/16 14:53	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		08/29/16 09:40	09/01/16 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*79*		*39 - 135*	*08/29/16 09:40*	*09/01/16 14:53*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.043	mg/L		08/26/16 10:57	08/26/16 15:58	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.064	mg/L		08/26/16 10:57	08/26/16 15:58	1

Client Sample ID: MW-15A-082316

Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:58*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*08/26/16 10:57*	*08/26/16 15:58*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45**		0.80	0.42	mg/L			08/24/16 15:55	1
Nitrate as N	**0.21**	**B**	0.20	0.039	mg/L			08/24/16 15:55	1
Nitrite as N	ND		0.20	0.069	mg/L			08/24/16 15:55	1
Sulfate	**22**		0.50	0.13	mg/L			08/24/16 15:55	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0036**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:49	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:49	1
Barium	**0.037**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:49	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:49	1
Cadmium	**0.00011**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:49	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:49	1
Copper	**0.0055**		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:49	1
Iron	**0.014**	**J**	0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:49	1
Lead	**0.00017**	**J**	0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:49	1
Manganese	**0.00058**	**J**	0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:49	1
Nickel	**0.0011**	**J**	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:49	1
Selenium	**0.00033**	**J**	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:49	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:49	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:49	1
Vanadium	**0.0055**		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:49	1
Zinc	**0.0035**	**J**	0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:49	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0038**		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:53	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:53	1
Barium	**0.038**		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:53	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:53	1
Cadmium	**0.000070**	**J**	0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:53	1
Chromium	**0.00027**	**J**	0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:53	1
Copper	**0.0063**		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:53	1
Iron	**0.028**	**J**	0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:53	1
Lead	**0.00038**	**J**	0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:53	1
Manganese	**0.0013**	**J**	0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:53	1
Nickel	**0.0011**	**J**	0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:53	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:53	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:53	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:53	1
Vanadium	**0.0059**		0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:53	1
Zinc	**0.0056**	**J**	0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:53	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:30	1

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:02	08/30/16 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:36	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:16	1
Chemical Oxygen Demand	**9.0**	**J**	20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	**4.6**		1.0	0.50	mg/L			09/01/16 18:53	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/24/16 11:10	1
Escherichia coli	**0.00**				MPN/100mL			08/24/16 11:10	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8293/6
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 15:29	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 15:29	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 15:29	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 15:29	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 15:29	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 15:29	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 15:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 15:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 15:29	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 15:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 15:29	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 15:29	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 15:29	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 15:29	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 15:29	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 15:29	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 15:29	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 15:29	1
Acetone	ND		25	4.1	ug/L			08/26/16 15:29	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 15:29	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 15:29	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 15:29	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 15:29	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 15:29	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 15:29	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 15:29	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 15:29	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 15:29	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 15:29	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 15:29	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 15:29	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 15:29	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 15:29	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 15:29	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 15:29	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 15:29	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 15:29	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 15:29	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 15:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8293/6
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			08/26/16 15:29	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 15:29	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 15:29	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 15:29	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 15:29	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 15:29	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 15:29	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 15:29	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 15:29	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 15:29	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 15:29	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 15:29	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 15:29	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 15:29	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 15:29	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 15:29	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 15:29	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 15:29	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 15:29	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*08/26/16 15:29*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*08/26/16 15:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/26/16 15:29*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 15:29*	*1*

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.6		ug/L		106	75 - 124
1,1,1-Trichloroethane	10.0	10.8		ug/L		108	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.8		ug/L		108	66 - 122
1,1,2-Trichloroethane	10.0	9.69		ug/L		97	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	11.4		ug/L		114	70 - 127
1,1-Dichloroethane	10.0	10.1		ug/L		101	79 - 121
1,1-Dichloroethene	10.0	10.1		ug/L		101	69 - 127
1,1-Dichloropropene	10.0	10.7		ug/L		107	76 - 125
1,2,3-Trichlorobenzene	10.0	10.9		ug/L		109	60 - 125
1,2,3-Trichloropropane	10.0	10.1		ug/L		101	60 - 124
1,2,4-Trichlorobenzene	10.0	11.4		ug/L		114	66 - 124
1,2,4-Trimethylbenzene	10.0	11.3		ug/L		113	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.7		ug/L		117	36 - 140
1,2-Dichlorobenzene	10.0	10.8		ug/L		108	78 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.1		ug/L		111	76 - 121
1,3,5-Trimethylbenzene	10.0	11.3		ug/L		113	75 - 122
1,3-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 120
1,3-Dichloropropane	10.0	9.84		ug/L		98	75 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 121
2,2-Dichloropropane	10.0	11.7		ug/L		117	49 - 147
2-Butanone (MEK)	50.0	61.5		ug/L		123	40 - 150
2-Chlorotoluene	10.0	11.2		ug/L		112	75 - 121
2-Hexanone	50.0	53.8		ug/L		108	46 - 146
4-Chlorotoluene	10.0	11.2		ug/L		112	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	48.0		ug/L		96	60 - 127
Acetone	50.0	95.8	*	ug/L		192	20 - 150
Benzene	10.0	10.5		ug/L		105	80 - 120
Bromobenzene	10.0	10.7		ug/L		107	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	10.1		ug/L		101	67 - 125
Bromoform	10.0	8.93		ug/L		89	60 - 122
Bromomethane	10.0	10.0		ug/L		100	45 - 150
Carbon disulfide	10.0	10.4		ug/L		104	67 - 129
Carbon tetrachloride	10.0	10.8		ug/L		108	68 - 134
Chlorobenzene	10.0	10.6		ug/L		106	79 - 125
Chloroethane	10.0	9.98		ug/L		100	48 - 150
Chloroform	10.0	10.2		ug/L		102	73 - 126
Chloromethane	10.0	8.69		ug/L		87	51 - 150
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	76 - 121
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	72 - 120
Dibromochloromethane	10.0	9.74		ug/L		97	72 - 120
Dibromomethane	10.0	9.51		ug/L		95	71 - 120
Dichlorodifluoromethane	10.0	7.84		ug/L		78	32 - 150
Dichlorofluoromethane	10.0	10.8		ug/L		108	60 - 140
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
Hexachlorobutadiene	10.0	11.0		ug/L		110	62 - 132
Hexane	10.0	10.8		ug/L		108	68 - 125
Isopropylbenzene	10.0	11.1		ug/L		111	77 - 123
m,p-Xylene	10.0	10.6		ug/L		106	80 - 120
Methyl tert-butyl ether	10.0	10.4		ug/L		104	71 - 128
Methylene Chloride	10.0	10.8		ug/L		108	20 - 150
Naphthalene	10.0	10.8		ug/L		108	63 - 124
n-Butylbenzene	10.0	11.5		ug/L		115	71 - 120
N-Propylbenzene	10.0	11.4		ug/L		114	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	11.4		ug/L		114	77 - 120
sec-Butylbenzene	10.0	11.4		ug/L		114	74 - 121
Styrene	10.0	10.1		ug/L		101	73 - 120
tert-Butylbenzene	10.0	11.3		ug/L		113	79 - 120
Tetrachloroethene	10.0	10.6		ug/L		106	71 - 132
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,2-Dichloroethene	10.0	9.97		ug/L		100	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.68		ug/L		97	70 - 121
Trichloroethene	10.0	9.92		ug/L		99	75 - 129
Trichlorofluoromethane	10.0	10.2		ug/L		102	60 - 140
Vinyl chloride	10.0	8.91		ug/L		89	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: 590-4291-1 MS
Matrix: Water
Analysis Batch: 8293

Client Sample ID: MW-3:082316
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND	F1	10.0	3.99	F1	ug/L		40	50 - 150
1,1,1-Trichloroethane	ND	F1	10.0	4.26	F1	ug/L		43	50 - 150
1,1,2,2-Tetrachloroethane	ND	F1	10.0	4.16	F1	ug/L		42	50 - 150
1,1,2-Trichloroethane	ND	F1	10.0	3.67	F1	ug/L		37	50 - 150
1,1,2-Trichlorotrifluoroethane	ND	F1	10.0	4.49	F1	ug/L		45	50 - 150
1,1-Dichloroethane	ND	F1	10.0	4.20	F1	ug/L		42	50 - 150
1,1-Dichloroethene	ND	F1	10.0	4.42	F1	ug/L		44	50 - 150
1,1-Dichloropropene	ND	F1	10.0	4.06	F1	ug/L		41	50 - 150
1,2,3-Trichlorobenzene	ND	F1	10.0	3.15	F1	ug/L		31	50 - 150
1,2,3-Trichloropropane	ND	F1	10.0	3.96	F1	ug/L		40	50 - 150
1,2,4-Trichlorobenzene	ND	F1	10.0	3.35	F1	ug/L		33	50 - 150
1,2,4-Trimethylbenzene	ND	F1	10.0	4.10	F1	ug/L		41	50 - 150
1,2-Dibromo-3-Chloropropane	ND	F1	10.0	3.50	J F1	ug/L		35	50 - 150
1,2-Dichlorobenzene	ND	F1	10.0	4.04	F1	ug/L		40	50 - 150
1,2-Dichloroethane	ND	F1	10.0	4.26	F1	ug/L		43	50 - 150
1,2-Dichloropropane	ND	F1	10.0	4.23	F1	ug/L		42	50 - 150
1,3,5-Trimethylbenzene	ND	F1	10.0	4.08	F1	ug/L		41	50 - 150
1,3-Dichlorobenzene	ND	F1	10.0	4.05	F1	ug/L		40	50 - 150
1,3-Dichloropropane	ND	F1	10.0	3.95	F1	ug/L		40	50 - 150
1,4-Dichlorobenzene	ND	F1	10.0	4.05	F1	ug/L		40	50 - 150
2,2-Dichloropropane	ND	F1	10.0	4.41	F1	ug/L		44	50 - 150
2-Butanone (MEK)	ND	F1	50.0	23.3	F1	ug/L		47	50 - 150
2-Chlorotoluene	ND	F1	10.0	4.25	F1	ug/L		42	50 - 150
2-Hexanone	ND	F1	50.0	17.4	F1	ug/L		35	50 - 150
4-Chlorotoluene	ND	F1	10.0	4.35	F1	ug/L		43	50 - 150
4-Methyl-2-pentanone (MIBK)	ND	F1	50.0	18.1	F1	ug/L		36	50 - 150
Acetone	ND	*	50.0	31.9		ug/L		64	50 - 150
Benzene	ND	F1	10.0	4.47	F1	ug/L		45	50 - 150
Bromobenzene	ND	F1	10.0	4.40	F1	ug/L		44	50 - 150
Bromochloromethane	ND	F1	10.0	4.32	F1	ug/L		43	50 - 150
Bromodichloromethane	ND	F1	10.0	4.01	F1	ug/L		40	50 - 150
Bromoform	ND	F1	10.0	3.19	F1	ug/L		32	50 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 590-4291-1 MS
Matrix: Water
Analysis Batch: 8293

Client Sample ID: MW-3:082316
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	ND	F1	10.0	4.27	J F1	ug/L		43	50 - 150
Carbon disulfide	ND	F1	10.0	3.55	F1	ug/L		35	50 - 150
Carbon tetrachloride	ND	F1	10.0	4.12	F1	ug/L		41	50 - 150
Chlorobenzene	ND	F1	10.0	4.38	F1	ug/L		44	50 - 150
Chloroethane	ND	F1	10.0	4.00	F1	ug/L		40	50 - 150
Chloroform	ND	F1	10.0	4.06	F1	ug/L		41	50 - 150
Chloromethane	ND	F1	10.0	3.78	F1	ug/L		38	50 - 150
cis-1,2-Dichloroethene	ND	F1	10.0	4.32	F1	ug/L		43	50 - 150
cis-1,3-Dichloropropene	ND	F1	10.0	3.94	F1	ug/L		39	50 - 150
Dibromochloromethane	ND	F1	10.0	3.12	F1	ug/L		31	50 - 150
Dibromomethane	ND	F1	10.0	3.90	F1	ug/L		39	50 - 150
Dichlorodifluoromethane	ND	F1	10.0	2.76	F1	ug/L		28	50 - 150
Dichlorofluoromethane	ND	F1	10.0	4.36	F1	ug/L		44	50 - 150
Ethylbenzene	ND	F1	10.0	4.26	F1	ug/L		43	50 - 150
Hexachlorobutadiene	ND	F1	10.0	3.19	F1	ug/L		32	50 - 150
Hexane	ND	F1	10.0	3.62	F1	ug/L		36	50 - 150
Isopropylbenzene	ND	F1	10.0	4.18	F1	ug/L		42	50 - 150
m,p-Xylene	ND	F1	10.0	4.10	F1	ug/L		41	50 - 150
Methyl tert-butyl ether	ND	F1	10.0	4.15	F1	ug/L		41	50 - 150
Methylene Chloride	ND	F1	10.0	ND	F1	ug/L		0	50 - 150
Naphthalene	ND	F1	10.0	3.13	F1	ug/L		31	50 - 150
n-Butylbenzene	ND	F1	10.0	3.82	F1	ug/L		38	50 - 150
N-Propylbenzene	ND	F1	10.0	4.27	F1	ug/L		43	50 - 150
o-Xylene	ND	F1	10.0	4.10	F1	ug/L		41	50 - 150
p-Isopropyltoluene	ND	F1	10.0	3.89	F1	ug/L		39	50 - 150
sec-Butylbenzene	ND	F1	10.0	4.16	F1	ug/L		42	50 - 150
Styrene	ND	F1	10.0	3.81	F1	ug/L		38	50 - 150
tert-Butylbenzene	ND	F1	10.0	4.31	F1	ug/L		43	50 - 150
Tetrachloroethene	ND	F1	10.0	3.87	F1	ug/L		39	50 - 150
Toluene	ND	F1	10.0	4.31	F1	ug/L		43	50 - 150
trans-1,2-Dichloroethene	ND	F1	10.0	4.15	F1	ug/L		41	50 - 150
trans-1,3-Dichloropropene	ND	F1	10.0	3.60	F1	ug/L		36	50 - 150
Trichloroethene	ND	F1	10.0	3.80	F1	ug/L		38	50 - 150
Trichlorofluoromethane	ND	F1	10.0	4.02	F1	ug/L		40	50 - 150
Vinyl chloride	ND	F1	10.0	3.92	F1	ug/L		39	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8292/6
Matrix: Water
Analysis Batch: 8292

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*08/26/16 15:29*	*1*

Lab Sample ID: LCS 590-8292/1004
Matrix: Water
Analysis Batch: 8292

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			998	1060		ug/L		106	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*

Lab Sample ID: 590-4291-2 MS
Matrix: Water
Analysis Batch: 8292

Client Sample ID: MW-5-082316
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline	ND	F1	998	488	F1	ug/L		49	55.6 - 126		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitrophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3-Nitroaniline	ND		0.40	0.12	ug/L		08/26/16 14:41	08/30/16 10:29	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitroaniline	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitrophenol	ND		3.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthene	ND		0.10	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthylene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Anthracene	ND		0.040	0.010	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzoic acid	ND		3.0	0.60	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzyl alcohol	0.193	J	0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-ethylhexyl) phthalate	2.02	J	3.0	1.2	ug/L		08/26/16 14:41	08/30/16 10:29	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		08/26/16 14:41	08/30/16 10:29	1
Carbazole	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Chrysene	ND		0.040	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenzofuran	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Diethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluoranthene	ND		0.050	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluorene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachloroethane	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Isophorone	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Naphthalene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Nitrobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.70	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenanthrene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pyrene	ND		0.060	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*57 - 132*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorobiphenyl	*68*		*50 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorophenol	*74*		*50 - 113*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Nitrobenzene-d5	*88*		*59 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Phenol-d5	*81*		*52 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Terphenyl-d14	*97*		*72 - 140*	*08/26/16 14:41*	*08/30/16 10:29*	*1*

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.31		ug/L		65	40 - 115
1,2-Dichlorobenzene	2.00	1.27		ug/L		64	44 - 119
1,3-Dichlorobenzene	2.00	1.12		ug/L		56	34 - 116
1,4-Dichlorobenzene	2.00	1.10		ug/L		55	40 - 118
1-Methylnaphthalene	2.00	1.51		ug/L		75	54 - 119
2,4,5-Trichlorophenol	2.00	1.80		ug/L		90	56 - 122
2,4,6-Trichlorophenol	2.00	1.63		ug/L		82	55 - 134
2,4-Dichlorophenol	2.00	1.65		ug/L		83	50 - 125
2,4-Dimethylphenol	2.00	1.30	J	ug/L		65	20 - 106
2,4-Dinitrophenol	4.00	3.22	J	ug/L		81	24 - 139
2,4-Dinitrotoluene	2.00	1.85		ug/L		92	40 - 143
2,6-Dinitrotoluene	2.00	1.75		ug/L		87	45 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	55 - 125
2-Chlorophenol	2.00	1.71		ug/L		86	57 - 125
2-Methylnaphthalene	2.00	1.50		ug/L		75	56 - 117
2-Methylphenol	2.00	1.46		ug/L		73	53 - 118
2-Nitroaniline	2.00	2.01		ug/L		101	58 - 124
2-Nitrophenol	2.00	1.73		ug/L		87	20 - 150
3 & 4 Methylphenol	2.00	1.54		ug/L		77	54 - 112
3,3'-Dichlorobenzidine	4.00	1.91	J	ug/L		48	20 - 121
3-Nitroaniline	2.00	1.17		ug/L		58	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.39	J	ug/L		85	20 - 150
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	62 - 132
4-Chloro-3-methylphenol	2.00	1.70		ug/L		85	56 - 133
4-Chloroaniline	2.00	1.11		ug/L		55	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.50		ug/L		75	59 - 125
4-Nitroaniline	2.00	1.09		ug/L		55	40 - 118
4-Nitrophenol	4.00	2.77	J	ug/L		69	20 - 150
Acenaphthene	2.00	1.41		ug/L		71	55 - 113
Acenaphthylene	2.00	1.52		ug/L		76	24 - 135

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	2.00	1.41		ug/L		70	20 - 125
Benzo[a]anthracene	2.00	1.88		ug/L		94	49 - 115
Benzo[a]pyrene	2.00	1.39		ug/L		69	20 - 115
Benzo[b]fluoranthene	2.00	1.71		ug/L		85	63 - 129
Benzo[g,h,i]perylene	2.00	1.77		ug/L		89	58 - 127
Benzo[k]fluoranthene	2.00	1.71		ug/L		86	60 - 134
Benzoic acid	4.00	4.33		ug/L		108	20 - 150
Benzyl alcohol	2.00	2.95	*	ug/L		147	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.45		ug/L		72	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.64		ug/L		82	59 - 125
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.62	J	ug/L		131	22 - 150
Butyl benzyl phthalate	2.00	2.86		ug/L		143	46 - 150
Carbazole	2.00	2.06		ug/L		103	68 - 142
Chrysene	2.00	1.86		ug/L		93	57 - 131
Dibenz(a,h)anthracene	2.00	1.79		ug/L		90	56 - 124
Dibenzofuran	2.00	1.55		ug/L		77	60 - 125
Diethyl phthalate	2.00	1.79		ug/L		90	60 - 134
Dimethyl phthalate	2.00	1.82		ug/L		91	65 - 134
Di-n-butyl phthalate	2.00	2.28		ug/L		114	67 - 140
Di-n-octyl phthalate	2.00	2.08		ug/L		104	55 - 150
Fluoranthene	2.00	1.95		ug/L		97	70 - 135
Fluorene	2.00	1.57		ug/L		78	57 - 125
Hexachlorobenzene	2.00	1.55		ug/L		78	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.698	J	ug/L		35	20 - 110
Hexachloroethane	2.00	0.928		ug/L		46	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.91		ug/L		95	54 - 124
Isophorone	2.00	1.64		ug/L		82	64 - 125
Naphthalene	2.00	1.45		ug/L		72	56 - 119
Nitrobenzene	2.00	1.74		ug/L		87	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.68		ug/L		84	54 - 120
N-Nitrosodiphenylamine	2.00	1.44		ug/L		72	40 - 124
Pentachlorophenol	4.00	2.61		ug/L		65	30 - 122
Phenanthrene	2.00	1.76		ug/L		88	57 - 125
Phenol	2.00	1.80		ug/L		90	53 - 113
Pyrene	2.00	1.70		ug/L		85	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*57 - 132*
2-Fluorobiphenyl	*72*		*50 - 120*
2-Fluorophenol	*74*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*76*		*52 - 120*
Terphenyl-d14	*87*		*72 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.46		ug/L		73	40 - 115	11	20
1,2-Dichlorobenzene	2.00	1.36		ug/L		68	44 - 119	7	20
1,3-Dichlorobenzene	2.00	1.22		ug/L		61	34 - 116	8	29
1,4-Dichlorobenzene	2.00	1.19		ug/L		59	40 - 118	8	20
1-Methylnaphthalene	2.00	1.54		ug/L		77	54 - 119	2	20
2,4,5-Trichlorophenol	2.00	1.80		ug/L		90	56 - 122	0	20
2,4,6-Trichlorophenol	2.00	1.59		ug/L		79	55 - 134	3	20
2,4-Dichlorophenol	2.00	1.66		ug/L		83	50 - 125	0	26
2,4-Dimethylphenol	2.00	1.50	J	ug/L		75	20 - 106	14	35
2,4-Dinitrophenol	4.00	3.37	J	ug/L		84	24 - 139	5	35
2,4-Dinitrotoluene	2.00	1.79		ug/L		89	40 - 143	3	29
2,6-Dinitrotoluene	2.00	1.74		ug/L		87	45 - 134	0	31
2-Chloronaphthalene	2.00	1.57		ug/L		79	55 - 125	4	20
2-Chlorophenol	2.00	1.76		ug/L		88	57 - 125	3	20
2-Methylnaphthalene	2.00	1.56		ug/L		78	56 - 117	4	20
2-Methylphenol	2.00	1.41		ug/L		70	53 - 118	4	33
2-Nitroaniline	2.00	1.98		ug/L		99	58 - 124	2	20
2-Nitrophenol	2.00	1.77		ug/L		89	20 - 150	2	35
3 & 4 Methylphenol	2.00	1.59		ug/L		79	54 - 112	3	20
3,3'-Dichlorobenzidine	4.00	2.81	*	ug/L		70	20 - 121	38	35
3-Nitroaniline	2.00	1.42		ug/L		71	22 - 124	19	35
4,6-Dinitro-2-methylphenol	4.00	3.56	J	ug/L		89	20 - 150	5	30
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	62 - 132	0	20
4-Chloro-3-methylphenol	2.00	1.77		ug/L		89	56 - 133	4	20
4-Chloroaniline	2.00	1.29		ug/L		64	20 - 110	15	35
4-Chlorophenyl phenyl ether	2.00	1.51		ug/L		76	59 - 125	0	20
4-Nitroaniline	2.00	1.38	*	ug/L		69	40 - 118	24	20
4-Nitrophenol	4.00	3.50		ug/L		87	20 - 150	23	29
Acenaphthene	2.00	1.44		ug/L		72	55 - 113	2	20
Acenaphthylene	2.00	1.56		ug/L		78	24 - 135	3	20
Anthracene	2.00	1.40		ug/L		70	20 - 125	0	26
Benzo[a]anthracene	2.00	1.90		ug/L		95	49 - 115	1	20
Benzo[a]pyrene	2.00	1.41		ug/L		70	20 - 115	2	35
Benzo[b]fluoranthene	2.00	1.76		ug/L		88	63 - 129	3	20
Benzo[g,h,i]perylene	2.00	1.73		ug/L		86	58 - 127	3	20
Benzo[k]fluoranthene	2.00	1.62		ug/L		81	60 - 134	6	20
Benzoic acid	4.00	3.55		ug/L		89	20 - 150	20	35
Benzyl alcohol	2.00	1.99	*	ug/L		100	52 - 124	39	20
bis (2-chloroisopropyl) ether	2.00	1.52		ug/L		76	44 - 123	5	20
Bis(2-chloroethoxy)methane	2.00	1.64		ug/L		82	59 - 125	0	20
Bis(2-chloroethyl)ether	2.00	1.71		ug/L		86	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	3.62	*	ug/L		181	22 - 150	32	20
Butyl benzyl phthalate	2.00	2.65		ug/L		132	46 - 150	8	20
Carbazole	2.00	2.07		ug/L		103	68 - 142	0	20
Chrysene	2.00	1.83		ug/L		91	57 - 131	2	20
Dibenz(a,h)anthracene	2.00	1.75		ug/L		87	56 - 124	2	20
Dibenzofuran	2.00	1.57		ug/L		78	60 - 125	1	20
Diethyl phthalate	2.00	1.59		ug/L		80	60 - 134	12	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dimethyl phthalate			2.00	1.80		ug/L		90	65 - 134	1	20
Di-n-butyl phthalate			2.00	2.14		ug/L		107	67 - 140	6	20
Di-n-octyl phthalate			2.00	2.05		ug/L		103	55 - 150	1	20
Fluoranthene			2.00	1.98		ug/L		99	70 - 135	1	20
Fluorene			2.00	1.57		ug/L		79	57 - 125	0	20
Hexachlorobenzene			2.00	1.57		ug/L		78	55 - 135	1	20
Hexachlorobutadiene			2.00	1.21		ug/L		61	25 - 125	18	31
Hexachlorocyclopentadiene			2.00	0.766	J	ug/L		38	20 - 110	9	35
Hexachloroethane			2.00	1.04		ug/L		52	24 - 125	11	35
Indeno[1,2,3-cd]pyrene			2.00	1.86		ug/L		93	54 - 124	2	20
Isophorone			2.00	1.65		ug/L		83	64 - 125	1	20
Naphthalene			2.00	1.51		ug/L		76	56 - 119	4	20
Nitrobenzene			2.00	1.70		ug/L		85	62 - 125	2	20
N-Nitrosodi-n-propylamine			2.00	1.77		ug/L		89	54 - 120	5	20
N-Nitrosodiphenylamine			2.00	1.41		ug/L		71	40 - 124	2	20
Pentachlorophenol			4.00	2.64		ug/L		66	30 - 122	1	35
Phenanthrene			2.00	1.73		ug/L		87	57 - 125	2	20
Phenol			2.00	1.58		ug/L		79	53 - 113	13	20
Pyrene			2.00	1.70		ug/L		85	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*91*		*57 - 132*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol	*71*		*50 - 113*
Nitrobenzene-d5	*83*		*59 - 120*
Phenol-d5	*74*		*52 - 120*
Terphenyl-d14	*83*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Lab Sample ID: LCS 590-8317/3-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8317

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.125	0.135		ug/L		108	60 - 140		

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226041/1-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 17:56	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 17:56	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*22 - 150*	*08/26/16 15:29*	*08/29/16 17:56*	*1*
Tetrachloro-m-xylene	*95*		*40 - 113*	*08/26/16 15:29*	*08/29/16 17:56*	*1*

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.194		ug/L		97	32 - 133
4,4'-DDE	0.200	0.190		ug/L		95	30 - 138
4,4'-DDT	0.200	0.213		ug/L		107	34 - 131
Aldrin	0.200	0.187		ug/L		93	35 - 124
alpha-BHC	0.200	0.185		ug/L		92	39 - 126
alpha-Chlordane	0.200	0.185		ug/L		93	37 - 133
beta-BHC	0.200	0.181		ug/L		91	38 - 114
delta-BHC	0.200	0.184		ug/L		92	20 - 138
Dieldrin	0.200	0.190		ug/L		95	39 - 140
Endosulfan I	0.200	0.190		ug/L		95	23 - 142
Endosulfan II	0.200	0.192		ug/L		96	20 - 150
Endosulfan sulfate	0.200	0.192		ug/L		96	36 - 130
Endrin	0.200	0.225		ug/L		113	32 - 130
Endrin aldehyde	0.200	0.209		ug/L		105	37 - 139
Endrin ketone	0.200	0.188		ug/L		94	32 - 136
gamma-BHC (Lindane)	0.200	0.171		ug/L		85	40 - 121
gamma-Chlordane	0.200	0.187		ug/L		93	38 - 136

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Heptachlor			0.200	0.191		ug/L		95	39 - 129		
Heptachlor epoxide			0.200	0.178		ug/L		89	34 - 135		
Methoxychlor			0.200	0.213		ug/L		106	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*105*		*22 - 150*
Tetrachloro-m-xylene	*100*		*40 - 113*

Lab Sample ID: LCSD 580-226041/3-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226041

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.178		ug/L		89	32 - 133	8	35
4,4'-DDE			0.200	0.174		ug/L		87	30 - 138	8	35
4,4'-DDT			0.200	0.197		ug/L		99	34 - 131	8	35
Aldrin			0.200	0.173		ug/L		86	35 - 124	8	35
alpha-BHC			0.200	0.173		ug/L		86	39 - 126	7	35
alpha-Chlordane			0.200	0.171		ug/L		85	37 - 133	8	35
beta-BHC			0.200	0.170		ug/L		85	38 - 114	7	35
delta-BHC			0.200	0.170		ug/L		85	20 - 138	8	35
Dieldrin			0.200	0.176		ug/L		88	39 - 140	8	35
Endosulfan I			0.200	0.176		ug/L		88	23 - 142	8	35
Endosulfan II			0.200	0.177		ug/L		89	20 - 150	8	35
Endosulfan sulfate			0.200	0.177		ug/L		89	36 - 130	8	35
Endrin			0.200	0.208		ug/L		104	32 - 130	8	35
Endrin aldehyde			0.200	0.200		ug/L		100	37 - 139	5	35
Endrin ketone			0.200	0.174		ug/L		87	32 - 136	7	35
gamma-BHC (Lindane)			0.200	0.164		ug/L		82	40 - 121	4	35
gamma-Chlordane			0.200	0.174		ug/L		87	38 - 136	7	35
Heptachlor			0.200	0.180		ug/L		90	39 - 129	6	35
Heptachlor epoxide			0.200	0.168		ug/L		84	34 - 135	6	35
Methoxychlor			0.200	0.199		ug/L		99	33 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*92*		*22 - 150*
Tetrachloro-m-xylene	*95*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.56		ug/L		98	23 - 140		
PCB-1260			1.60	1.47		ug/L		92	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-339916/1-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/29/16 13:00	09/25/16 14:39	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Bolstar	ND		1.0	0.31	ug/L		08/29/16 13:00	09/25/16 14:39	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/29/16 13:00	09/25/16 14:39	1
Coumaphos	ND		1.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Demeton, Total	ND		3.0	0.21	ug/L		08/29/16 13:00	09/25/16 14:39	1
Diazinon	ND		0.50	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Dichlorvos	ND		0.50	0.16	ug/L		08/29/16 13:00	09/25/16 14:39	1
Dimethoate	ND		1.5	0.45	ug/L		08/29/16 13:00	09/25/16 14:39	1
Disulfoton	ND		1.0	0.32	ug/L		08/29/16 13:00	09/25/16 14:39	1
EPN	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Famphur	ND		1.0	0.18	ug/L		08/29/16 13:00	09/25/16 14:39	1
Fensulfothion	ND		2.5	0.54	ug/L		08/29/16 13:00	09/25/16 14:39	1
Fenthion	ND		2.5	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Malathion	ND		2.0	0.13	ug/L		08/29/16 13:00	09/25/16 14:39	1
Merphos	ND		5.0	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Methyl parathion	ND		4.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-339916/1-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mevinphos	ND		6.2	0.46	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Phorate	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ronnel	ND		10	0.12	ug/L		08/29/16 13:00	09/25/16 14:39	1
Simazine	ND		10	0.22	ug/L		08/29/16 13:00	09/25/16 14:39	1
Sulfotepp	ND		1.5	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Thionazin	ND		1.0	0.31	ug/L		08/29/16 13:00	09/25/16 14:39	1
Tokuthion	ND		1.6	0.12	ug/L		08/29/16 13:00	09/25/16 14:39	1
Trichloronate	ND		1.5	0.24	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ethoprop	ND		1.5	0.18	ug/L		08/29/16 13:00	09/25/16 14:39	1
Propazine	ND		10	0.29	ug/L		08/29/16 13:00	09/25/16 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*87*		*49 - 171*	*08/29/16 13:00*	*09/25/16 14:39*	*1*
Triphenylphosphate	*101*		*60 - 154*	*08/29/16 13:00*	*09/25/16 14:39*	*1*

Lab Sample ID: LCS 280-339916/2-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.92	J	ug/L		73	52 - 115
Azinphos-methyl	4.00	3.89		ug/L		97	59 - 115
Chlorpyrifos	4.00	3.17		ug/L		79	54 - 115
Coumaphos	4.00	3.87		ug/L		97	63 - 118
Demeton, Total	4.00	3.22		ug/L		80	44 - 115
Diazinon	4.00	2.98		ug/L		74	47 - 115
Dichlorvos	4.00	4.67		ug/L		117	53 - 128
Dimethoate	4.00	3.24		ug/L		81	42 - 115
Disulfoton	4.00	2.97		ug/L		74	45 - 115
EPN	4.00	3.69		ug/L		92	56 - 115
Famphur	4.00	3.62		ug/L		91	62 - 115
Fensulfothion	4.00	4.13		ug/L		103	50 - 115
Fenthion	4.00	3.33		ug/L		83	55 - 115
Malathion	4.00	2.98		ug/L		75	52 - 115
Merphos	4.00	1.90	J	ug/L		48	31 - 115
Methyl parathion	4.00	3.48	J	ug/L		87	58 - 115
Mevinphos	4.00	2.95	J	ug/L		74	42 - 115
Ethyl Parathion	4.00	3.42		ug/L		86	55 - 115
Phorate	4.00	2.66		ug/L		67	40 - 115
Ronnel	4.00	3.29	J	ug/L		82	55 - 115
Simazine	4.00	2.80	J	ug/L		70	39 - 115
Sulfotepp	4.00	3.24		ug/L		81	53 - 115
Thionazin	4.00	3.23		ug/L		81	54 - 115
Trichloronate	4.00	2.94		ug/L		74	48 - 115
Ethoprop	4.00	3.19		ug/L		80	50 - 115
BolstarFamphur	4.00	7.27		ug/L		182	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Chlormefos	82		49 - 171
Triphenylphosphate	100		60 - 154

Lab Sample ID: LCSD 280-339916/3-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339916

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine			4.00	2.79	J	ug/L		70	52 - 115	5	45
Azinphos-methyl			4.00	3.90		ug/L		97	59 - 115	0	20
Chlorpyrifos			4.00	3.25		ug/L		81	54 - 115	2	24
Coumaphos			4.00	3.91		ug/L		98	63 - 118	1	20
Demeton, Total			4.00	3.30		ug/L		83	44 - 115	2	38
Diazinon			4.00	3.15		ug/L		79	47 - 115	6	37
Dichlorvos			4.00	3.86		ug/L		97	53 - 128	19	37
Dimethoate			4.00	3.10		ug/L		78	42 - 115	4	38
Disulfoton			4.00	3.09		ug/L		77	45 - 115	4	31
EPN			4.00	3.66		ug/L		92	56 - 115	1	20
Famphur			4.00	3.59		ug/L		90	62 - 115	1	20
Fensulfothion			4.00	3.83		ug/L		96	50 - 115	7	27
Fenthion			4.00	3.40		ug/L		85	55 - 115	2	22
Malathion			4.00	3.01		ug/L		75	52 - 115	1	20
Merphos			4.00	1.91	J	ug/L		48	31 - 115	0	25
Methyl parathion			4.00	3.64	J	ug/L		91	58 - 115	4	20
Mevinphos			4.00	2.79	J	ug/L		70	42 - 115	6	27
Ethyl Parathion			4.00	3.48		ug/L		87	55 - 115	2	20
Phorate			4.00	2.77		ug/L		69	40 - 115	4	32
Ronnel			4.00	3.43	J	ug/L		86	55 - 115	4	28
Simazine			4.00	2.27	J	ug/L		57	39 - 115	21	53
Sulfotepp			4.00	3.38		ug/L		85	53 - 115	4	27
Thionazin			4.00	3.29		ug/L		82	54 - 115	2	27
Trichloronate			4.00	3.03		ug/L		76	48 - 115	3	26
Ethoprop			4.00	3.32		ug/L		83	50 - 115	4	29
BolstarFamphur			4.00	7.32		ug/L		183		1	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Chlormefos	78		49 - 171
Triphenylphosphate	101		60 - 154

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-339876/1-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339876

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/29/16 09:40	09/01/16 15:15	1
2,4-D	ND		4.0	0.21	ug/L		08/29/16 09:40	09/01/16 15:15	1
2,4-DB	ND		4.0	0.36	ug/L		08/29/16 09:40	09/01/16 15:15	1
Dalapon	ND		2.0	0.91	ug/L		08/29/16 09:40	09/01/16 15:15	1
Dicamba	ND		2.0	0.15	ug/L		08/29/16 09:40	09/01/16 15:15	1
Dichlorprop	ND		4.0	0.65	ug/L		08/29/16 09:40	09/01/16 15:15	1
MCPA	ND		400	17	ug/L		08/29/16 09:40	09/01/16 15:15	1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: MB 280-339876/1-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339876

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		400	33	ug/L		08/29/16 09:40	09/01/16 15:15	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/29/16 09:40	09/01/16 15:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*83*		*39 - 135*	*08/29/16 09:40*	*09/01/16 15:15*	*1*

Lab Sample ID: LCS 280-339876/2-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.71		ug/L		74	45 - 135
2,4-D	5.00	3.77	J	ug/L		75	46 - 126
2,4-DB	5.00	3.99	J	ug/L		80	18 - 135
Dalapon	5.00	3.34		ug/L		67	52 - 119
Dicamba	5.00	3.72		ug/L		74	50 - 128
Dichlorprop	5.00	3.66	J	ug/L		73	44 - 121
MCPA	500	373	J	ug/L		75	43 - 118
MCPP	500	425		ug/L		85	45 - 121
Silvex (2,4,5-TP)	5.00	4.02		ug/L		80	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*78*		*39 - 135*

Lab Sample ID: LCSD 280-339876/3-A
Matrix: Water
Analysis Batch: 340437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.97		ug/L		79	45 - 135	7	30
2,4-D	5.00	3.89	J	ug/L		78	46 - 126	3	30
2,4-DB	5.00	3.73	J	ug/L		75	18 - 135	7	30
Dalapon	5.00	3.52		ug/L		70	52 - 119	5	30
Dicamba	5.00	3.91		ug/L		78	50 - 128	5	30
Dichlorprop	5.00	3.87	J	ug/L		77	44 - 121	5	30
MCPA	500	389	J	ug/L		78	43 - 118	4	30
MCPP	500	446		ug/L		89	45 - 121	5	30
Silvex (2,4,5-TP)	5.00	4.16		ug/L		83	48 - 127	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8283/1-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 13:12	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*

Lab Sample ID: LCS 590-8283/2-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.24		mg/L		77	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.58		mg/L		99	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*80*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8240/1015
Matrix: Water
Analysis Batch: 8240

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/24/16 14:07	1
Sulfate	ND		0.50	0.13	mg/L			08/24/16 14:07	1

Lab Sample ID: LCS 590-8240/1014
Matrix: Water
Analysis Batch: 8240

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.1		mg/L		104	90 - 110
Sulfate	12.5	13.1		mg/L		105	90 - 110

Lab Sample ID: MB 590-8241/1015
Matrix: Water
Analysis Batch: 8241

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0435	J	0.20	0.039	mg/L			08/24/16 14:07	1
Nitrite as N	ND		0.20	0.069	mg/L			08/24/16 14:07	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 590-8241/1014
Matrix: Water
Analysis Batch: 8241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.21		mg/L		104	90 - 110
Nitrite as N	5.00	5.16		mg/L		103	90 - 110

Lab Sample ID: MB 590-8285/1003
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/26/16 12:01	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 12:01	1

Lab Sample ID: MB 590-8285/1015
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/26/16 14:50	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 14:50	1

Lab Sample ID: LCS 590-8285/1002
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.24		mg/L		105	90 - 110
Nitrite as N	5.00	5.07		mg/L		101	90 - 110

Lab Sample ID: LCS 590-8285/1014
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.23		mg/L		105	90 - 110
Nitrite as N	5.00	5.15		mg/L		103	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-226122/10-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:26	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:26	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:26	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:26	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:26	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:26	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:26	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226122/10-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:26	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:26	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:26	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:26	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:26	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:26	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:26	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:26	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:26	1

Lab Sample ID: LCS 580-226122/11-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.105		mg/L		105	85 - 115
Antimony	0.100	0.106		mg/L		106	85 - 115
Barium	0.100	0.110		mg/L		110	85 - 115
Beryllium	0.100	0.103		mg/L		103	85 - 115
Cadmium	0.100	0.103		mg/L		103	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.103		mg/L		103	85 - 115
Iron	10.0	10.1		mg/L		101	85 - 115
Lead	0.100	0.105		mg/L		105	85 - 115
Manganese	0.100	0.102		mg/L		102	85 - 115
Nickel	0.100	0.103		mg/L		103	85 - 115
Selenium	0.100	0.103		mg/L		103	85 - 115
Silver	0.100	0.104		mg/L		104	85 - 115
Thallium	0.100	0.107		mg/L		107	85 - 115
Vanadium	0.100	0.102		mg/L		102	85 - 115
Zinc	0.100	0.102		mg/L		102	85 - 115

Lab Sample ID: LCSD 580-226122/12-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226122

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.105		mg/L		105	85 - 115	0	20
Antimony	0.100	0.106		mg/L		106	85 - 115	1	20
Barium	0.100	0.108		mg/L		108	85 - 115	1	20
Beryllium	0.100	0.102		mg/L		102	85 - 115	1	20
Cadmium	0.100	0.103		mg/L		103	85 - 115	0	20
Chromium	0.100	0.101		mg/L		101	85 - 115	0	20
Copper	0.100	0.103		mg/L		103	85 - 115	0	20
Iron	10.0	10.1		mg/L		101	85 - 115	0	20
Lead	0.100	0.104		mg/L		104	85 - 115	1	20
Manganese	0.100	0.102		mg/L		102	85 - 115	0	20
Nickel	0.100	0.103		mg/L		103	85 - 115	0	20
Selenium	0.100	0.104		mg/L		104	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-226122/12-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226122

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.100	0.103		mg/L		103	85 - 115	1	20
Thallium	0.100	0.105		mg/L		105	85 - 115	2	20
Vanadium	0.100	0.103		mg/L		103	85 - 115	0	20
Zinc	0.100	0.103		mg/L		103	85 - 115	0	20

Lab Sample ID: MB 580-226150/14-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226150

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 19:20	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 19:20	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 19:20	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 19:20	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 19:20	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 19:20	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 19:20	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 19:20	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 19:20	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 19:20	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 19:20	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 19:20	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 19:20	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 19:20	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 19:20	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 19:20	1

Lab Sample ID: LCS 580-226150/15-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.107		mg/L		107	85 - 115
Antimony	0.100	0.110		mg/L		110	85 - 115
Barium	0.100	0.112		mg/L		112	85 - 115
Beryllium	0.100	0.106		mg/L		106	85 - 115
Cadmium	0.100	0.105		mg/L		105	85 - 115
Chromium	0.100	0.103		mg/L		103	85 - 115
Copper	0.100	0.105		mg/L		105	85 - 115
Iron	10.0	10.3		mg/L		103	85 - 115
Lead	0.100	0.106		mg/L		106	85 - 115
Manganese	0.100	0.105		mg/L		105	85 - 115
Nickel	0.100	0.105		mg/L		105	85 - 115
Selenium	0.100	0.105		mg/L		105	85 - 115
Silver	0.100	0.106		mg/L		106	85 - 115
Thallium	0.100	0.108		mg/L		108	85 - 115
Vanadium	0.100	0.104		mg/L		104	85 - 115
Zinc	0.100	0.105		mg/L		105	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-226150/16-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226150

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			0.100	0.106		mg/L		106	85 - 115	1	20
Antimony			0.100	0.109		mg/L		109	85 - 115	1	20
Barium			0.100	0.111		mg/L		111	85 - 115	1	20
Beryllium			0.100	0.105		mg/L		105	85 - 115	1	20
Cadmium			0.100	0.105		mg/L		105	85 - 115	1	20
Chromium			0.100	0.103		mg/L		103	85 - 115	0	20
Copper			0.100	0.104		mg/L		104	85 - 115	1	20
Iron			10.0	10.3		mg/L		103	85 - 115	1	20
Lead			0.100	0.106		mg/L		106	85 - 115	0	20
Manganese			0.100	0.105		mg/L		105	85 - 115	1	20
Nickel			0.100	0.104		mg/L		104	85 - 115	1	20
Selenium			0.100	0.105		mg/L		105	85 - 115	0	20
Silver			0.100	0.105		mg/L		105	85 - 115	1	20
Thallium			0.100	0.108		mg/L		108	85 - 115	1	20
Vanadium			0.100	0.105		mg/L		105	85 - 115	1	20
Zinc			0.100	0.104		mg/L		104	85 - 115	1	20

Lab Sample ID: MB 580-225917/6-B
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 10:12	08/31/16 18:21	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 10:12	08/31/16 18:21	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 10:12	08/31/16 18:21	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 10:12	08/31/16 18:21	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 10:12	08/31/16 18:21	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 10:12	08/31/16 18:21	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 10:12	08/31/16 18:21	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 10:12	08/31/16 18:21	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 10:12	08/31/16 18:21	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 10:12	08/31/16 18:21	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 10:12	08/31/16 18:21	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 10:12	08/31/16 18:21	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 10:12	08/31/16 18:21	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 10:12	08/31/16 18:21	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 10:12	08/31/16 18:21	1
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 10:12	08/31/16 18:21	1

Lab Sample ID: 590-4291-1 DU
Matrix: Water
Analysis Batch: 226420

Client Sample ID: MW-3:082316
Prep Type: Dissolved
Prep Batch: 226122

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	0.0025			0.00260		mg/L				3	20
Antimony	0.00016	J		0.000172	J	mg/L				5	20
Barium	0.045			0.0432		mg/L				4	20
Beryllium	ND			ND		mg/L				NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-4291-1 DU — **Client Sample ID: MW-3:082316**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 226420 — **Prep Batch: 226122**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	0.000029	J	0.0000435	J F5	mg/L		40	20
Chromium	0.00047		0.000267	J F5	mg/L		55	20
Copper	0.0058		0.00593		mg/L		2	20
Iron	0.035	J	0.0412		mg/L		16	20
Lead	0.00049		0.000741	F5	mg/L		41	20
Manganese	0.00097	J	0.00114	J	mg/L		16	20
Nickel	0.0016	J	0.00132	J	mg/L		19	20
Selenium	0.00030	J	0.000322	J	mg/L		6	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0057		0.00573		mg/L		0.3	20
Zinc	0.0023	J	0.00293	J F5	mg/L		24	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: LCS 580-226207/8-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226336 — **Prep Batch: 226207**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00214		mg/L		107	85 - 115

Lab Sample ID: LCSD 580-226207/9-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226336 — **Prep Batch: 226207**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00209		mg/L		105	85 - 115	2	20

Lab Sample ID: MB 580-226226/19-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226336 — **Prep Batch: 226226**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 14:56	1

Lab Sample ID: LCS 580-226226/20-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226336 — **Prep Batch: 226226**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00210		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226226/21-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226336 — **Prep Batch: 226226**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00202		mg/L		101	85 - 115	4	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: MB 580-225917/6-C
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226207

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 10:02	08/30/16 12:50	1

Lab Sample ID: 590-4291-2 DU
Matrix: Water
Analysis Batch: 226336

Client Sample ID: MW-5-082316
Prep Type: Dissolved
Prep Batch: 226207

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-368088/1-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 368088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:23	1

Lab Sample ID: LCS 490-368088/3-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Lab Sample ID: LCSD 490-368088/4-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.0990		mg/L		99	90 - 110	3	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-366375/1-A
Matrix: Water
Analysis Batch: 366637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366375

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 08:57	1

Lab Sample ID: LCS 490-366375/2-A
Matrix: Water
Analysis Batch: 366637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.77		mg/L		95	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-366363/3
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1

Lab Sample ID: LCS 490-366363/4
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	52.6		mg/L		105	90 - 110

Lab Sample ID: LCSD 490-366363/5
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	50.5		mg/L		101	90 - 110	4	20

Lab Sample ID: 590-4291-1 MS
Matrix: Water
Analysis Batch: 366363

Client Sample ID: MW-3:082316
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	4.1	J F1	50.0	60.4	F1	mg/L		113	90 - 110

Method: SM 5310C - TOC

Lab Sample ID: MB 490-367509/2
Matrix: Water
Analysis Batch: 367509

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			09/01/16 15:50	1

Lab Sample ID: LCS 490-367509/6
Matrix: Water
Analysis Batch: 367509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.0		mg/L		100	90 - 110
TOC Result 1	10.0	9.87		mg/L		99	90 - 110
TOC Result 2	10.0	10.2		mg/L		102	90 - 110

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-3:082316

Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 16:34	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 16:34	MRS	TAL SPK
Total/NA	Prep	3520C			1049 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 16:29	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 13:18	NMI	TAL SPK
Total/NA	Prep	3510C			228.3 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 20:27	JCP	TAL SEA
Total/NA	Prep	3510C			249 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 21:18	NMI	TAL SPK
Total/NA	Prep	3510C			890 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 17:16	TEM	TAL DEN
Total/NA	Prep	8151A			1041.4 mL	10 mL	339876	08/29/16 09:40	JRA	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 13:22	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			249.9 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 14:44	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8240	08/24/16 15:07	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8241	08/24/16 15:07	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226122	08/29/16 10:12		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 18:31	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:14	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226207	08/30/16 10:02	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 13:01	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:16	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:31	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:12	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 17:47	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8274	08/24/16 11:10	SJK	TAL SPK

Client Sample ID: MW-5-082316

Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 17:17	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 17:17	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			975.4 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 16:55	D1R	TAL SEA
Total/NA	Prep	3520C	DL		975.4 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D	DL	10			226356	08/31/16 13:50	ERB	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 13:33	NMI	TAL SPK
Total/NA	Prep	3510C			251 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 20:44	JCP	TAL SEA
Total/NA	Prep	3510C			248 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 21:38	NMI	TAL SPK
Total/NA	Prep	3510C			1049.8 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 17:47	TEM	TAL DEN
Total/NA	Prep	8151A			1027.1 mL	10 mL	339876	08/29/16 09:40	JRA	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 13:45	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			249 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 15:03	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8240	08/24/16 15:19	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8241	08/24/16 15:19	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226122	08/29/16 10:12		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 18:39	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:18	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226207	08/30/16 10:02	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 12:56	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:23	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:33	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:13	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 18:03	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8274	08/24/16 11:10	SJK	TAL SPK

Client Sample ID: MW-5A-082316

Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 17:59	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 17:59	MRS	TAL SPK
Total/NA	Prep	3520C			1048.7 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 17:21	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 14:05	NMI	TAL SPK

Client Sample ID: MW-5A-082316

Lab Sample ID: 590-4291-3

Date Collected: 08/23/16 12:55

Matrix: Water

Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			253.6 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 21:01	JCP	TAL SEA
Total/NA	Prep	3510C			259.8 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 21:57	NMI	TAL SPK
Total/NA	Prep	3510C			1056.5 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 18:19	TEM	TAL DEN
Total/NA	Prep	8151A			1038.2 mL	10 mL	339876	08/29/16 09:40	JRA	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 14:07	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			244 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 15:21	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8240	08/24/16 15:31	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8241	08/24/16 15:31	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226122	08/29/16 10:12		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 18:44	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:41	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226207	08/30/16 10:02	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 13:03	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:25	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:34	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:14	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 18:20	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8274	08/24/16 11:10	SJK	TAL SPK

Client Sample ID: MW-15-082316

Lab Sample ID: 590-4291-4

Date Collected: 08/23/16 14:15

Matrix: Water

Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 18:21	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 18:21	MRS	TAL SPK
Total/NA	Prep	3520C			1039.8 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 17:47	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 14:21	NMI	TAL SPK
Total/NA	Prep	3510C			250.3 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 21:18	JCP	TAL SEA

Client Sample ID: MW-15-082316

Lab Sample ID: 590-4291-4

Date Collected: 08/23/16 14:15

Matrix: Water

Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			251 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 22:16	NMI	TAL SPK
Total/NA	Prep	3510C			1045.8 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 19:53	TEM	TAL DEN
Total/NA	Prep	8151A			951.6 mL	10 mL	339876	08/29/16 09:40	JRA	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 14:30	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			246.6 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 15:40	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8240	08/24/16 15:43	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8241	08/24/16 15:43	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226122	08/29/16 10:12		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 18:48	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:45	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226207	08/30/16 10:02	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 13:05	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:28	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:35	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:15	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 18:37	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8274	08/24/16 11:10	SJK	TAL SPK

Client Sample ID: MW-15A-082316

Lab Sample ID: 590-4291-5

Date Collected: 08/23/16 15:55

Matrix: Water

Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 18:43	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 18:43	MRS	TAL SPK
Total/NA	Prep	3520C			1024.2 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 18:12	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 14:36	NMI	TAL SPK
Total/NA	Prep	3510C			249.5 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 21:35	JCP	TAL SEA
Total/NA	Prep	3510C			250.1 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 22:36	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Client Sample ID: MW-15A-082316

Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1045.6 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 20:24	TEM	TAL DEN
Total/NA	Prep	8151A			1028.9 mL	10 mL	339876	08/29/16 09:40	JRA	TAL DEN
Total/NA	Analysis	8151A		1			340437	09/01/16 14:53	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			233.9 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 15:58	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8240	08/24/16 15:55	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8241	08/24/16 15:55	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226122	08/29/16 10:12		TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 18:53	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:49	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	225917	08/25/16 15:56	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226207	08/30/16 10:02	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226336	08/30/16 13:08	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:30	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:36	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:16	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 18:53	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8274	08/24/16 11:10	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.3
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-3:082316	8/23/16	1030	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-5:082316		1132		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-5A:082316		1255		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-15:082316		1415		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-15A:082316		1555		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	

590-4291 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
			Sheila Kratz	8/24/16 950	TA Spok
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.5° IR003

9/27/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.4
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 3
Company: GeoEngineers Inc				Job #:

Address: 523 East Second Ave	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Spokane	TAT Requested (days): Std.		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WA, 99202			
Phone: 509-363-3125	PO #: Purchase Order not required		Other:
Email: jmlee@geoengineers.com	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TCIE.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-3:082316	8/23/16	1030	G	Water	N		X	X	X	X	25	
MW-5:082316		1132		Water	N		X	X	X	X	25	
MW-5A:082316		1255		Water	N		X	X	X	X	25	
MW-15:082316		1415		Water	N		X	X	X	X	25	
MW-15A:082316		1555		Water	N		X	X	X	X	25	
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Sheila Kraft	8/24/16 950	TA Spok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.5 C IR003

9/27/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1952.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4291-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/6/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-3-082316 (590-4291-1)	8/23/16	10:30 Pacific		Water			X	X	4	
MW-5-082316 (590-4291-2)	8/23/16	11:32 Pacific		Water			X	X	4	
MW-5A-082316 (590-4291-3)	8/23/16	12:55 Pacific		Water			X	X	4	
MW-15-082316 (590-4291-4)	8/23/16	14:15 Pacific		Water			X	X	4	
MW-15A-082316 (590-4291-5)	8/23/16	15:55 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/24/16 1515	TAS LOCK	[signature]	8/25/16 0910	DAD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.4, 3.1+0.2 IR#5 Transferred by [signature] 8/25/16

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-4291 Chain of Custody

Cooler Received/Opened On 8/25/2016 @ 0915

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1571 (last 4 digits, FedEx) Courier: _____

IR Gun ID_17610176___ pH Strip Lot HC564992 Chlorine Strip Lot 012516A

2. Temperature of rep. sample or temp blank when opened: 2.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
4291

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

9/27/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	COC No: 590-1955.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc			Job #: 590-4291-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 9/6/2016		
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/ Total Organic Carbon (TOC)	410.4/ Chemical Oxygen Demand (COD)	350.1/Distill_Ammonia Ammonia	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-3:082316 (590-4291-1)	8/23/16	10:30 Pacific		Water			X	X	X	X	3	
MW-5-082316 (590-4291-2)	8/23/16	11:32 Pacific		Water			X	X	X	X	3	
MW-5A-082316 (590-4291-3)	8/23/16	12:55 Pacific		Water			X	X	X	X	3	
MW-15-082316 (590-4291-4)	8/23/16	14:15 Pacific		Water			X	X	X	X	3	
MW-15A-082316 (590-4291-5)	8/23/16	15:55 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 8/24/16 1100	Company STA	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 8-25-16 9:15	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.1

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1954.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4291-1
Address: 5755 8th Street East,	Due Date Requested: 9/6/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	8270D/3520C Standard Reporting List	8081B/3510C_LVI Standard Reporting List	245.1/FILTRATION Dissolved Mercury - Seattle	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-3:082316 (590-4291-1)	8/23/16	10:30 Pacific		Water			X	X	X	X	X	X	6	
MW-5-082316 (590-4291-2)	8/23/16	11:32 Pacific		Water			X	X	X	X	X	X	6	
MW-5A-082316 (590-4291-3)	8/23/16	12:55 Pacific		Water			X	X	X	X	X	X	6	
MW-15-082316 (590-4291-4)	8/23/16	14:15 Pacific		Water			X	X	X	X	X	X	6	
MW-15A-082316 (590-4291-5)	8/23/16	15:55 Pacific		Water			X	X	X	X	X	X	6	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Shelia Hoad	8/24/16 1550	TA-Spk	Tom Blunt	8/25/16 1000	TA-Spk
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR2 0.2/0.3 IR2 -0.2/-0.1

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4291-1

Login Number: 4291
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4291-1

Login Number: 4291
List Number: 2
Creator: White, Denise E

List Source: TestAmerica Denver
List Creation: 08/25/16 11:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	False	Not present, tape intact and samples appear untouched.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4291-1

Login Number: 4291
List Number: 4
Creator: Abernathy, Eric

List Source: TestAmerica Nashville
List Creation: 08/25/16 05:57 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4291-1

Login Number: 4291
List Number: 3
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 08/25/16 03:51 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4291-2
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
10/3/2016 10:13:28 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Job ID: 590-4291-2

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/24/2016 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.5º C.

Dioxin
Method 8290A: The laboratory control sample (LCS) for 320-127279 recovered outside control limits for 1,2,3,6,7,8-HxCDF. This analyte was biased high in the LCS and was either not detected or detected as a 'J' flagged estimated value below the reporting limit (RL) in the associated samples; therefore, the data have been reported.

Method 8290A: The Isotope Dilution Analyte (IDA 13C-OCDD) recovery associated with the ending Continuing Calibration Verification (CCV) is below the method recommended limit: CCV 320-129406/14. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for this IDA in this CCV and all associated samples. The 13C-OCDD IDA recovery for all associated samples is within recovery limits.

Method 8290A: The bracketing continuing calibration verification (CCV) associated with batch 320-129408 1,2,3,4,7,8-HxCDD with percent difference values that are between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4291-1	MW-3:082316	Water	08/23/16 10:30	08/24/16 09:50
590-4291-2	MW-5-082316	Water	08/23/16 11:32	08/24/16 09:50
590-4291-3	MW-5A-082316	Water	08/23/16 12:55	08/24/16 09:50
590-4291-4	MW-15-082316	Water	08/23/16 14:15	08/24/16 09:50
590-4291-5	MW-15A-082316	Water	08/23/16 15:55	08/24/16 09:50

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: MW-3:082316

Date Collected: 08/23/16 10:30
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.40	pg/L		09/15/16 09:07	09/22/16 10:59	1
2,3,7,8-TCDF	ND		9.5	0.21	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,7,8-PeCDD	ND		47	0.44	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,7,8-PeCDF	ND		47	0.27	pg/L		09/15/16 09:07	09/22/16 10:59	1
2,3,4,7,8-PeCDF	ND		47	0.29	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,4,7,8-HxCDD	ND		47	0.26	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,6,7,8-HxCDD	ND		47	0.24	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,7,8,9-HxCDD	ND		47	0.20	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,4,7,8-HxCDF	ND		47	0.35	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,6,7,8-HxCDF	ND	*	47	0.31	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,7,8,9-HxCDF	ND		47	0.33	pg/L		09/15/16 09:07	09/22/16 10:59	1
2,3,4,6,7,8-HxCDF	ND		47	0.34	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,4,6,7,8-HpCDD	ND		47	0.49	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.20	pg/L		09/15/16 09:07	09/22/16 10:59	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.24	pg/L		09/15/16 09:07	09/22/16 10:59	1
OCDD	**2.2**	**J B**	95	0.40	pg/L		09/15/16 09:07	09/22/16 10:59	1
OCDF	ND		95	0.70	pg/L		09/15/16 09:07	09/22/16 10:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-2,3,7,8-TCDF	*85*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-1,2,3,4,7,8-HxCDF	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*63*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*
13C-OCDD	*61*		*40 - 135*	*09/15/16 09:07*	*09/22/16 10:59*	*1*

Client Sample ID: MW-5-082316

Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.36	pg/L		09/15/16 09:07	09/22/16 11:45	1
2,3,7,8-TCDF	ND		11	0.29	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,7,8-PeCDD	ND		53	0.41	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,7,8-PeCDF	ND		53	0.24	pg/L		09/15/16 09:07	09/22/16 11:45	1
2,3,4,7,8-PeCDF	ND		53	0.25	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,4,7,8-HxCDD	ND		53	0.30	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,6,7,8-HxCDD	ND		53	0.27	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,7,8,9-HxCDD	ND		53	0.23	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,4,7,8-HxCDF	ND		53	0.51	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,6,7,8-HxCDF	ND	*	53	0.46	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,7,8,9-HxCDF	ND		53	0.49	pg/L		09/15/16 09:07	09/22/16 11:45	1
2,3,4,6,7,8-HxCDF	ND		53	0.50	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,4,6,7,8-HpCDD	**0.50**	**J**	53	0.43	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,4,6,7,8-HpCDF	ND		53	0.18	pg/L		09/15/16 09:07	09/22/16 11:45	1
1,2,3,4,7,8,9-HpCDF	ND		53	0.21	pg/L		09/15/16 09:07	09/22/16 11:45	1

Client Sample ID: MW-5-082316

Date Collected: 08/23/16 11:32
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	ND		110	0.56	pg/L		09/15/16 09:07	09/22/16 11:45	1
OCDF	ND		110	0.91	pg/L		09/15/16 09:07	09/22/16 11:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-2,3,7,8-TCDF	*95*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-1,2,3,7,8-PeCDF	*85*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-1,2,3,6,7,8-HxCDD	*101*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*71*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*82*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*
13C-OCDD	*70*		*40 - 135*	*09/15/16 09:07*	*09/22/16 11:45*	*1*

Client Sample ID: MW-5A-082316

Date Collected: 08/23/16 12:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-3
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.32	pg/L		09/19/16 15:17	09/26/16 00:50	1
2,3,7,8-TCDF	ND		9.5	0.25	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,7,8-PeCDD	ND		47	0.46	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,7,8-PeCDF	ND		47	0.39	pg/L		09/19/16 15:17	09/26/16 00:50	1
2,3,4,7,8-PeCDF	ND		47	0.40	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,4,7,8-HxCDD	ND		47	0.32	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,6,7,8-HxCDD	ND		47	0.34	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,7,8,9-HxCDD	ND		47	0.28	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,4,7,8-HxCDF	ND		47	0.34	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,6,7,8-HxCDF	ND		47	0.33	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,7,8,9-HxCDF	ND		47	0.37	pg/L		09/19/16 15:17	09/26/16 00:50	1
2,3,4,6,7,8-HxCDF	ND		47	0.35	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,4,6,7,8-HpCDD	ND		47	0.40	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.20	pg/L		09/19/16 15:17	09/26/16 00:50	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.23	pg/L		09/19/16 15:17	09/26/16 00:50	1
OCDD	**2.9**	**J B**	95	0.39	pg/L		09/19/16 15:17	09/26/16 00:50	1
OCDF	ND		95	0.48	pg/L		09/19/16 15:17	09/26/16 00:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-1,2,3,7,8-PeCDD	*65*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-1,2,3,7,8-PeCDF	*69*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*89*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*
13C-OCDD	*71*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:50*	*1*

Client Sample ID: MW-15-082316

Lab Sample ID: 590-4291-4

Date Collected: 08/23/16 14:15

Matrix: Water

Date Received: 08/24/16 09:50

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.37	pg/L		09/19/16 15:17	09/26/16 01:36	1
2,3,7,8-TCDF	ND		11	0.28	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,7,8-PeCDD	ND		54	0.60	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,7,8-PeCDF	ND		54	0.58	pg/L		09/19/16 15:17	09/26/16 01:36	1
2,3,4,7,8-PeCDF	ND		54	0.59	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,4,7,8-HxCDD	ND		54	0.35	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,6,7,8-HxCDD	ND		54	0.37	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,7,8,9-HxCDD	ND		54	0.30	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,4,7,8-HxCDF	ND		54	0.40	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,6,7,8-HxCDF	ND		54	0.39	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,7,8,9-HxCDF	ND		54	0.42	pg/L		09/19/16 15:17	09/26/16 01:36	1
2,3,4,6,7,8-HxCDF	ND		54	0.40	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,4,6,7,8-HpCDD	ND		54	0.35	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,4,6,7,8-HpCDF	ND		54	0.23	pg/L		09/19/16 15:17	09/26/16 01:36	1
1,2,3,4,7,8,9-HpCDF	ND		54	0.26	pg/L		09/19/16 15:17	09/26/16 01:36	1
OCDD	ND		110	0.45	pg/L		09/19/16 15:17	09/26/16 01:36	1
OCDF	ND		110	0.48	pg/L		09/19/16 15:17	09/26/16 01:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-1,2,3,7,8-PeCDF	*68*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*
13C-OCDD	*76*		*40 - 135*	*09/19/16 15:17*	*09/26/16 01:36*	*1*

Client Sample ID: MW-15A-082316

Lab Sample ID: 590-4291-5

Date Collected: 08/23/16 15:55

Matrix: Water

Date Received: 08/24/16 09:50

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.40	pg/L		09/19/16 15:17	09/26/16 23:44	1
2,3,7,8-TCDF	ND		9.6	0.47	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,7,8-PeCDD	ND		48	0.76	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,7,8-PeCDF	ND		48	0.56	pg/L		09/19/16 15:17	09/26/16 23:44	1
2,3,4,7,8-PeCDF	ND		48	0.57	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,4,7,8-HxCDD	ND		48	0.40	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,6,7,8-HxCDD	ND		48	0.42	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,7,8,9-HxCDD	ND		48	0.34	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,4,7,8-HxCDF	ND		48	0.51	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,6,7,8-HxCDF	ND		48	0.50	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,7,8,9-HxCDF	ND		48	0.55	pg/L		09/19/16 15:17	09/26/16 23:44	1
2,3,4,6,7,8-HxCDF	ND		48	0.52	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,4,6,7,8-HpCDD	**1.1**	**J q B**	48	0.43	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.25	pg/L		09/19/16 15:17	09/26/16 23:44	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.29	pg/L		09/19/16 15:17	09/26/16 23:44	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Client Sample ID: MW-15A-082316
Date Collected: 08/23/16 15:55
Date Received: 08/24/16 09:50

Lab Sample ID: 590-4291-5
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	2.7	J q B	96	0.61	pg/L		09/19/16 15:17	09/26/16 23:44	1
OCDF	ND		96	0.80	pg/L		09/19/16 15:17	09/26/16 23:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*81*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-1,2,3,7,8-PeCDD	*64*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-1,2,3,7,8-PeCDF	*70*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-1,2,3,6,7,8-HxCDD	*94*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*76*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*85*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*
13C-OCDD	*60*		*40 - 135*	*09/19/16 15:17*	*09/26/16 23:44*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-127279/1-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127279

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.26	pg/L		09/15/16 09:07	09/22/16 00:50	1
2,3,7,8-TCDF	ND		10	0.16	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8-PeCDD	ND		50	0.37	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8-PeCDF	ND		50	0.21	pg/L		09/15/16 09:07	09/22/16 00:50	1
2,3,4,7,8-PeCDF	ND		50	0.22	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,7,8-HxCDD	ND		50	0.19	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,6,7,8-HxCDD	ND		50	0.18	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8,9-HxCDD	ND		50	0.15	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,7,8-HxCDF	ND		50	0.22	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,6,7,8-HxCDF	ND		50	0.19	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,7,8,9-HxCDF	ND		50	0.21	pg/L		09/15/16 09:07	09/22/16 00:50	1
2,3,4,6,7,8-HxCDF	ND		50	0.21	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.30	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,6,7,8-HpCDF	ND		50	0.13	pg/L		09/15/16 09:07	09/22/16 00:50	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.16	pg/L		09/15/16 09:07	09/22/16 00:50	1
OCDD	2.63	J	100	0.45	pg/L		09/15/16 09:07	09/22/16 00:50	1
OCDF	ND		100	0.51	pg/L		09/15/16 09:07	09/22/16 00:50	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-2,3,7,8-TCDF	*97*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*77*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*
13C-OCDD	*64*		*40 - 135*	*09/15/16 09:07*	*09/22/16 00:50*	*1*

Lab Sample ID: LCS 320-127279/2-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	221		pg/L		110	64 - 142
2,3,7,8-TCDF	200	200		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1220		pg/L		122	71 - 140
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	76 - 135
2,3,4,7,8-PeCDF	1000	1120		pg/L		112	74 - 137
1,2,3,4,7,8-HxCDD	1000	1020		pg/L		102	56 - 146
1,2,3,6,7,8-HxCDD	1000	1200		pg/L		120	73 - 144
1,2,3,7,8,9-HxCDD	1000	1050		pg/L		105	71 - 151
1,2,3,4,7,8-HxCDF	1000	1200		pg/L		120	75 - 131
1,2,3,6,7,8-HxCDF	1000	1340	*	pg/L		134	76 - 133
1,2,3,7,8,9-HxCDF	1000	1190		pg/L		119	77 - 142
2,3,4,6,7,8-HxCDF	1000	1270		pg/L		127	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	1180		pg/L		118	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1190		pg/L		119	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-127279/2-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,7,8,9-HpCDF	1000	1160		pg/L		116	83 - 130
OCDD	2000	2130		pg/L		107	80 - 132
OCDF	2000	2310		pg/L		115	72 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*85*		*40 - 135*
13C-2,3,7,8-TCDF	*93*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*68*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*83*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*92*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*85*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*78*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-127279/3-A
Matrix: Water
Analysis Batch: 128409

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127279

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	200	223		pg/L		111	64 - 142	1	20
2,3,7,8-TCDF	200	195		pg/L		98	71 - 142	2	20
1,2,3,7,8-PeCDD	1000	1130		pg/L		113	71 - 140	8	20
1,2,3,7,8-PeCDF	1000	1110		pg/L		111	76 - 135	5	20
2,3,4,7,8-PeCDF	1000	1110		pg/L		111	74 - 137	1	20
1,2,3,4,7,8-HxCDD	1000	990		pg/L		99	56 - 146	3	20
1,2,3,6,7,8-HxCDD	1000	1120		pg/L		112	73 - 144	7	20
1,2,3,7,8,9-HxCDD	1000	1040		pg/L		104	71 - 151	1	20
1,2,3,4,7,8-HxCDF	1000	1160		pg/L		116	75 - 131	4	20
1,2,3,6,7,8-HxCDF	1000	1250		pg/L		125	76 - 133	7	20
1,2,3,7,8,9-HxCDF	1000	1140		pg/L		114	77 - 142	4	20
2,3,4,6,7,8-HxCDF	1000	1210		pg/L		121	80 - 137	5	20
1,2,3,4,6,7,8-HpCDD	1000	1150		pg/L		115	78 - 139	3	20
1,2,3,4,6,7,8-HpCDF	1000	1160		pg/L		116	79 - 133	2	20
1,2,3,4,7,8,9-HpCDF	1000	1150		pg/L		115	83 - 130	1	20
OCDD	2000	2150		pg/L		108	80 - 132	1	20
OCDF	2000	2290		pg/L		114	72 - 140	1	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*87*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*68*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*82*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*76*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*40 - 135*
13C-OCDD	*60*		*40 - 135*

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-127940/1-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127940

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,7,8-TCDF	ND		10	0.27	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDD	ND		50	0.56	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDF	ND		50	0.47	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,7,8-PeCDF	ND		50	0.48	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDD	ND		50	0.41	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDD	ND		50	0.42	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDD	ND		50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDF	ND		50	0.32	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDF	ND		50	0.31	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDF	ND		50	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,6,7,8-HxCDF	ND		50	0.33	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDD	1.10	J	50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDF	0.430	J q	50	0.19	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.22	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDD	3.50	J	100	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDF	ND		100	0.40	pg/L		09/19/16 15:17	09/25/16 19:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-OCDD	*72*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	191		pg/L		95	64 - 142
2,3,7,8-TCDF	200	199		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135
2,3,4,7,8-PeCDF	1000	1030		pg/L		103	74 - 137
1,2,3,4,7,8-HxCDD	1000	853		pg/L		85	56 - 146
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	73 - 144
1,2,3,7,8,9-HxCDD	1000	949		pg/L		95	71 - 151
1,2,3,4,7,8-HxCDF	1000	1040		pg/L		104	75 - 131
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	77 - 142
2,3,4,6,7,8-HxCDF	1000	1080		pg/L		108	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	999		pg/L		100	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8,9-HpCDF			1000	942		pg/L		94	83 - 130		
OCDD			2000	2000		pg/L		100	80 - 132		
OCDF			2000	2170		pg/L		109	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*64*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*83*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*77*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-127940/3-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	213		pg/L		107	64 - 142	11	20
2,3,7,8-TCDF			200	212		pg/L		106	71 - 142	6	20
1,2,3,7,8-PeCDD			1000	1070		pg/L		107	71 - 140	6	20
1,2,3,7,8-PeCDF			1000	1070		pg/L		107	76 - 135	1	20
2,3,4,7,8-PeCDF			1000	1050		pg/L		105	74 - 137	2	20
1,2,3,4,7,8-HxCDD			1000	969		pg/L		97	56 - 146	13	20
1,2,3,6,7,8-HxCDD			1000	1080		pg/L		108	73 - 144	5	20
1,2,3,7,8,9-HxCDD			1000	1030		pg/L		103	71 - 151	9	20
1,2,3,4,7,8-HxCDF			1000	1100		pg/L		110	75 - 131	6	20
1,2,3,6,7,8-HxCDF			1000	1200		pg/L		120	76 - 133	5	20
1,2,3,7,8,9-HxCDF			1000	1120		pg/L		112	77 - 142	8	20
2,3,4,6,7,8-HxCDF			1000	1170		pg/L		117	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD			1000	1060		pg/L		106	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF			1000	1070		pg/L		107	79 - 133	5	20
1,2,3,4,7,8,9-HpCDF			1000	1010		pg/L		101	83 - 130	7	20
OCDD			2000	2170		pg/L		108	80 - 132	8	20
OCDF			2000	2380		pg/L		119	72 - 140	9	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*86*		*40 - 135*
13C-2,3,7,8-TCDF	*83*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*80*		*40 - 135*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Client Sample ID: MW-3:082316
Lab Sample ID: 590-4291-1
Date Collected: 08/23/16 10:30
Matrix: Water
Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1057.8 mL	20 uL	127279	09/15/16 09:07	DXD	TAL SAC
Total/NA	Analysis	8290A		1			128413	09/22/16 10:59	KSS	TAL SAC

Client Sample ID: MW-5-082316
Lab Sample ID: 590-4291-2
Date Collected: 08/23/16 11:32
Matrix: Water
Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			948.2 mL	20 uL	127279	09/15/16 09:07	DXD	TAL SAC
Total/NA	Analysis	8290A		1			128413	09/22/16 11:45	KSS	TAL SAC

Client Sample ID: MW-5A-082316
Lab Sample ID: 590-4291-3
Date Collected: 08/23/16 12:55
Matrix: Water
Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1057.1 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129092	09/26/16 00:50	SMA	TAL SAC

Client Sample ID: MW-15-082316
Lab Sample ID: 590-4291-4
Date Collected: 08/23/16 14:15
Matrix: Water
Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			920 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129092	09/26/16 01:36	SMA	TAL SAC

Client Sample ID: MW-15A-082316
Lab Sample ID: 590-4291-5
Date Collected: 08/23/16 15:55
Matrix: Water
Date Received: 08/24/16 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1040 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129408	09/26/16 23:44	SMA	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4291-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.3
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-3:082316	8/23/16	1030	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-5:082316		1132		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-5A:082316		1255		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-15:082316		1415		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-15A:082316		1555		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	

590-4291 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
			Sheila Kratz	8/24/16 0950	TA Spok
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.5° IR003

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.4
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 3
Company: GeoEngineers Inc				Job #:

Address: 523 East Second Ave	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Spokane	TAT Requested (days): Std.		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WA, 99202			
Phone: 509-363-3125	PO #: Purchase Order not required		Other:
Email: jmlee@geoengineers.com	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TCIE.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-3:082316	8/23/16	1030	G	Water	N		X	X	X	X	25	
MW-5:082316		1132		Water	N		X	X	X	X	25	
MW-5A:082316		1255		Water	N		X	X	X	X	25	
MW-15:082316		1415		Water	N		X	X	X	X	25	
MW-15A:082316		1555		Water	N		X	X	X	X	25	
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Sheila Krad	8/24/16 950	TA Spk
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.5 C IR003

10/3/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1953.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4291-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/8/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-3:082316 (590-4291-1)	8/23/16	10:30 Pacific		Water			X	2	
MW-5-082316 (590-4291-2)	8/23/16	11:32 Pacific		Water			X	2	
MW-5A-082316 (590-4291-3)	8/23/16	12:55 Pacific		Water			X	2	
MW-15-082316 (590-4291-4)	8/23/16	14:15 Pacific		Water			X	2	
MW-15A-082316 (590-4291-5)	8/23/16	15:55 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kpadi	8/24/16 1535	TA Stock		8/25/16 0905	TA Spok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.0

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4291-2

Login Number: 4291
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4291-2

Login Number: 4291
List Number: 5
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 08/25/16 05:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4302-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/27/2016 4:02:17 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-4302-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/24/2016 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
Method NWTPH-Gx: The matrix spike(MS) recoveries for analytical batch 590-8292 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8293 recovered above the upper control limit for Acetone and 2-Butanone (MEK). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the recovery for Acetone was greater than 40%D, results for this analyte are estimates. The following samples are impacted: MW-14:082416 (590-4302-1), MW-11A:082416 (590-4302-2) and MW-7D:082416 (590-4302-3).

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8293 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 590-8293 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The laboratory control sample (LCS) for analytical batch 590-8293 recovered outside control limits for the following analyte: Acetone. This analyte was biased high in the LCS and not detected above the reporting limit in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226191 recovered above the upper control limit for 3,3'-Dichlorobenzidine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-14:082416 (590-4302-1), MW-11A:082416 (590-4302-2), MW-7D:082416 (590-4302-3) and (CCVIS 580-226191/3).

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-226191 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-226029 and analytical batch 580-226191 recovered outside control limits for the following analytes: Benzyl alcohol (LCS only) and Bis(2-ethylhexyl) phthalate (LCSD only). These analytes were biased high in the LCS. The affected samples were either not detected for this analyte or had hits below the reporting limit but above the detection limit. Bis(2-ethylhexyl) phthalate is a common lab contaminant.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226029 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, Bis(2-ethylhexyl) phthalate, 4-Nitroaniline and Benzyl alcohol.

Method 8270D: The method blank for preparation batch 580-226029 and analytical batch 580-226191 contained Benzyl alcohol and Bis(2-ethylhexyl) phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: MW-14:082416 (590-4302-1). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 590-4302-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) for 2,4-D, Dalapon and 2,4-DB associated with analytical batch 280-340865 recovered outside the control limit on one column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the column which is in control.

Method 8141B: The initial calibration verification (ICV) for 8141 exceeded control criteria for mevinphos on the back (confirmation) column. The impacted samples were ND for mevinphos and are reported from the front, in control, column. Per the laboratory SOP the ICV is acceptable if the average of the percent differences (%D) values for all of the analytes is within +/- 15% and the %D for all individual analytes is within +/- 30%. The data has been qualified and reported.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-343654 recovered below the lower control limit for Simazine on the confirmation column. The client samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the column in control (front). The following samples are impacted: MW-14:082416 (590-4302-1), MW-11A:082416 (590-4302-2) and MW-7D:082416 (590-4302-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 245.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-226014 and 580-226457.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-339916.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 340052.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4302-1	MW-14:082416	Water	08/24/16 10:55	08/24/16 16:50
590-4302-2	MW-11A:082416	Water	08/24/16 12:40	08/24/16 16:50
590-4302-3	MW-7D:082416	Water	08/24/16 14:25	08/24/16 16:50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-14:082416
Date Collected: 08/24/16 10:55
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 22:43	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 22:43	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 22:43	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 22:43	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 22:43	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 22:43	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 22:43	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 22:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 22:43	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 22:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 22:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 22:43	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 22:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 22:43	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 22:43	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 22:43	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 22:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 22:43	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 22:43	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 22:43	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 22:43	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 22:43	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 22:43	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 22:43	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 22:43	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 22:43	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 22:43	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 22:43	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 22:43	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 22:43	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 22:43	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 22:43	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 22:43	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 22:43	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 22:43	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 22:43	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 22:43	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 22:43	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 22:43	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 22:43	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 22:43	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 22:43	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 22:43	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 22:43	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 22:43	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 22:43	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 22:43	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 22:43	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 22:43	1

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Lab Sample ID: 590-4302-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 22:43	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 22:43	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 22:43	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 22:43	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 22:43	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 22:43	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 22:43	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 22:43	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 22:43	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 22:43	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 22:43	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 22:43	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 22:43	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 22:43	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 22:43	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 22:43	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 22:43	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 22:43	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 22:43	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*		*08/26/16 22:43*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*08/26/16 22:43*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/26/16 22:43*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 22:43*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*08/26/16 22:43*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,4,6-Trichlorophenol	ND		0.57	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
2-Chlorophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1

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Lab Sample ID: 590-4302-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
2-Methylphenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2-Nitroaniline	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
2-Nitrophenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 18:38	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		08/26/16 14:41	08/30/16 18:38	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
4-Chloroaniline	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
4-Nitroaniline	ND	*	0.57	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
4-Nitrophenol	ND		2.9	0.96	ug/L		08/26/16 14:41	08/30/16 18:38	1
Acenaphthene	ND		0.096	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Acenaphthylene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Anthracene	ND		0.038	0.0096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzoic acid	**1.1**	**J**	2.9	0.57	ug/L		08/26/16 14:41	08/30/16 18:38	1
Benzyl alcohol	ND	*	0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Bis(2-ethylhexyl) phthalate	**2.7**	**J B ***	2.9	1.1	ug/L		08/26/16 14:41	08/30/16 18:38	1
Butyl benzyl phthalate	**0.39**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 18:38	1
Carbazole	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 18:38	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Dibenzofuran	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Diethyl phthalate	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Di-n-butyl phthalate	**0.16**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 18:38	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 18:38	1
Fluoranthene	ND		0.048	0.012	ug/L		08/26/16 14:41	08/30/16 18:38	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Hexachlorobutadiene	ND		0.57	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Hexachloroethane	ND		0.57	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Isophorone	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Naphthalene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Nitrobenzene	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1

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Lab Sample ID: 590-4302-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Phenanthrene	ND		0.077	0.019	ug/L		08/26/16 14:41	08/30/16 18:38	1
Phenol	ND		0.57	0.096	ug/L		08/26/16 14:41	08/30/16 18:38	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*57 - 132*	*08/26/16 14:41*	*08/30/16 18:38*	*1*
2-Fluorobiphenyl	*73*		*50 - 120*	*08/26/16 14:41*	*08/30/16 18:38*	*1*
2-Fluorophenol	*76*		*50 - 113*	*08/26/16 14:41*	*08/30/16 18:38*	*1*
Nitrobenzene-d5	*86*		*59 - 120*	*08/26/16 14:41*	*08/30/16 18:38*	*1*
Phenol-d5	*80*		*52 - 120*	*08/26/16 14:41*	*08/30/16 18:38*	*1*
Terphenyl-d14	*64*	*X*	*72 - 140*	*08/26/16 14:41*	*08/30/16 18:38*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 14:52	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 21:52	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:52	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:52	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 21:52	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 21:52	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:52	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 21:52	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 21:52	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:52	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:52	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:52	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:52	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:52	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 21:52	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 21:52	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 21:52	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:52	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 21:52	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 21:52	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 21:52	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*88*		*22 - 150*	*08/26/16 15:29*	*08/29/16 21:52*	*1*
Tetrachloro-m-xylene	*87*		*40 - 113*	*08/26/16 15:29*	*08/29/16 21:52*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 22:55	1
PCB-1221	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 22:55	1
PCB-1232	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 22:55	1
PCB-1242	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 22:55	1

Client Sample ID: MW-14:082416
Date Collected: 08/24/16 10:55
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 22:55	1
PCB-1254	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 22:55	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*20 - 120*	*08/30/16 13:27*	*08/30/16 22:55*	*1*
DCB Decachlorobiphenyl (Surr)	*104*		*36 - 138*	*08/30/16 13:27*	*08/30/16 22:55*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 20:55	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 20:55	1
Bolstar	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 20:55	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 20:55	1
Coumaphos	ND		0.95	0.13	ug/L		08/29/16 13:00	09/25/16 20:55	1
Demeton, Total	ND		2.9	0.20	ug/L		08/29/16 13:00	09/25/16 20:55	1
Diazinon	ND		0.48	0.14	ug/L		08/29/16 13:00	09/25/16 20:55	1
Dichlorvos	ND		0.48	0.15	ug/L		08/29/16 13:00	09/25/16 20:55	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 20:55	1
Disulfoton	ND		0.95	0.31	ug/L		08/29/16 13:00	09/25/16 20:55	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 20:55	1
Famphur	ND		0.95	0.17	ug/L		08/29/16 13:00	09/25/16 20:55	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 20:55	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 20:55	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 20:55	1
Merphos	ND		4.8	0.17	ug/L		08/29/16 13:00	09/25/16 20:55	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 20:55	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 20:55	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/29/16 13:00	09/25/16 20:55	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 20:55	1
Ronnel	ND		9.5	0.11	ug/L		08/29/16 13:00	09/25/16 20:55	1
Simazine	ND		9.5	0.21	ug/L		08/29/16 13:00	09/25/16 20:55	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 20:55	1
Thionazin	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 20:55	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 20:55	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 20:55	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 20:55	1
Propazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*78*		*49 - 171*	*08/29/16 13:00*	*09/25/16 20:55*	*1*
Triphenylphosphate	*97*		*60 - 154*	*08/29/16 13:00*	*09/25/16 20:55*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		08/30/16 09:02	09/06/16 14:35	1
2,4-D	ND		3.8	0.20	ug/L		08/30/16 09:02	09/06/16 14:35	1
2,4-DB	ND		3.8	0.34	ug/L		08/30/16 09:02	09/06/16 14:35	1
Dalapon	ND		1.9	0.86	ug/L		08/30/16 09:02	09/06/16 14:35	1
Dicamba	ND		1.9	0.14	ug/L		08/30/16 09:02	09/06/16 14:35	1

Client Sample ID: MW-14:082416
Date Collected: 08/24/16 10:55
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.61	ug/L		08/30/16 09:02	09/06/16 14:35	1
MCPA	ND		380	16	ug/L		08/30/16 09:02	09/06/16 14:35	1
MCPP	ND		380	31	ug/L		08/30/16 09:02	09/06/16 14:35	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		08/30/16 09:02	09/06/16 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*	*08/30/16 09:02*	*09/06/16 14:35*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 16:34	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/26/16 10:57*	*08/26/16 16:34*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*08/26/16 10:57*	*08/26/16 16:34*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.7**		0.80	0.42	mg/L			08/25/16 14:49	1
Nitrate as N	**5.1**		0.20	0.039	mg/L			08/25/16 14:49	1
Nitrite as N	ND		0.20	0.069	mg/L			08/25/16 14:49	1
Sulfate	**10**		0.50	0.13	mg/L			08/25/16 14:49	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		08/26/16 16:47	08/30/16 00:32	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		08/26/16 16:47	08/30/16 00:32	1
Barium	**0.055**		0.0012	0.000054	mg/L		08/26/16 16:47	08/30/16 00:32	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 16:47	08/30/16 00:32	1
Cadmium	ND		0.00040	0.000028	mg/L		08/26/16 16:47	08/30/16 00:32	1
Chromium	**0.00033**	**J**	0.00040	0.00014	mg/L		08/26/16 16:47	08/30/16 00:32	1
Copper	**0.00088**	**J**	0.0020	0.00060	mg/L		08/26/16 16:47	08/30/16 00:32	1
Iron	**0.034**	**J**	0.040	0.0058	mg/L		08/26/16 16:47	08/30/16 00:32	1
Lead	ND		0.00040	0.000034	mg/L		08/26/16 16:47	08/30/16 00:32	1
Manganese	**0.00040**	**J**	0.0020	0.00035	mg/L		08/26/16 16:47	08/30/16 00:32	1
Nickel	ND		0.0030	0.00040	mg/L		08/26/16 16:47	08/30/16 00:32	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 16:47	08/30/16 00:32	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 16:47	08/30/16 00:32	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 16:47	08/30/16 00:32	1
Vanadium	**0.0033**	**J**	0.0040	0.00098	mg/L		08/26/16 16:47	08/30/16 00:32	1
Zinc	**0.0024**	**J**	0.0070	0.0019	mg/L		08/26/16 16:47	08/30/16 00:32	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		08/31/16 09:55	09/01/16 18:34	1
Antimony	**0.00012**	**J**	0.00040	0.000080	mg/L		08/31/16 09:55	09/01/16 18:34	1
Barium	**0.053**		0.0012	0.000054	mg/L		08/31/16 09:55	09/01/16 18:34	1
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:55	09/01/16 18:34	1

Client Sample ID: MW-14:082416

Date Collected: 08/24/16 10:55
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-1
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000086	J B	0.00040	0.000028	mg/L		08/31/16 09:55	09/01/16 18:34	1
Chromium	0.0012		0.00040	0.00014	mg/L		08/31/16 09:55	09/01/16 18:34	1
Copper	0.00063	J	0.0020	0.00060	mg/L		08/31/16 09:55	09/01/16 18:34	1
Iron	ND		0.040	0.0058	mg/L		08/31/16 09:55	09/01/16 18:34	1
Lead	0.00019	J	0.00040	0.000034	mg/L		08/31/16 09:55	09/01/16 18:34	1
Manganese	0.0013	J	0.0020	0.00035	mg/L		08/31/16 09:55	09/01/16 18:34	1
Nickel	0.00042	J	0.0030	0.00040	mg/L		08/31/16 09:55	09/01/16 18:34	1
Selenium	ND		0.0010	0.00030	mg/L		08/31/16 09:55	09/01/16 18:34	1
Silver	ND		0.00040	0.000030	mg/L		08/31/16 09:55	09/01/16 18:34	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:55	09/01/16 18:34	1
Vanadium	0.0042		0.0040	0.00098	mg/L		08/31/16 09:55	09/01/16 18:34	1
Zinc	0.0075		0.0070	0.0019	mg/L		08/31/16 09:55	09/01/16 18:34	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:03	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:38	09/01/16 12:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:37	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:17	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	1.1		1.0	0.50	mg/L			09/01/16 20:51	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	0.00				MPN/100mL			08/25/16 13:20	1
Escherichia coli	0.00				MPN/100mL			08/25/16 13:20	1

Client Sample ID: MW-11A:082416

Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 23:05	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 23:05	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 23:05	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 23:05	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 23:05	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 23:05	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 23:05	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 23:05	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 23:05	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 23:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 23:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 23:05	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-11A:082416
Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 23:05	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 23:05	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 23:05	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 23:05	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 23:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 23:05	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 23:05	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 23:05	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 23:05	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 23:05	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 23:05	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 23:05	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 23:05	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 23:05	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 23:05	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 23:05	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 23:05	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 23:05	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 23:05	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 23:05	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 23:05	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 23:05	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 23:05	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 23:05	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 23:05	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 23:05	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 23:05	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 23:05	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 23:05	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 23:05	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 23:05	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 23:05	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 23:05	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 23:05	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 23:05	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 23:05	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 23:05	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 23:05	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 23:05	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 23:05	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 23:05	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 23:05	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 23:05	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 23:05	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 23:05	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 23:05	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 23:05	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 23:05	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 23:05	1

Client Sample ID: MW-11A:082416
Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 23:05	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 23:05	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 23:05	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 23:05	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 23:05	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 23:05	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 23:05	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 23:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*08/26/16 23:05*	*1*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*08/26/16 23:05*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/26/16 23:05*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/26/16 23:05*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 23:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*		*08/26/16 23:05*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2-Nitroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/26/16 14:41	08/30/16 19:04	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		08/26/16 14:41	08/30/16 19:04	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
4-Chloroaniline	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-11A:082416
Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND	*	0.57	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
4-Nitrophenol	ND		2.8	0.95	ug/L		08/26/16 14:41	08/30/16 19:04	1
Acenaphthene	ND		0.095	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Anthracene	ND		0.038	0.0095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzoic acid	**0.57**	**J**	2.8	0.57	ug/L		08/26/16 14:41	08/30/16 19:04	1
Benzyl alcohol	ND	*	0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Bis(2-ethylhexyl) phthalate	ND	*	2.8	1.1	ug/L		08/26/16 14:41	08/30/16 19:04	1
Butyl benzyl phthalate	**0.37**	**J**	0.57	0.19	ug/L		08/26/16 14:41	08/30/16 19:04	1
Carbazole	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Chrysene	ND		0.038	0.012	ug/L		08/26/16 14:41	08/30/16 19:04	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Di-n-butyl phthalate	**0.15**	**J**	0.38	0.12	ug/L		08/26/16 14:41	08/30/16 19:04	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/26/16 14:41	08/30/16 19:04	1
Fluoranthene	ND		0.047	0.012	ug/L		08/26/16 14:41	08/30/16 19:04	1
Fluorene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Hexachloroethane	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Isophorone	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Naphthalene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Pentachlorophenol	ND		0.66	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Phenanthrene	ND		0.076	0.019	ug/L		08/26/16 14:41	08/30/16 19:04	1
Phenol	ND		0.57	0.095	ug/L		08/26/16 14:41	08/30/16 19:04	1
Pyrene	ND		0.057	0.012	ug/L		08/26/16 14:41	08/30/16 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*57 - 132*	*08/26/16 14:41*	*08/30/16 19:04*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*08/26/16 14:41*	*08/30/16 19:04*	*1*
2-Fluorophenol	*76*		*50 - 113*	*08/26/16 14:41*	*08/30/16 19:04*	*1*
Nitrobenzene-d5	*93*		*59 - 120*	*08/26/16 14:41*	*08/30/16 19:04*	*1*
Phenol-d5	*81*		*52 - 120*	*08/26/16 14:41*	*08/30/16 19:04*	*1*
Terphenyl-d14	*96*		*72 - 140*	*08/26/16 14:41*	*08/30/16 19:04*	*1*

Client Sample ID: MW-11A:082416
Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2
Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 15:08	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 22:08	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:08	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 22:08	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 22:08	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 22:08	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:08	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 22:08	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 22:08	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 22:08	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:08	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 22:08	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 22:08	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:08	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 22:08	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 22:08	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 22:08	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:08	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 22:08	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:08	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 22:08	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*76*		*22 - 150*	*08/26/16 15:29*	*08/29/16 22:08*	*1*
Tetrachloro-m-xylene	*71*		*40 - 113*	*08/26/16 15:29*	*08/29/16 22:08*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.065	ug/L		08/30/16 13:27	08/30/16 23:14	1
PCB-1221	ND		0.10	0.065	ug/L		08/30/16 13:27	08/30/16 23:14	1
PCB-1232	ND		0.10	0.065	ug/L		08/30/16 13:27	08/30/16 23:14	1
PCB-1242	ND		0.10	0.065	ug/L		08/30/16 13:27	08/30/16 23:14	1
PCB-1248	ND		0.10	0.065	ug/L		08/30/16 13:27	08/30/16 23:14	1
PCB-1254	ND		0.10	0.065	ug/L		08/30/16 13:27	08/30/16 23:14	1
PCB-1260	ND		0.10	0.045	ug/L		08/30/16 13:27	08/30/16 23:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*20 - 120*	*08/30/16 13:27*	*08/30/16 23:14*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*36 - 138*	*08/30/16 13:27*	*08/30/16 23:14*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 21:27	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 21:27	1
Bolstar	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 21:27	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 21:27	1
Coumaphos	ND		0.95	0.13	ug/L		08/29/16 13:00	09/25/16 21:27	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-11A:082416
Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Demeton, Total	ND		2.8	0.20	ug/L		08/29/16 13:00	09/25/16 21:27	1
Diazinon	ND		0.47	0.14	ug/L		08/29/16 13:00	09/25/16 21:27	1
Dichlorvos	ND		0.47	0.15	ug/L		08/29/16 13:00	09/25/16 21:27	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 21:27	1
Disulfoton	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 21:27	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 21:27	1
Famphur	ND		0.95	0.17	ug/L		08/29/16 13:00	09/25/16 21:27	1
Fensulfothion	ND		2.4	0.51	ug/L		08/29/16 13:00	09/25/16 21:27	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 21:27	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 21:27	1
Merphos	ND		4.7	0.16	ug/L		08/29/16 13:00	09/25/16 21:27	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 21:27	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 21:27	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/29/16 13:00	09/25/16 21:27	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 21:27	1
Ronnel	ND		9.5	0.11	ug/L		08/29/16 13:00	09/25/16 21:27	1
Simazine	ND		9.5	0.21	ug/L		08/29/16 13:00	09/25/16 21:27	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 21:27	1
Thionazin	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 21:27	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 21:27	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 21:27	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 21:27	1
Propazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*08/29/16 13:00*	*09/25/16 21:27*	*1*
Triphenylphosphate	*102*		*60 - 154*	*08/29/16 13:00*	*09/25/16 21:27*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		08/30/16 09:02	09/06/16 14:58	1
2,4-D	ND		3.8	0.20	ug/L		08/30/16 09:02	09/06/16 14:58	1
2,4-DB	ND		3.8	0.34	ug/L		08/30/16 09:02	09/06/16 14:58	1
Dalapon	ND		1.9	0.86	ug/L		08/30/16 09:02	09/06/16 14:58	1
Dicamba	ND		1.9	0.14	ug/L		08/30/16 09:02	09/06/16 14:58	1
Dichlorprop	ND		3.8	0.62	ug/L		08/30/16 09:02	09/06/16 14:58	1
MCPA	ND		380	16	ug/L		08/30/16 09:02	09/06/16 14:58	1
MCPP	ND		380	31	ug/L		08/30/16 09:02	09/06/16 14:58	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		08/30/16 09:02	09/06/16 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*83*		*39 - 135*	*08/30/16 09:02*	*09/06/16 14:58*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 16:52	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 16:52	1

Client Sample ID: MW-11A:082416

Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*08/26/16 10:57*	*08/26/16 16:52*	*1*
n-Triacontane-d62	*95*		*50 - 150*	*08/26/16 10:57*	*08/26/16 16:52*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11**		0.80	0.42	mg/L			08/25/16 15:01	1
Nitrate as N	**3.6**		0.20	0.039	mg/L			08/25/16 15:01	1
Nitrite as N	ND		0.20	0.069	mg/L			08/25/16 15:01	1
Sulfate	**11**		0.50	0.13	mg/L			08/25/16 15:01	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		08/26/16 16:47	08/30/16 00:37	1
Antimony	**0.00017**	**J**	0.00040	0.000080	mg/L		08/26/16 16:47	08/30/16 00:37	1
Barium	**0.10**		0.0012	0.000054	mg/L		08/26/16 16:47	08/30/16 00:37	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 16:47	08/30/16 00:37	1
Cadmium	**0.000031**	**J**	0.00040	0.000028	mg/L		08/26/16 16:47	08/30/16 00:37	1
Chromium	**0.00054**		0.00040	0.00014	mg/L		08/26/16 16:47	08/30/16 00:37	1
Copper	ND		0.0020	0.00060	mg/L		08/26/16 16:47	08/30/16 00:37	1
Iron	**0.017**	**J**	0.040	0.0058	mg/L		08/26/16 16:47	08/30/16 00:37	1
Lead	ND		0.00040	0.000034	mg/L		08/26/16 16:47	08/30/16 00:37	1
Manganese	**0.00046**	**J**	0.0020	0.00035	mg/L		08/26/16 16:47	08/30/16 00:37	1
Nickel	ND		0.0030	0.00040	mg/L		08/26/16 16:47	08/30/16 00:37	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 16:47	08/30/16 00:37	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 16:47	08/30/16 00:37	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 16:47	08/30/16 00:37	1
Vanadium	**0.0034**	**J**	0.0040	0.00098	mg/L		08/26/16 16:47	08/30/16 00:37	1
Zinc	**0.0032**	**J**	0.0070	0.0019	mg/L		08/26/16 16:47	08/30/16 00:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		08/31/16 09:55	09/01/16 18:44	1
Antimony	**0.00012**	**J**	0.00040	0.000080	mg/L		08/31/16 09:55	09/01/16 18:44	1
Barium	**0.098**		0.0012	0.000054	mg/L		08/31/16 09:55	09/01/16 18:44	1
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:55	09/01/16 18:44	1
Cadmium	ND		0.00040	0.000028	mg/L		08/31/16 09:55	09/01/16 18:44	1
Chromium	**0.0013**		0.00040	0.00014	mg/L		08/31/16 09:55	09/01/16 18:44	1
Copper	ND		0.0020	0.00060	mg/L		08/31/16 09:55	09/01/16 18:44	1
Iron	ND		0.040	0.0058	mg/L		08/31/16 09:55	09/01/16 18:44	1
Lead	ND		0.00040	0.000034	mg/L		08/31/16 09:55	09/01/16 18:44	1
Manganese	**0.00058**	**J**	0.0020	0.00035	mg/L		08/31/16 09:55	09/01/16 18:44	1
Nickel	ND		0.0030	0.00040	mg/L		08/31/16 09:55	09/01/16 18:44	1
Selenium	ND		0.0010	0.00030	mg/L		08/31/16 09:55	09/01/16 18:44	1
Silver	ND		0.00040	0.000030	mg/L		08/31/16 09:55	09/01/16 18:44	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:55	09/01/16 18:44	1
Vanadium	**0.0042**		0.0040	0.00098	mg/L		08/31/16 09:55	09/01/16 18:44	1
Zinc	**0.0024**	**J**	0.0070	0.0019	mg/L		08/31/16 09:55	09/01/16 18:44	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:12	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:38	09/01/16 12:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:37	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:18	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	**0.75**	**J**	1.0	0.50	mg/L			09/01/16 21:24	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/25/16 13:20	1
Escherichia coli	**0.00**				MPN/100mL			08/25/16 13:20	1

Client Sample ID: MW-7D:082416

Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 23:27	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 23:27	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 23:27	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 23:27	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 23:27	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 23:27	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 23:27	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 23:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 23:27	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 23:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 23:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 23:27	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 23:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 23:27	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 23:27	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 23:27	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 23:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 23:27	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 23:27	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 23:27	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 23:27	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 23:27	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 23:27	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 23:27	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 23:27	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 23:27	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 23:27	1
Acetone	ND	*	25	4.1	ug/L			08/26/16 23:27	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 23:27	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 23:27	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 23:27	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 23:27	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 23:27	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 23:27	1

Client Sample ID: MW-7D:082416
Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 23:27	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 23:27	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 23:27	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 23:27	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 23:27	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 23:27	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 23:27	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 23:27	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 23:27	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 23:27	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 23:27	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 23:27	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 23:27	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 23:27	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 23:27	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 23:27	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 23:27	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 23:27	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 23:27	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 23:27	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 23:27	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 23:27	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 23:27	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 23:27	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 23:27	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 23:27	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 23:27	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 23:27	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 23:27	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 23:27	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 23:27	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 23:27	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 23:27	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 23:27	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*08/26/16 23:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*08/26/16 23:27*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/26/16 23:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 23:27*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*08/26/16 23:27*	*1*

Client Sample ID: MW-7D:082416
Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
1,2-Dichlorobenzene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
1,3-Dichlorobenzene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
1,4-Dichlorobenzene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
1-Methylnaphthalene	ND		0.062	0.031	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,4,5-Trichlorophenol	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,4,6-Trichlorophenol	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,4-Dichlorophenol	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,4-Dimethylphenol	ND		2.1	0.31	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,4-Dinitrophenol	ND		5.2	1.0	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,4-Dinitrotoluene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2,6-Dinitrotoluene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2-Chloronaphthalene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
2-Chlorophenol	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2-Methylnaphthalene	ND		0.21	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
2-Methylphenol	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2-Nitroaniline	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
2-Nitrophenol	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
3 & 4 Methylphenol	ND		0.83	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
3,3'-Dichlorobenzidine	ND	*	2.1	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
3-Nitroaniline	ND		0.42	0.12	ug/L		08/26/16 14:41	08/30/16 19:30	1
4,6-Dinitro-2-methylphenol	ND		4.2	1.0	ug/L		08/26/16 14:41	08/30/16 19:30	1
4-Bromophenyl phenyl ether	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
4-Chloro-3-methylphenol	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
4-Chloroaniline	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
4-Chlorophenyl phenyl ether	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
4-Nitroaniline	ND	*	0.62	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
4-Nitrophenol	ND		3.1	1.0	ug/L		08/26/16 14:41	08/30/16 19:30	1
Acenaphthene	ND		0.10	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Acenaphthylene	ND		0.083	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Anthracene	ND		0.042	0.010	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzo[a]anthracene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzo[a]pyrene	ND		0.042	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzo[b]fluoranthene	ND		0.083	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzo[g,h,i]perylene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzo[k]fluoranthene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzoic acid	**0.62**	**J**	3.1	0.62	ug/L		08/26/16 14:41	08/30/16 19:30	1
Benzyl alcohol	ND	*	0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
bis (2-chloroisopropyl) ether	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Bis(2-chloroethoxy)methane	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Bis(2-chloroethyl)ether	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Bis(2-ethylhexyl) phthalate	ND	*	3.1	1.2	ug/L		08/26/16 14:41	08/30/16 19:30	1
Butyl benzyl phthalate	**0.45**	**J**	0.62	0.21	ug/L		08/26/16 14:41	08/30/16 19:30	1
Carbazole	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Chrysene	ND		0.042	0.014	ug/L		08/26/16 14:41	08/30/16 19:30	1
Dibenz(a,h)anthracene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Dibenzofuran	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Diethyl phthalate	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Dimethyl phthalate	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-7D:082416
Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.16**	**J**	0.42	0.14	ug/L		08/26/16 14:41	08/30/16 19:30	1
Di-n-octyl phthalate	ND		0.42	0.19	ug/L		08/26/16 14:41	08/30/16 19:30	1
Fluoranthene	ND		0.052	0.014	ug/L		08/26/16 14:41	08/30/16 19:30	1
Fluorene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Hexachlorobenzene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Hexachlorobutadiene	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Hexachlorocyclopentadiene	ND		2.1	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Hexachloroethane	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Indeno[1,2,3-cd]pyrene	ND		0.062	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Isophorone	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Naphthalene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Nitrobenzene	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
N-Nitrosodi-n-propylamine	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
N-Nitrosodiphenylamine	ND		0.42	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Pentachlorophenol	ND		0.73	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Phenanthrene	ND		0.083	0.021	ug/L		08/26/16 14:41	08/30/16 19:30	1
Phenol	ND		0.62	0.10	ug/L		08/26/16 14:41	08/30/16 19:30	1
Pyrene	ND		0.062	0.014	ug/L		08/26/16 14:41	08/30/16 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*57 - 132*	*08/26/16 14:41*	*08/30/16 19:30*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*08/26/16 14:41*	*08/30/16 19:30*	*1*
2-Fluorophenol	*70*		*50 - 113*	*08/26/16 14:41*	*08/30/16 19:30*	*1*
Nitrobenzene-d5	*90*		*59 - 120*	*08/26/16 14:41*	*08/30/16 19:30*	*1*
Phenol-d5	*76*		*52 - 120*	*08/26/16 14:41*	*08/30/16 19:30*	*1*
Terphenyl-d14	*97*		*72 - 140*	*08/26/16 14:41*	*08/30/16 19:30*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 15:24	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 22:25	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:25	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 22:25	1
Aldrin	ND		0.030	0.0071	ug/L		08/26/16 15:29	08/29/16 22:25	1
alpha-BHC	ND		0.030	0.0071	ug/L		08/26/16 15:29	08/29/16 22:25	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:25	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 22:25	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 22:25	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 22:25	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:25	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 22:25	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 22:25	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:25	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 22:25	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 22:25	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 22:25	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:25	1

Client Sample ID: MW-7D:082416
Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 22:25	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 22:25	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 22:25	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*08/26/16 15:29*	*08/29/16 22:25*	*1*
Tetrachloro-m-xylene	*84*		*40 - 113*	*08/26/16 15:29*	*08/29/16 22:25*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 23:34	1
PCB-1221	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 23:34	1
PCB-1232	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 23:34	1
PCB-1242	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 23:34	1
PCB-1248	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 23:34	1
PCB-1254	ND		0.10	0.063	ug/L		08/30/16 13:27	08/30/16 23:34	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*20 - 120*	*08/30/16 13:27*	*08/30/16 23:34*	*1*
DCB Decachlorobiphenyl (Surr)	*101*		*36 - 138*	*08/30/16 13:27*	*08/30/16 23:34*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 21:58	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 21:58	1
Bolstar	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 21:58	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 21:58	1
Coumaphos	ND		0.95	0.13	ug/L		08/29/16 13:00	09/25/16 21:58	1
Demeton, Total	ND		2.9	0.20	ug/L		08/29/16 13:00	09/25/16 21:58	1
Diazinon	ND		0.48	0.14	ug/L		08/29/16 13:00	09/25/16 21:58	1
Dichlorvos	ND		0.48	0.15	ug/L		08/29/16 13:00	09/25/16 21:58	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 21:58	1
Disulfoton	ND		0.95	0.31	ug/L		08/29/16 13:00	09/25/16 21:58	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 21:58	1
Famphur	ND		0.95	0.17	ug/L		08/29/16 13:00	09/25/16 21:58	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 21:58	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 21:58	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 21:58	1
Merphos	ND		4.8	0.17	ug/L		08/29/16 13:00	09/25/16 21:58	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 21:58	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 21:58	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/29/16 13:00	09/25/16 21:58	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 21:58	1
Ronnel	ND		9.5	0.11	ug/L		08/29/16 13:00	09/25/16 21:58	1
Simazine	ND		9.5	0.21	ug/L		08/29/16 13:00	09/25/16 21:58	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 21:58	1
Thionazin	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 21:58	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 21:58	1

Client Sample ID: MW-7D:082416
Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 21:58	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 21:58	1
Propazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*79*		*49 - 171*	*08/29/16 13:00*	*09/25/16 21:58*	*1*
Triphenylphosphate	*100*		*60 - 154*	*08/29/16 13:00*	*09/25/16 21:58*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		08/30/16 09:02	09/06/16 15:21	1
2,4-D	ND		3.8	0.20	ug/L		08/30/16 09:02	09/06/16 15:21	1
2,4-DB	ND		3.8	0.34	ug/L		08/30/16 09:02	09/06/16 15:21	1
Dalapon	ND		1.9	0.87	ug/L		08/30/16 09:02	09/06/16 15:21	1
Dicamba	ND		1.9	0.14	ug/L		08/30/16 09:02	09/06/16 15:21	1
Dichlorprop	ND		3.8	0.62	ug/L		08/30/16 09:02	09/06/16 15:21	1
MCPA	ND		380	16	ug/L		08/30/16 09:02	09/06/16 15:21	1
MCPP	ND		380	32	ug/L		08/30/16 09:02	09/06/16 15:21	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		08/30/16 09:02	09/06/16 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*86*		*39 - 135*	*08/30/16 09:02*	*09/06/16 15:21*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 17:10	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		08/26/16 10:57	08/26/16 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/26/16 10:57*	*08/26/16 17:10*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*08/26/16 10:57*	*08/26/16 17:10*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24**		0.80	0.42	mg/L			08/25/16 16:55	1
Nitrate as N	ND		0.20	0.039	mg/L			08/25/16 16:55	1
Nitrite as N	**0.30**		0.20	0.069	mg/L			08/25/16 16:55	1
Sulfate	**7.4**		0.50	0.13	mg/L			08/25/16 16:55	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00055**	**J**	0.0010	0.00027	mg/L		08/26/16 16:47	08/30/16 00:41	1
Antimony	**0.000081**	**J**	0.00040	0.000080	mg/L		08/26/16 16:47	08/30/16 00:41	1
Barium	**0.027**		0.0012	0.000054	mg/L		08/26/16 16:47	08/30/16 00:41	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 16:47	08/30/16 00:41	1
Cadmium	**0.000031**	**J**	0.00040	0.000028	mg/L		08/26/16 16:47	08/30/16 00:41	1
Chromium	**0.0023**		0.00040	0.00014	mg/L		08/26/16 16:47	08/30/16 00:41	1
Copper	**0.00060**	**J**	0.0020	0.00060	mg/L		08/26/16 16:47	08/30/16 00:41	1
Iron	**0.22**		0.040	0.0058	mg/L		08/26/16 16:47	08/30/16 00:41	1
Lead	**0.00076**		0.00040	0.000034	mg/L		08/26/16 16:47	08/30/16 00:41	1

Client Sample ID: MW-7D:082416
Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.020**		0.0020	0.00035	mg/L		08/26/16 16:47	08/30/16 00:41	1
Nickel	**0.00061**	**J**	0.0030	0.00040	mg/L		08/26/16 16:47	08/30/16 00:41	1
Selenium	**0.00035**	**J**	0.0010	0.00030	mg/L		08/26/16 16:47	08/30/16 00:41	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 16:47	08/30/16 00:41	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 16:47	08/30/16 00:41	1
Vanadium	**0.012**		0.0040	0.00098	mg/L		08/26/16 16:47	08/30/16 00:41	1
Zinc	**0.025**		0.0070	0.0019	mg/L		08/26/16 16:47	08/30/16 00:41	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00097**	**J**	0.0010	0.00027	mg/L		08/31/16 09:55	09/01/16 18:49	1
Antimony	ND		0.00040	0.000080	mg/L		08/31/16 09:55	09/01/16 18:49	1
Barium	**0.024**		0.0012	0.000054	mg/L		08/31/16 09:55	09/01/16 18:49	1
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:55	09/01/16 18:49	1
Cadmium	**0.000035**	**J B**	0.00040	0.000028	mg/L		08/31/16 09:55	09/01/16 18:49	1
Chromium	**0.0024**		0.00040	0.00014	mg/L		08/31/16 09:55	09/01/16 18:49	1
Copper	ND		0.0020	0.00060	mg/L		08/31/16 09:55	09/01/16 18:49	1
Iron	ND		0.040	0.0058	mg/L		08/31/16 09:55	09/01/16 18:49	1
Lead	ND		0.00040	0.000034	mg/L		08/31/16 09:55	09/01/16 18:49	1
Manganese	**0.00084**	**J**	0.0020	0.00035	mg/L		08/31/16 09:55	09/01/16 18:49	1
Nickel	ND		0.0030	0.00040	mg/L		08/31/16 09:55	09/01/16 18:49	1
Selenium	ND		0.0010	0.00030	mg/L		08/31/16 09:55	09/01/16 18:49	1
Silver	ND		0.00040	0.000030	mg/L		08/31/16 09:55	09/01/16 18:49	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:55	09/01/16 18:49	1
Vanadium	**0.011**		0.0040	0.00098	mg/L		08/31/16 09:55	09/01/16 18:49	1
Zinc	**0.013**		0.0070	0.0019	mg/L		08/31/16 09:55	09/01/16 18:49	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:14	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:38	09/01/16 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:38	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:12	08/30/16 09:19	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1
Total Organic Carbon	ND		1.0	0.50	mg/L			09/01/16 21:41	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/25/16 13:20	1
Escherichia coli	**0.00**				MPN/100mL			08/25/16 13:20	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8293/6
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 15:29	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 15:29	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 15:29	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 15:29	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 15:29	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 15:29	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 15:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 15:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 15:29	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 15:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 15:29	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 15:29	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 15:29	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 15:29	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 15:29	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 15:29	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 15:29	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 15:29	1
Acetone	ND		25	4.1	ug/L			08/26/16 15:29	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 15:29	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 15:29	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 15:29	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 15:29	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 15:29	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 15:29	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 15:29	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 15:29	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 15:29	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 15:29	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 15:29	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 15:29	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 15:29	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 15:29	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 15:29	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 15:29	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 15:29	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 15:29	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 15:29	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 15:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8293/6
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			08/26/16 15:29	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 15:29	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 15:29	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 15:29	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 15:29	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 15:29	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 15:29	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 15:29	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 15:29	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 15:29	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 15:29	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 15:29	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 15:29	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 15:29	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 15:29	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 15:29	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 15:29	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 15:29	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 15:29	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*08/26/16 15:29*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*08/26/16 15:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/26/16 15:29*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 15:29*	*1*

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.6		ug/L		106	75 - 124
1,1,1-Trichloroethane	10.0	10.8		ug/L		108	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.8		ug/L		108	66 - 122
1,1,2-Trichloroethane	10.0	9.69		ug/L		97	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	11.4		ug/L		114	70 - 127
1,1-Dichloroethane	10.0	10.1		ug/L		101	79 - 121
1,1-Dichloroethene	10.0	10.1		ug/L		101	69 - 127
1,1-Dichloropropene	10.0	10.7		ug/L		107	76 - 125
1,2,3-Trichlorobenzene	10.0	10.9		ug/L		109	60 - 125
1,2,3-Trichloropropane	10.0	10.1		ug/L		101	60 - 124
1,2,4-Trichlorobenzene	10.0	11.4		ug/L		114	66 - 124
1,2,4-Trimethylbenzene	10.0	11.3		ug/L		113	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.7		ug/L		117	36 - 140
1,2-Dichlorobenzene	10.0	10.8		ug/L		108	78 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.1		ug/L		111	76 - 121
1,3,5-Trimethylbenzene	10.0	11.3		ug/L		113	75 - 122
1,3-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 120
1,3-Dichloropropane	10.0	9.84		ug/L		98	75 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 121
2,2-Dichloropropane	10.0	11.7		ug/L		117	49 - 147
2-Butanone (MEK)	50.0	61.5		ug/L		123	40 - 150
2-Chlorotoluene	10.0	11.2		ug/L		112	75 - 121
2-Hexanone	50.0	53.8		ug/L		108	46 - 146
4-Chlorotoluene	10.0	11.2		ug/L		112	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	48.0		ug/L		96	60 - 127
Acetone	50.0	95.8	*	ug/L		192	20 - 150
Benzene	10.0	10.5		ug/L		105	80 - 120
Bromobenzene	10.0	10.7		ug/L		107	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	10.1		ug/L		101	67 - 125
Bromoform	10.0	8.93		ug/L		89	60 - 122
Bromomethane	10.0	10.0		ug/L		100	45 - 150
Carbon disulfide	10.0	10.4		ug/L		104	67 - 129
Carbon tetrachloride	10.0	10.8		ug/L		108	68 - 134
Chlorobenzene	10.0	10.6		ug/L		106	79 - 125
Chloroethane	10.0	9.98		ug/L		100	48 - 150
Chloroform	10.0	10.2		ug/L		102	73 - 126
Chloromethane	10.0	8.69		ug/L		87	51 - 150
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	76 - 121
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	72 - 120
Dibromochloromethane	10.0	9.74		ug/L		97	72 - 120
Dibromomethane	10.0	9.51		ug/L		95	71 - 120
Dichlorodifluoromethane	10.0	7.84		ug/L		78	32 - 150
Dichlorofluoromethane	10.0	10.8		ug/L		108	60 - 140
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
Hexachlorobutadiene	10.0	11.0		ug/L		110	62 - 132
Hexane	10.0	10.8		ug/L		108	68 - 125
Isopropylbenzene	10.0	11.1		ug/L		111	77 - 123
m,p-Xylene	10.0	10.6		ug/L		106	80 - 120
Methyl tert-butyl ether	10.0	10.4		ug/L		104	71 - 128
Methylene Chloride	10.0	10.8		ug/L		108	20 - 150
Naphthalene	10.0	10.8		ug/L		108	63 - 124
n-Butylbenzene	10.0	11.5		ug/L		115	71 - 120
N-Propylbenzene	10.0	11.4		ug/L		114	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	11.4		ug/L		114	77 - 120
sec-Butylbenzene	10.0	11.4		ug/L		114	74 - 121
Styrene	10.0	10.1		ug/L		101	73 - 120
tert-Butylbenzene	10.0	11.3		ug/L		113	79 - 120
Tetrachloroethene	10.0	10.6		ug/L		106	71 - 132
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,2-Dichloroethene	10.0	9.97		ug/L		100	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.68		ug/L		97	70 - 121
Trichloroethene	10.0	9.92		ug/L		99	75 - 129
Trichlorofluoromethane	10.0	10.2		ug/L		102	60 - 140
Vinyl chloride	10.0	8.91		ug/L		89	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8292/6
Matrix: Water
Analysis Batch: 8292

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*08/26/16 15:29*	*1*

Lab Sample ID: LCS 590-8292/1004
Matrix: Water
Analysis Batch: 8292

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	1060		ug/L		106	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Chlorophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
2-Nitrophenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
3-Nitroaniline	ND		0.40	0.12	ug/L		08/26/16 14:41	08/30/16 10:29	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chloroaniline	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitroaniline	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
4-Nitrophenol	ND		3.0	1.0	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthene	ND		0.10	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Acenaphthylene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Anthracene	ND		0.040	0.010	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzoic acid	ND		3.0	0.60	ug/L		08/26/16 14:41	08/30/16 10:29	1
Benzyl alcohol	0.193	J	0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Bis(2-ethylhexyl) phthalate	2.02	J	3.0	1.2	ug/L		08/26/16 14:41	08/30/16 10:29	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		08/26/16 14:41	08/30/16 10:29	1
Carbazole	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Chrysene	ND		0.040	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dibenzofuran	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Diethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		08/26/16 14:41	08/30/16 10:29	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluoranthene	ND		0.050	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1
Fluorene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226029/1-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226029

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Hexachloroethane	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Isophorone	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Naphthalene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Nitrobenzene	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pentachlorophenol	ND		0.70	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenanthrene	ND		0.080	0.020	ug/L		08/26/16 14:41	08/30/16 10:29	1
Phenol	ND		0.60	0.10	ug/L		08/26/16 14:41	08/30/16 10:29	1
Pyrene	ND		0.060	0.013	ug/L		08/26/16 14:41	08/30/16 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*57 - 132*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorobiphenyl	*68*		*50 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
2-Fluorophenol	*74*		*50 - 113*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Nitrobenzene-d5	*88*		*59 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Phenol-d5	*81*		*52 - 120*	*08/26/16 14:41*	*08/30/16 10:29*	*1*
Terphenyl-d14	*97*		*72 - 140*	*08/26/16 14:41*	*08/30/16 10:29*	*1*

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.31		ug/L		65	40 - 115
1,2-Dichlorobenzene	2.00	1.27		ug/L		64	44 - 119
1,3-Dichlorobenzene	2.00	1.12		ug/L		56	34 - 116
1,4-Dichlorobenzene	2.00	1.10		ug/L		55	40 - 118
1-Methylnaphthalene	2.00	1.51		ug/L		75	54 - 119
2,4,5-Trichlorophenol	2.00	1.80		ug/L		90	56 - 122
2,4,6-Trichlorophenol	2.00	1.63		ug/L		82	55 - 134
2,4-Dichlorophenol	2.00	1.65		ug/L		83	50 - 125
2,4-Dimethylphenol	2.00	1.30	J	ug/L		65	20 - 106
2,4-Dinitrophenol	4.00	3.22	J	ug/L		81	24 - 139
2,4-Dinitrotoluene	2.00	1.85		ug/L		92	40 - 143
2,6-Dinitrotoluene	2.00	1.75		ug/L		87	45 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	55 - 125
2-Chlorophenol	2.00	1.71		ug/L		86	57 - 125
2-Methylnaphthalene	2.00	1.50		ug/L		75	56 - 117
2-Methylphenol	2.00	1.46		ug/L		73	53 - 118
2-Nitroaniline	2.00	2.01		ug/L		101	58 - 124
2-Nitrophenol	2.00	1.73		ug/L		87	20 - 150
3 & 4 Methylphenol	2.00	1.54		ug/L		77	54 - 112
3,3'-Dichlorobenzidine	4.00	1.91	J	ug/L		48	20 - 121
3-Nitroaniline	2.00	1.17		ug/L		58	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.39	J	ug/L		85	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	62 - 132
4-Chloro-3-methylphenol	2.00	1.70		ug/L		85	56 - 133
4-Chloroaniline	2.00	1.11		ug/L		55	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.50		ug/L		75	59 - 125
4-Nitroaniline	2.00	1.09		ug/L		55	40 - 118
4-Nitrophenol	4.00	2.77	J	ug/L		69	20 - 150
Acenaphthene	2.00	1.41		ug/L		71	55 - 113
Acenaphthylene	2.00	1.52		ug/L		76	24 - 135
Anthracene	2.00	1.41		ug/L		70	20 - 125
Benzo[a]anthracene	2.00	1.88		ug/L		94	49 - 115
Benzo[a]pyrene	2.00	1.39		ug/L		69	20 - 115
Benzo[b]fluoranthene	2.00	1.71		ug/L		85	63 - 129
Benzo[g,h,i]perylene	2.00	1.77		ug/L		89	58 - 127
Benzo[k]fluoranthene	2.00	1.71		ug/L		86	60 - 134
Benzoic acid	4.00	4.33		ug/L		108	20 - 150
Benzyl alcohol	2.00	2.95	*	ug/L		147	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.45		ug/L		72	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.64		ug/L		82	59 - 125
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.62	J	ug/L		131	22 - 150
Butyl benzyl phthalate	2.00	2.86		ug/L		143	46 - 150
Carbazole	2.00	2.06		ug/L		103	68 - 142
Chrysene	2.00	1.86		ug/L		93	57 - 131
Dibenz(a,h)anthracene	2.00	1.79		ug/L		90	56 - 124
Dibenzofuran	2.00	1.55		ug/L		77	60 - 125
Diethyl phthalate	2.00	1.79		ug/L		90	60 - 134
Dimethyl phthalate	2.00	1.82		ug/L		91	65 - 134
Di-n-butyl phthalate	2.00	2.28		ug/L		114	67 - 140
Di-n-octyl phthalate	2.00	2.08		ug/L		104	55 - 150
Fluoranthene	2.00	1.95		ug/L		97	70 - 135
Fluorene	2.00	1.57		ug/L		78	57 - 125
Hexachlorobenzene	2.00	1.55		ug/L		78	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.698	J	ug/L		35	20 - 110
Hexachloroethane	2.00	0.928		ug/L		46	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.91		ug/L		95	54 - 124
Isophorone	2.00	1.64		ug/L		82	64 - 125
Naphthalene	2.00	1.45		ug/L		72	56 - 119
Nitrobenzene	2.00	1.74		ug/L		87	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.68		ug/L		84	54 - 120
N-Nitrosodiphenylamine	2.00	1.44		ug/L		72	40 - 124
Pentachlorophenol	4.00	2.61		ug/L		65	30 - 122
Phenanthrene	2.00	1.76		ug/L		88	57 - 125
Phenol	2.00	1.80		ug/L		90	53 - 113
Pyrene	2.00	1.70		ug/L		85	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226029/2-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226029

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*50 - 120*
2-Fluorophenol	*74*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*76*		*52 - 120*
Terphenyl-d14	*87*		*72 - 140*

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.46		ug/L		73	40 - 115	11	20
1,2-Dichlorobenzene			2.00	1.36		ug/L		68	44 - 119	7	20
1,3-Dichlorobenzene			2.00	1.22		ug/L		61	34 - 116	8	29
1,4-Dichlorobenzene			2.00	1.19		ug/L		59	40 - 118	8	20
1-Methylnaphthalene			2.00	1.54		ug/L		77	54 - 119	2	20
2,4,5-Trichlorophenol			2.00	1.80		ug/L		90	56 - 122	0	20
2,4,6-Trichlorophenol			2.00	1.59		ug/L		79	55 - 134	3	20
2,4-Dichlorophenol			2.00	1.66		ug/L		83	50 - 125	0	26
2,4-Dimethylphenol			2.00	1.50	J	ug/L		75	20 - 106	14	35
2,4-Dinitrophenol			4.00	3.37	J	ug/L		84	24 - 139	5	35
2,4-Dinitrotoluene			2.00	1.79		ug/L		89	40 - 143	3	29
2,6-Dinitrotoluene			2.00	1.74		ug/L		87	45 - 134	0	31
2-Chloronaphthalene			2.00	1.57		ug/L		79	55 - 125	4	20
2-Chlorophenol			2.00	1.76		ug/L		88	57 - 125	3	20
2-Methylnaphthalene			2.00	1.56		ug/L		78	56 - 117	4	20
2-Methylphenol			2.00	1.41		ug/L		70	53 - 118	4	33
2-Nitroaniline			2.00	1.98		ug/L		99	58 - 124	2	20
2-Nitrophenol			2.00	1.77		ug/L		89	20 - 150	2	35
3 & 4 Methylphenol			2.00	1.59		ug/L		79	54 - 112	3	20
3,3'-Dichlorobenzidine			4.00	2.81	*	ug/L		70	20 - 121	38	35
3-Nitroaniline			2.00	1.42		ug/L		71	22 - 124	19	35
4,6-Dinitro-2-methylphenol			4.00	3.56	J	ug/L		89	20 - 150	5	30
4-Bromophenyl phenyl ether			2.00	1.80		ug/L		90	62 - 132	0	20
4-Chloro-3-methylphenol			2.00	1.77		ug/L		89	56 - 133	4	20
4-Chloroaniline			2.00	1.29		ug/L		64	20 - 110	15	35
4-Chlorophenyl phenyl ether			2.00	1.51		ug/L		76	59 - 125	0	20
4-Nitroaniline			2.00	1.38	*	ug/L		69	40 - 118	24	20
4-Nitrophenol			4.00	3.50		ug/L		87	20 - 150	23	29
Acenaphthene			2.00	1.44		ug/L		72	55 - 113	2	20
Acenaphthylene			2.00	1.56		ug/L		78	24 - 135	3	20
Anthracene			2.00	1.40		ug/L		70	20 - 125	0	26
Benzo[a]anthracene			2.00	1.90		ug/L		95	49 - 115	1	20
Benzo[a]pyrene			2.00	1.41		ug/L		70	20 - 115	2	35
Benzo[b]fluoranthene			2.00	1.76		ug/L		88	63 - 129	3	20
Benzo[g,h,i]perylene			2.00	1.73		ug/L		86	58 - 127	3	20
Benzo[k]fluoranthene			2.00	1.62		ug/L		81	60 - 134	6	20
Benzoic acid			4.00	3.55		ug/L		89	20 - 150	20	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226029/3-A
Matrix: Water
Analysis Batch: 226191

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226029

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	1.99	*	ug/L		100	52 - 124	39	20
bis (2-chloroisopropyl) ether	2.00	1.52		ug/L		76	44 - 123	5	20
Bis(2-chloroethoxy)methane	2.00	1.64		ug/L		82	59 - 125	0	20
Bis(2-chloroethyl)ether	2.00	1.71		ug/L		86	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	3.62	*	ug/L		181	22 - 150	32	20
Butyl benzyl phthalate	2.00	2.65		ug/L		132	46 - 150	8	20
Carbazole	2.00	2.07		ug/L		103	68 - 142	0	20
Chrysene	2.00	1.83		ug/L		91	57 - 131	2	20
Dibenz(a,h)anthracene	2.00	1.75		ug/L		87	56 - 124	2	20
Dibenzofuran	2.00	1.57		ug/L		78	60 - 125	1	20
Diethyl phthalate	2.00	1.59		ug/L		80	60 - 134	12	20
Dimethyl phthalate	2.00	1.80		ug/L		90	65 - 134	1	20
Di-n-butyl phthalate	2.00	2.14		ug/L		107	67 - 140	6	20
Di-n-octyl phthalate	2.00	2.05		ug/L		103	55 - 150	1	20
Fluoranthene	2.00	1.98		ug/L		99	70 - 135	1	20
Fluorene	2.00	1.57		ug/L		79	57 - 125	0	20
Hexachlorobenzene	2.00	1.57		ug/L		78	55 - 135	1	20
Hexachlorobutadiene	2.00	1.21		ug/L		61	25 - 125	18	31
Hexachlorocyclopentadiene	2.00	0.766	J	ug/L		38	20 - 110	9	35
Hexachloroethane	2.00	1.04		ug/L		52	24 - 125	11	35
Indeno[1,2,3-cd]pyrene	2.00	1.86		ug/L		93	54 - 124	2	20
Isophorone	2.00	1.65		ug/L		83	64 - 125	1	20
Naphthalene	2.00	1.51		ug/L		76	56 - 119	4	20
Nitrobenzene	2.00	1.70		ug/L		85	62 - 125	2	20
N-Nitrosodi-n-propylamine	2.00	1.77		ug/L		89	54 - 120	5	20
N-Nitrosodiphenylamine	2.00	1.41		ug/L		71	40 - 124	2	20
Pentachlorophenol	4.00	2.64		ug/L		66	30 - 122	1	35
Phenanthrene	2.00	1.73		ug/L		87	57 - 125	2	20
Phenol	2.00	1.58		ug/L		79	53 - 113	13	20
Pyrene	2.00	1.70		ug/L		85	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*91*		*57 - 132*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol	*71*		*50 - 113*
Nitrobenzene-d5	*83*		*59 - 120*
Phenol-d5	*74*		*52 - 120*
Terphenyl-d14	*83*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-8317/3-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.135		ug/L		108	60 - 140

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226041/1-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Aldrin	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/26/16 15:29	08/29/16 17:56	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
beta-BHC	ND		0.050	0.012	ug/L		08/26/16 15:29	08/29/16 17:56	1
delta-BHC	ND		0.050	0.010	ug/L		08/26/16 15:29	08/29/16 17:56	1
Dieldrin	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/26/16 15:29	08/29/16 17:56	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/26/16 15:29	08/29/16 17:56	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor	ND		0.020	0.0040	ug/L		08/26/16 15:29	08/29/16 17:56	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/26/16 15:29	08/29/16 17:56	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/26/16 15:29	08/29/16 17:56	1
Toxaphene	ND		1.0	0.22	ug/L		08/26/16 15:29	08/29/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*22 - 150*	*08/26/16 15:29*	*08/29/16 17:56*	*1*
Tetrachloro-m-xylene	*95*		*40 - 113*	*08/26/16 15:29*	*08/29/16 17:56*	*1*

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.194		ug/L		97	32 - 133
4,4'-DDE	0.200	0.190		ug/L		95	30 - 138
4,4'-DDT	0.200	0.213		ug/L		107	34 - 131
Aldrin	0.200	0.187		ug/L		93	35 - 124
alpha-BHC	0.200	0.185		ug/L		92	39 - 126
alpha-Chlordane	0.200	0.185		ug/L		93	37 - 133
beta-BHC	0.200	0.181		ug/L		91	38 - 114
delta-BHC	0.200	0.184		ug/L		92	20 - 138

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-226041/2-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	0.200	0.190		ug/L		95	39 - 140
Endosulfan I	0.200	0.190		ug/L		95	23 - 142
Endosulfan II	0.200	0.192		ug/L		96	20 - 150
Endosulfan sulfate	0.200	0.192		ug/L		96	36 - 130
Endrin	0.200	0.225		ug/L		113	32 - 130
Endrin aldehyde	0.200	0.209		ug/L		105	37 - 139
Endrin ketone	0.200	0.188		ug/L		94	32 - 136
gamma-BHC (Lindane)	0.200	0.171		ug/L		85	40 - 121
gamma-Chlordane	0.200	0.187		ug/L		93	38 - 136
Heptachlor	0.200	0.191		ug/L		95	39 - 129
Heptachlor epoxide	0.200	0.178		ug/L		89	34 - 135
Methoxychlor	0.200	0.213		ug/L		106	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*105*		*22 - 150*
Tetrachloro-m-xylene	*100*		*40 - 113*

Lab Sample ID: LCSD 580-226041/3-A
Matrix: Water
Analysis Batch: 226138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226041

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.178		ug/L		89	32 - 133	8	35
4,4'-DDE	0.200	0.174		ug/L		87	30 - 138	8	35
4,4'-DDT	0.200	0.197		ug/L		99	34 - 131	8	35
Aldrin	0.200	0.173		ug/L		86	35 - 124	8	35
alpha-BHC	0.200	0.173		ug/L		86	39 - 126	7	35
alpha-Chlordane	0.200	0.171		ug/L		85	37 - 133	8	35
beta-BHC	0.200	0.170		ug/L		85	38 - 114	7	35
delta-BHC	0.200	0.170		ug/L		85	20 - 138	8	35
Dieldrin	0.200	0.176		ug/L		88	39 - 140	8	35
Endosulfan I	0.200	0.176		ug/L		88	23 - 142	8	35
Endosulfan II	0.200	0.177		ug/L		89	20 - 150	8	35
Endosulfan sulfate	0.200	0.177		ug/L		89	36 - 130	8	35
Endrin	0.200	0.208		ug/L		104	32 - 130	8	35
Endrin aldehyde	0.200	0.200		ug/L		100	37 - 139	5	35
Endrin ketone	0.200	0.174		ug/L		87	32 - 136	7	35
gamma-BHC (Lindane)	0.200	0.164		ug/L		82	40 - 121	4	35
gamma-Chlordane	0.200	0.174		ug/L		87	38 - 136	7	35
Heptachlor	0.200	0.180		ug/L		90	39 - 129	6	35
Heptachlor epoxide	0.200	0.168		ug/L		84	34 - 135	6	35
Methoxychlor	0.200	0.199		ug/L		99	33 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*92*		*22 - 150*
Tetrachloro-m-xylene	*95*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.56		ug/L		98	23 - 140		
PCB-1260			1.60	1.47		ug/L		92	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-339916/1-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/29/16 13:00	09/25/16 14:39	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Bolstar	ND		1.0	0.31	ug/L		08/29/16 13:00	09/25/16 14:39	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/29/16 13:00	09/25/16 14:39	1
Coumaphos	ND		1.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Demeton, Total	ND		3.0	0.21	ug/L		08/29/16 13:00	09/25/16 14:39	1
Diazinon	ND		0.50	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Dichlorvos	ND		0.50	0.16	ug/L		08/29/16 13:00	09/25/16 14:39	1
Dimethoate	ND		1.5	0.45	ug/L		08/29/16 13:00	09/25/16 14:39	1
Disulfoton	ND		1.0	0.32	ug/L		08/29/16 13:00	09/25/16 14:39	1
EPN	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Famphur	ND		1.0	0.18	ug/L		08/29/16 13:00	09/25/16 14:39	1
Fensulfothion	ND		2.5	0.54	ug/L		08/29/16 13:00	09/25/16 14:39	1
Fenthion	ND		2.5	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Malathion	ND		2.0	0.13	ug/L		08/29/16 13:00	09/25/16 14:39	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-339916/1-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Merphos	ND		5.0	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Methyl parathion	ND		4.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Mevinphos	ND		6.2	0.46	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Phorate	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ronnel	ND		10	0.12	ug/L		08/29/16 13:00	09/25/16 14:39	1
Simazine	ND		10	0.22	ug/L		08/29/16 13:00	09/25/16 14:39	1
Sulfotepp	ND		1.5	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Thionazin	ND		1.0	0.31	ug/L		08/29/16 13:00	09/25/16 14:39	1
Tokuthion	ND		1.6	0.12	ug/L		08/29/16 13:00	09/25/16 14:39	1
Trichloronate	ND		1.5	0.24	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ethoprop	ND		1.5	0.18	ug/L		08/29/16 13:00	09/25/16 14:39	1
Propazine	ND		10	0.29	ug/L		08/29/16 13:00	09/25/16 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*87*		*49 - 171*	*08/29/16 13:00*	*09/25/16 14:39*	*1*
Triphenylphosphate	*101*		*60 - 154*	*08/29/16 13:00*	*09/25/16 14:39*	*1*

Lab Sample ID: LCS 280-339916/2-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.92	J	ug/L		73	52 - 115
Azinphos-methyl	4.00	3.89		ug/L		97	59 - 115
Chlorpyrifos	4.00	3.17		ug/L		79	54 - 115
Coumaphos	4.00	3.87		ug/L		97	63 - 118
Demeton, Total	4.00	3.22		ug/L		80	44 - 115
Diazinon	4.00	2.98		ug/L		74	47 - 115
Dichlorvos	4.00	4.67		ug/L		117	53 - 128
Dimethoate	4.00	3.24		ug/L		81	42 - 115
Disulfoton	4.00	2.97		ug/L		74	45 - 115
EPN	4.00	3.69		ug/L		92	56 - 115
Famphur	4.00	3.62		ug/L		91	62 - 115
Fensulfothion	4.00	4.13		ug/L		103	50 - 115
Fenthion	4.00	3.33		ug/L		83	55 - 115
Malathion	4.00	2.98		ug/L		75	52 - 115
Merphos	4.00	1.90	J	ug/L		48	31 - 115
Methyl parathion	4.00	3.48	J	ug/L		87	58 - 115
Mevinphos	4.00	2.95	J	ug/L		74	42 - 115
Ethyl Parathion	4.00	3.42		ug/L		86	55 - 115
Phorate	4.00	2.66		ug/L		67	40 - 115
Ronnel	4.00	3.29	J	ug/L		82	55 - 115
Simazine	4.00	2.80	J	ug/L		70	39 - 115
Sulfotepp	4.00	3.24		ug/L		81	53 - 115
Thionazin	4.00	3.23		ug/L		81	54 - 115
Trichloronate	4.00	2.94		ug/L		74	48 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-339916/2-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethoprop	4.00	3.19		ug/L		80	50 - 115
BolstarFamphur	4.00	7.27		ug/L		182	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*82*		*49 - 171*
Triphenylphosphate	*100*		*60 - 154*

Lab Sample ID: LCSD 280-339916/3-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339916

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	2.79	J	ug/L		70	52 - 115	5	45
Azinphos-methyl	4.00	3.90		ug/L		97	59 - 115	0	20
Chlorpyrifos	4.00	3.25		ug/L		81	54 - 115	2	24
Coumaphos	4.00	3.91		ug/L		98	63 - 118	1	20
Demeton, Total	4.00	3.30		ug/L		83	44 - 115	2	38
Diazinon	4.00	3.15		ug/L		79	47 - 115	6	37
Dichlorvos	4.00	3.86		ug/L		97	53 - 128	19	37
Dimethoate	4.00	3.10		ug/L		78	42 - 115	4	38
Disulfoton	4.00	3.09		ug/L		77	45 - 115	4	31
EPN	4.00	3.66		ug/L		92	56 - 115	1	20
Famphur	4.00	3.59		ug/L		90	62 - 115	1	20
Fensulfothion	4.00	3.83		ug/L		96	50 - 115	7	27
Fenthion	4.00	3.40		ug/L		85	55 - 115	2	22
Malathion	4.00	3.01		ug/L		75	52 - 115	1	20
Merphos	4.00	1.91	J	ug/L		48	31 - 115	0	25
Methyl parathion	4.00	3.64	J	ug/L		91	58 - 115	4	20
Mevinphos	4.00	2.79	J	ug/L		70	42 - 115	6	27
Ethyl Parathion	4.00	3.48		ug/L		87	55 - 115	2	20
Phorate	4.00	2.77		ug/L		69	40 - 115	4	32
Ronnel	4.00	3.43	J	ug/L		86	55 - 115	4	28
Simazine	4.00	2.27	J	ug/L		57	39 - 115	21	53
Sulfotepp	4.00	3.38		ug/L		85	53 - 115	4	27
Thionazin	4.00	3.29		ug/L		82	54 - 115	2	27
Trichloronate	4.00	3.03		ug/L		76	48 - 115	3	26
Ethoprop	4.00	3.32		ug/L		83	50 - 115	4	29
BolstarFamphur	4.00	7.32		ug/L		183		1	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*78*		*49 - 171*
Triphenylphosphate	*101*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-340052/1-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340052

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/30/16 09:02	09/06/16 13:28	1
2,4-D	ND		4.0	0.21	ug/L		08/30/16 09:02	09/06/16 13:28	1
2,4-DB	ND		4.0	0.36	ug/L		08/30/16 09:02	09/06/16 13:28	1
Dalapon	ND		2.0	0.91	ug/L		08/30/16 09:02	09/06/16 13:28	1
Dicamba	ND		2.0	0.15	ug/L		08/30/16 09:02	09/06/16 13:28	1
Dichlorprop	ND		4.0	0.65	ug/L		08/30/16 09:02	09/06/16 13:28	1
MCPA	ND		400	17	ug/L		08/30/16 09:02	09/06/16 13:28	1
MCPP	ND		400	33	ug/L		08/30/16 09:02	09/06/16 13:28	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/30/16 09:02	09/06/16 13:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*08/30/16 09:02*	*09/06/16 13:28*	*1*

Lab Sample ID: LCS 280-340052/2-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340052

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	4.43		ug/L		89	45 - 135		
2,4-D			5.00	4.61		ug/L		92	46 - 126		
2,4-DB			5.00	4.76		ug/L		95	18 - 135		
Dalapon			5.00	3.91		ug/L		78	52 - 119		
Dicamba			5.00	4.18		ug/L		84	50 - 128		
Dichlorprop			5.00	4.33		ug/L		87	44 - 121		
MCPA			500	438		ug/L		88	43 - 118		
MCPP			500	478		ug/L		96	45 - 121		
Silvex (2,4,5-TP)			5.00	4.71		ug/L		94	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*86*		*39 - 135*

Lab Sample ID: LCSD 280-340052/3-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340052

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	3.92		ug/L		78	45 - 135	12	30
2,4-D			5.00	4.43		ug/L		89	46 - 126	4	30
2,4-DB			5.00	3.71	J	ug/L		74	18 - 135	25	30
Dalapon			5.00	3.88		ug/L		78	52 - 119	1	30
Dicamba			5.00	3.90		ug/L		78	50 - 128	7	30
Dichlorprop			5.00	3.84	J	ug/L		77	44 - 121	12	30
MCPA			500	396	J	ug/L		79	43 - 118	10	30
MCPP			500	405		ug/L		81	45 - 121	17	30
Silvex (2,4,5-TP)			5.00	4.03		ug/L		81	48 - 127	16	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-340052/3-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340052

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*78*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8283/1-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 13:12	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*

Lab Sample ID: LCS 590-8283/2-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.24		mg/L		77	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.58		mg/L		99	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*80*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8257/1015
Matrix: Water
Analysis Batch: 8257

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/25/16 14:37	1
Sulfate	ND		0.50	0.13	mg/L			08/25/16 14:37	1

Lab Sample ID: LCS 590-8257/1014
Matrix: Water
Analysis Batch: 8257

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.0		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 590-8257/1014
Matrix: Water
Analysis Batch: 8257

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	12.5	12.7		mg/L		101	90 - 110

Lab Sample ID: MB 590-8258/1015
Matrix: Water
Analysis Batch: 8258

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/25/16 14:37	1
Nitrite as N	ND		0.20	0.069	mg/L			08/25/16 14:37	1

Lab Sample ID: LCS 590-8258/1014
Matrix: Water
Analysis Batch: 8258

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.14		mg/L		103	90 - 110
Nitrite as N	5.00	4.58		mg/L		92	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-226047/14-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/26/16 16:47	08/29/16 23:28	1
Antimony	ND		0.00040	0.000080	mg/L		08/26/16 16:47	08/29/16 23:28	1
Barium	ND		0.0012	0.000054	mg/L		08/26/16 16:47	08/29/16 23:28	1
Beryllium	ND		0.00040	0.00010	mg/L		08/26/16 16:47	08/29/16 23:28	1
Cadmium	ND		0.00040	0.000028	mg/L		08/26/16 16:47	08/29/16 23:28	1
Chromium	ND		0.00040	0.00014	mg/L		08/26/16 16:47	08/29/16 23:28	1
Copper	ND		0.0020	0.00060	mg/L		08/26/16 16:47	08/29/16 23:28	1
Iron	ND		0.040	0.0058	mg/L		08/26/16 16:47	08/29/16 23:28	1
Lead	ND		0.00040	0.000034	mg/L		08/26/16 16:47	08/29/16 23:28	1
Manganese	ND		0.0020	0.00035	mg/L		08/26/16 16:47	08/29/16 23:28	1
Nickel	ND		0.0030	0.00040	mg/L		08/26/16 16:47	08/29/16 23:28	1
Selenium	ND		0.0010	0.00030	mg/L		08/26/16 16:47	08/29/16 23:28	1
Silver	ND		0.00040	0.000030	mg/L		08/26/16 16:47	08/29/16 23:28	1
Thallium	ND		0.0010	0.00014	mg/L		08/26/16 16:47	08/29/16 23:28	1
Vanadium	ND		0.0040	0.00098	mg/L		08/26/16 16:47	08/29/16 23:28	1
Zinc	ND		0.0070	0.0019	mg/L		08/26/16 16:47	08/29/16 23:28	1

Lab Sample ID: LCS 580-226047/15-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.103		mg/L		103	85 - 115
Antimony	0.100	0.108		mg/L		108	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226047/15-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.100	0.110		mg/L		110	85 - 115
Beryllium	0.100	0.107		mg/L		107	85 - 115
Cadmium	0.100	0.104		mg/L		104	85 - 115
Chromium	0.100	0.107		mg/L		107	85 - 115
Copper	0.100	0.107		mg/L		107	85 - 115
Iron	10.0	10.8		mg/L		108	85 - 115
Lead	0.100	0.109		mg/L		109	85 - 115
Manganese	0.100	0.109		mg/L		109	85 - 115
Nickel	0.100	0.108		mg/L		108	85 - 115
Selenium	0.100	0.101		mg/L		101	85 - 115
Silver	0.100	0.106		mg/L		106	85 - 115
Thallium	0.100	0.110		mg/L		110	85 - 115
Vanadium	0.100	0.108		mg/L		108	85 - 115
Zinc	0.100	0.106		mg/L		106	85 - 115

Lab Sample ID: LCSD 580-226047/16-A
Matrix: Water
Analysis Batch: 226204

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226047

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.104		mg/L		104	85 - 115	0	20
Antimony	0.100	0.109		mg/L		109	85 - 115	1	20
Barium	0.100	0.111		mg/L		111	85 - 115	1	20
Beryllium	0.100	0.107		mg/L		107	85 - 115	0	20
Cadmium	0.100	0.106		mg/L		106	85 - 115	2	20
Chromium	0.100	0.106		mg/L		106	85 - 115	1	20
Copper	0.100	0.107		mg/L		107	85 - 115	1	20
Iron	10.0	10.7		mg/L		107	85 - 115	1	20
Lead	0.100	0.110		mg/L		110	85 - 115	0	20
Manganese	0.100	0.109		mg/L		109	85 - 115	1	20
Nickel	0.100	0.109		mg/L		109	85 - 115	1	20
Selenium	0.100	0.103		mg/L		103	85 - 115	1	20
Silver	0.100	0.107		mg/L		107	85 - 115	1	20
Thallium	0.100	0.110		mg/L		110	85 - 115	0	20
Vanadium	0.100	0.108		mg/L		108	85 - 115	0	20
Zinc	0.100	0.106		mg/L		106	85 - 115	0	20

Lab Sample ID: LCS 580-226341/6-A
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.102		mg/L		102	85 - 115
Antimony	0.100	0.107		mg/L		107	85 - 115
Barium	0.100	0.110		mg/L		110	85 - 115
Beryllium	0.100	0.102		mg/L		102	85 - 115
Cadmium	0.100	0.105		mg/L		105	85 - 115
Chromium	0.100	0.102		mg/L		102	85 - 115
Copper	0.100	0.0993		mg/L		99	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226341/6-A
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.3		mg/L		103	85 - 115
Lead	0.100	0.103		mg/L		103	85 - 115
Manganese	0.100	0.103		mg/L		103	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Selenium	0.100	0.101		mg/L		101	85 - 115
Silver	0.100	0.104		mg/L		104	85 - 115
Thallium	0.100	0.104		mg/L		104	85 - 115
Vanadium	0.100	0.102		mg/L		102	85 - 115
Zinc	0.100	0.0988		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-226341/7-A
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226341

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.101		mg/L		101	85 - 115	1	20
Antimony	0.100	0.107		mg/L		107	85 - 115	0	20
Barium	0.100	0.109		mg/L		109	85 - 115	0	20
Beryllium	0.100	0.102		mg/L		102	85 - 115	0	20
Cadmium	0.100	0.105		mg/L		105	85 - 115	0	20
Chromium	0.100	0.104		mg/L		104	85 - 115	2	20
Copper	0.100	0.101		mg/L		101	85 - 115	2	20
Iron	10.0	10.4		mg/L		104	85 - 115	1	20
Lead	0.100	0.103		mg/L		103	85 - 115	1	20
Manganese	0.100	0.104		mg/L		104	85 - 115	1	20
Nickel	0.100	0.101		mg/L		101	85 - 115	1	20
Selenium	0.100	0.101		mg/L		101	85 - 115	0	20
Silver	0.100	0.104		mg/L		104	85 - 115	0	20
Thallium	0.100	0.104		mg/L		104	85 - 115	0	20
Vanadium	0.100	0.103		mg/L		103	85 - 115	2	20
Zinc	0.100	0.0997		mg/L		100	85 - 115	1	20

Lab Sample ID: MB 580-226014/4-B
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/31/16 09:55	09/01/16 18:30	1
Antimony	ND		0.00040	0.000080	mg/L		08/31/16 09:55	09/01/16 18:30	1
Barium	ND		0.0012	0.000054	mg/L		08/31/16 09:55	09/01/16 18:30	1
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:55	09/01/16 18:30	1
Cadmium	0.0000292	J	0.00040	0.000028	mg/L		08/31/16 09:55	09/01/16 18:30	1
Chromium	ND		0.00040	0.00014	mg/L		08/31/16 09:55	09/01/16 18:30	1
Copper	ND		0.0020	0.00060	mg/L		08/31/16 09:55	09/01/16 18:30	1
Iron	ND		0.040	0.0058	mg/L		08/31/16 09:55	09/01/16 18:30	1
Lead	ND		0.00040	0.000034	mg/L		08/31/16 09:55	09/01/16 18:30	1
Manganese	ND		0.0020	0.00035	mg/L		08/31/16 09:55	09/01/16 18:30	1
Nickel	ND		0.0030	0.00040	mg/L		08/31/16 09:55	09/01/16 18:30	1
Selenium	ND		0.0010	0.00030	mg/L		08/31/16 09:55	09/01/16 18:30	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226014/4-B
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.00040	0.000030	mg/L		08/31/16 09:55	09/01/16 18:30	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:55	09/01/16 18:30	1
Vanadium	ND		0.0040	0.00098	mg/L		08/31/16 09:55	09/01/16 18:30	1
Zinc	ND		0.0070	0.0019	mg/L		08/31/16 09:55	09/01/16 18:30	1

Lab Sample ID: 590-4302-1 DU
Matrix: Water
Analysis Batch: 226545

Client Sample ID: MW-14:082416
Prep Type: Dissolved
Prep Batch: 226341

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0023		0.00230		mg/L		0.7	20
Antimony	0.00012	J	0.000105	J	mg/L		15	20
Barium	0.053		0.0531		mg/L		0.08	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	0.000086	J B	0.0000340	J F5	mg/L		87	20
Chromium	0.0012		0.00115		mg/L		6	20
Copper	0.00063	J	ND		mg/L		NC	20
Iron	ND		ND		mg/L		NC	20
Lead	0.00019	J	0.000127	J F5	mg/L		40	20
Manganese	0.0013	J	0.000497	J F5	mg/L		92	20
Nickel	0.00042	J	ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0042		0.00487		mg/L		15	20
Zinc	0.0075		0.00329	J F5	mg/L		78	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-226226/19-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 14:56	1

Lab Sample ID: LCS 580-226226/20-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00210		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226226/21-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00202		mg/L		101	85 - 115	4	20

Lab Sample ID: 590-4302-1 MS
Matrix: Water
Analysis Batch: 226336

Client Sample ID: MW-14:082416
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00244		mg/L		122	70 - 130

Lab Sample ID: 590-4302-1 MSD
Matrix: Water
Analysis Batch: 226336

Client Sample ID: MW-14:082416
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00240		mg/L		120	70 - 130	1	20

Lab Sample ID: 590-4302-1 DU
Matrix: Water
Analysis Batch: 226336

Client Sample ID: MW-14:082416
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Lab Sample ID: LCS 580-226457/6-A
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226457

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00208		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-226457/7-A
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226457

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00206		mg/L		103	85 - 115	1	20

Lab Sample ID: MB 580-226014/4-C
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226457

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:38	09/01/16 12:19	1

Lab Sample ID: 590-4302-2 DU
Matrix: Water
Analysis Batch: 226588

Client Sample ID: MW-11A:082416
Prep Type: Dissolved
Prep Batch: 226457

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-368088/1-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 368088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:23	1

Lab Sample ID: LCS 490-368088/3-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Lab Sample ID: LCSD 490-368088/4-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.0990		mg/L		99	90 - 110	3	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-366375/1-A
Matrix: Water
Analysis Batch: 366637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366375

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 08:57	1

Lab Sample ID: LCS 490-366375/2-A
Matrix: Water
Analysis Batch: 366637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.77		mg/L		95	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-366363/3
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1

Lab Sample ID: LCS 490-366363/4
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	52.6		mg/L		105	90 - 110

Lab Sample ID: LCSD 490-366363/5
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	50.5		mg/L		101	90 - 110	4	20

Method: 410.4 - COD (Continued)

Lab Sample ID: 590-4302-1 MS
Matrix: Water
Analysis Batch: 366363

Client Sample ID: MW-14:082416
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND		50.0	51.1		mg/L		102	90 - 110

Method: SM 5310C - TOC

Lab Sample ID: MB 490-367509/2
Matrix: Water
Analysis Batch: 367509

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			09/01/16 15:50	1

Lab Sample ID: LCS 490-367509/6
Matrix: Water
Analysis Batch: 367509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.0		mg/L		100	90 - 110
TOC Result 1	10.0	9.87		mg/L		99	90 - 110
TOC Result 2	10.0	10.2		mg/L		102	90 - 110

Lab Sample ID: 590-4302-1 MS
Matrix: Water
Analysis Batch: 367509

Client Sample ID: MW-14:082416
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1.1		20.0	20.8		mg/L		99	75 - 122
TOC Result 1	1.1		20.0	20.5		mg/L		97	75 - 122
TOC Result 2	1.1		20.0	21.1		mg/L		100	75 - 122

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-14:082416

Date Collected: 08/24/16 10:55
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 22:43	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 22:43	MRS	TAL SPK
Total/NA	Prep	3520C			1043.5 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 18:38	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 14:52	NMI	TAL SPK
Total/NA	Prep	3510C			248.8 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 21:52	JCP	TAL SEA
Total/NA	Prep	3510C			245.4 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/30/16 22:55	NMI	TAL SPK
Total/NA	Prep	3510C			1051.7 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 20:55	TEM	TAL DEN
Total/NA	Prep	8151A			1058 mL	10 mL	340052	08/30/16 09:02	KI	TAL DEN
Total/NA	Analysis	8151A		1			340865	09/06/16 14:35	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			248 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 16:34	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8257	08/25/16 14:49	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8258	08/25/16 14:49	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226014	08/26/16 13:39	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226341	08/31/16 09:55	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226545	09/01/16 18:34	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226047	08/26/16 16:47		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 00:32	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226014	08/26/16 13:39	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226457	09/01/16 09:38	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 12:30	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:03	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:37	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:17	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 20:51	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8288	08/25/16 13:20	SJK	TAL SPK

Client Sample ID: MW-11A:082416

Date Collected: 08/24/16 12:40
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 23:05	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 23:05	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1055.8 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 19:04	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 15:08	NMI	TAL SPK
Total/NA	Prep	3510C			249.5 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 22:08	JCP	TAL SEA
Total/NA	Prep	3510C			238.6 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	8331	08/30/16 23:14	NMI	TAL SPK
Total/NA	Prep	3510C			1056.4 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 21:27	TEM	TAL DEN
Total/NA	Prep	8151A			1052.9 mL	10 mL	340052	08/30/16 09:02	KI	TAL DEN
Total/NA	Analysis	8151A		1			340865	09/06/16 14:58	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			249.9 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 16:52	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8257	08/25/16 15:01	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8258	08/25/16 15:01	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226014	08/26/16 13:39	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226341	08/31/16 09:55	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226545	09/01/16 18:44	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226047	08/26/16 16:47		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 00:37	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226014	08/26/16 13:39	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226457	09/01/16 09:38	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 12:26	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:12	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:37	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:18	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 21:24	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8288	08/25/16 13:20	SJK	TAL SPK

Client Sample ID: MW-7D:082416

Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 23:27	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 23:27	MRS	TAL SPK
Total/NA	Prep	3520C			960.5 mL	2 mL	226029	08/26/16 14:41	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226191	08/30/16 19:30	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 15:24	NMI	TAL SPK
Total/NA	Prep	3510C			248.1 mL	2.5 mL	226041	08/26/16 15:29	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226138	08/29/16 22:25	JCP	TAL SEA

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Client Sample ID: MW-7D:082416

Date Collected: 08/24/16 14:25
Date Received: 08/24/16 16:50

Lab Sample ID: 590-4302-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			247.1 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	8331	08/30/16 23:34	NMI	TAL SPK
Total/NA	Prep	3510C			1052.4 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 21:58	TEM	TAL DEN
Total/NA	Prep	8151A			1047.4 mL	10 mL	340052	08/30/16 09:02	KI	TAL DEN
Total/NA	Analysis	8151A		1			340865	09/06/16 15:21	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			247.9 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 17:10	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8257	08/25/16 16:55	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8258	08/25/16 16:55	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226014	08/26/16 13:39	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226341	08/31/16 09:55	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226545	09/01/16 18:49	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226047	08/26/16 16:47		TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226204	08/30/16 00:41	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226014	08/26/16 13:39	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226457	09/01/16 09:38	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 12:33	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:14	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:38	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:12	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:19	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:30	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	367509	09/01/16 21:41	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8288	08/25/16 13:20	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NWTPH = Northwest Total Petroleum Hydrocarbon

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Aqueous)	8290A - Dioxins of Interest List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_DOD_ORGPNS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-14:082416	8/24/16	1055	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-11A:082416	↓	1240	↓	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-71:082416	↓	1425	↓	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4302 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	2.5 FedEx
Relinquished by: Josh Lee	Date/Time: 8/24/16 1650	Company: GEI	Received by:		Date/Time: 8/24/16 1650	Company: TA Spok	
Relinquished by:	Date/Time:	Company:	Received by:		Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:		Date/Time:	Company:	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:				

9/27/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee / Jon Ruddes	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - Nacle, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC E coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and ORO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-14: 082416	8/24/16	1055	G	Water	N		X	X	X	X	25	
MW-11A: 082416	↓	1240	↓	Water	N		X	X	X	X	25	
MW-7D: 082416	↓	1425	↓	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/24/2016 1650	GEI	Sheila Kadu	8/24/16 1650	TAL SPK
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

2.5 IR003

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

9/27/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1959.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4302-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/6/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP Herbicide (Aqueous)	8141B/3510C Standard 8141 list	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-14:082416 (590-4302-1)	8/24/16	10:55 Pacific		Water			X	X	4	
MW-11A:082416 (590-4302-2)	8/24/16	12:40 Pacific		Water			X	X	4	
MW-7D:082416 (590-4302-3)	8/24/16	14:25 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Trask	8/25/16 1530	TAK		0940 26Aug16	TAL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.4, 3.3 IR5 -0.0 26Aug16

9/27/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Nashville, TN

COOLER RECEIPT FORM

590-4302 Chain of Custody

Cooler Received/Opened On 8/26/2016 @ 920

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1699 (last 4 digits, FedEx) Courier: _fedex_

IR Gun ID 97310166 pH Strip Lot HC581117 Chlorine Strip Lot 71130

2. Temperature of rep. sample or temp blank when opened: 4.6 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where:_____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) HkG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) HkG

17. Were custody papers properly filled out (ink, signed, etc)? YES..NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) HkG

I certify that I attached a label with the unique LIMS number to each container (intial) HkG

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

Loc: 590
4302

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On 8/26/2016 @ 920

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1688 (last 4 digits, FedEx) Courier: _fedex_

IR Gun ID__Ranger_____ pH Strip Lot HC581117 Chlorine Strip Lot 71130

2. Temperature of rep. sample or temp blank when opened: 3.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: Front

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) HG

7. Were custody seals on containers: YES (NO) and Intact YES...NO..(NA)

Were these signed and dated correctly? YES...NO..(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES..(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO..(NA)

14. Was there a Trip Blank in this cooler? YES..(NO)..NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) HG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)..NO...NA

16. Was residual chlorine present? YES...NO..(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) HG

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) HG

I certify that I attached a label with the unique LIMS number to each container (intial) HG

21. Were there Non-Conformance issues at login? YES..(NO) Was a NCM generated? YES..(NO)..#_____

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
4302

stAmerica
LEADER IN ENVIRONMENTAL TESTING

9/27/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	61.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page 1 of 1
Company: TestAmerica Laboratories, Inc		**Analysis Requested**	Job #: 590-4302-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 9/6/2016		**Preservation Codes:**
City: Nashville	TAT Requested (days):		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		**Other:**
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/ Total Organic Carbon (TOC)	410.4/ Chemical Oxygen Demand (COD)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-14:082416 (590-4302-1)	8/24/16	10:55 Pacific		Water			X	X	X	X	3	
MW-11A:082416 (590-4302-2)	8/24/16	12:40 Pacific		Water			X	X	X	X	3	
MW-7D:082416 (590-4302-3)	8/24/16	14:25 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 8/25/16 1600	Company	Received by: 3.1/4.6	Date/Time: 8/26/16 0920	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1957.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4302-1

Address: 5755 8th Street East,	Due Date Requested: 9/6/2016
City: Tacoma	TAT Requested (days):
State, Zip: WA, 98424	
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:
Email:	WO #:
Project Name: Marshall 0504-104-00	Project #: 59000577
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-14:082416 (590-4302-1)	8/24/16	10:55 Pacific		Water			X	X	X	X	X	X	6	
MW-11A:082416 (590-4302-2)	8/24/16	12:40 Pacific		Water			X	X	X	X	X	X	6	
MW-7D:082416 (590-4302-3)	8/24/16	14:25 Pacific		Water			X	X	X	X	X	X	6	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Shula Khal	8/25/16 1515	TA Spokane	B. Hall	8.26.16 1100	SEATA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: AZ = 5.8 /6.0 W

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4302-1

Login Number: 4302
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4302-1

Login Number: 4302
List Number: 2
Creator: Muniz, Ashley T

List Source: TestAmerica Denver
List Creation: 08/26/16 11:39 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4302-1

Login Number: 4302
List Number: 4
Creator: Gundi, Hozar K

List Source: TestAmerica Nashville
List Creation: 08/26/16 05:12 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4302-1

Login Number: 4302
List Number: 3
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 08/26/16 11:45 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4302-2
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/30/2016 8:54:38 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-2

Job ID: 590-4302-2

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/24/2016 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4302-1	MW-14:082416	Water	08/24/16 10:55	08/24/16 16:50
590-4302-2	MW-11A:082416	Water	08/24/16 12:40	08/24/16 16:50
590-4302-3	MW-7D:082416	Water	08/24/16 14:25	08/24/16 16:50

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: MW-14:082416

Lab Sample ID: 590-4302-1

Date Collected: 08/24/16 10:55

Matrix: Water

Date Received: 08/24/16 16:50

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.27	pg/L		09/19/16 15:17	09/25/16 22:32	1
2,3,7,8-TCDF	ND		9.5	0.25	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,7,8-PeCDD	ND		47	0.47	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,7,8-PeCDF	ND		47	0.40	pg/L		09/19/16 15:17	09/25/16 22:32	1
2,3,4,7,8-PeCDF	ND		47	0.40	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,4,7,8-HxCDD	ND		47	0.37	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,6,7,8-HxCDD	ND		47	0.39	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,7,8,9-HxCDD	ND		47	0.32	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,4,7,8-HxCDF	ND		47	0.25	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,6,7,8-HxCDF	ND		47	0.25	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,7,8,9-HxCDF	ND		47	0.27	pg/L		09/19/16 15:17	09/25/16 22:32	1
2,3,4,6,7,8-HxCDF	ND		47	0.26	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,4,6,7,8-HpCDD	**0.68**	**J B**	47	0.32	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.23	pg/L		09/19/16 15:17	09/25/16 22:32	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.26	pg/L		09/19/16 15:17	09/25/16 22:32	1
OCDD	**3.8**	**J B**	95	0.37	pg/L		09/19/16 15:17	09/25/16 22:32	1
OCDF	ND		95	0.57	pg/L		09/19/16 15:17	09/25/16 22:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-1,2,3,7,8-PeCDF	*74*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*88*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*93*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*
13C-OCDD	*77*		*40 - 135*	*09/19/16 15:17*	*09/25/16 22:32*	*1*

Client Sample ID: MW-11A:082416

Lab Sample ID: 590-4302-2

Date Collected: 08/24/16 12:40

Matrix: Water

Date Received: 08/24/16 16:50

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.32	pg/L		09/19/16 15:17	09/25/16 23:18	1
2,3,7,8-TCDF	ND		11	0.28	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,7,8-PeCDD	ND		53	0.51	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,7,8-PeCDF	ND		53	0.44	pg/L		09/19/16 15:17	09/25/16 23:18	1
2,3,4,7,8-PeCDF	ND		53	0.45	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,4,7,8-HxCDD	ND		53	0.35	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,6,7,8-HxCDD	ND		53	0.36	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,7,8,9-HxCDD	ND		53	0.30	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,4,7,8-HxCDF	ND		53	0.30	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,6,7,8-HxCDF	ND		53	0.29	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,7,8,9-HxCDF	ND		53	0.32	pg/L		09/19/16 15:17	09/25/16 23:18	1
2,3,4,6,7,8-HxCDF	ND		53	0.31	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,4,6,7,8-HpCDD	**0.91**	**J B**	53	0.32	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,4,6,7,8-HpCDF	ND		53	0.19	pg/L		09/19/16 15:17	09/25/16 23:18	1
1,2,3,4,7,8,9-HpCDF	ND		53	0.22	pg/L		09/19/16 15:17	09/25/16 23:18	1

Client Sample ID: MW-11A:082416

Lab Sample ID: 590-4302-2

Date Collected: 08/24/16 12:40

Matrix: Water

Date Received: 08/24/16 16:50

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	3.3	J B q	110	0.40	pg/L		09/19/16 15:17	09/25/16 23:18	1
OCDF	ND		110	0.65	pg/L		09/19/16 15:17	09/25/16 23:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*80*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-2,3,7,8-TCDF	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-1,2,3,7,8-PeCDD	*71*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-1,2,3,7,8-PeCDF	*74*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*92*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*
13C-OCDD	*76*		*40 - 135*	*09/19/16 15:17*	*09/25/16 23:18*	*1*

Client Sample ID: MW-7D:082416

Lab Sample ID: 590-4302-3

Date Collected: 08/24/16 14:25

Matrix: Water

Date Received: 08/24/16 16:50

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.36	pg/L		09/19/16 15:17	09/26/16 00:04	1
2,3,7,8-TCDF	ND		9.6	0.28	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,7,8-PeCDD	ND		48	0.48	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,7,8-PeCDF	ND		48	0.44	pg/L		09/19/16 15:17	09/26/16 00:04	1
2,3,4,7,8-PeCDF	ND		48	0.45	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,4,7,8-HxCDD	ND		48	0.29	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,6,7,8-HxCDD	ND		48	0.31	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,7,8,9-HxCDD	ND		48	0.25	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,4,7,8-HxCDF	ND		48	0.26	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,6,7,8-HxCDF	ND		48	0.25	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,7,8,9-HxCDF	ND		48	0.27	pg/L		09/19/16 15:17	09/26/16 00:04	1
2,3,4,6,7,8-HxCDF	ND		48	0.26	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,4,6,7,8-HpCDD	0.76	J B q	48	0.27	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.17	pg/L		09/19/16 15:17	09/26/16 00:04	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.20	pg/L		09/19/16 15:17	09/26/16 00:04	1
OCDD	3.2	J B q	96	0.31	pg/L		09/19/16 15:17	09/26/16 00:04	1
OCDF	0.83	J	96	0.44	pg/L		09/19/16 15:17	09/26/16 00:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-2,3,7,8-TCDF	*82*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-1,2,3,7,8-PeCDD	*69*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-1,2,3,6,7,8-HxCDD	*100*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-1,2,3,4,7,8-HxCDF	*92*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*
13C-OCDD	*81*		*40 - 135*	*09/19/16 15:17*	*09/26/16 00:04*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-127940/1-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127940

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,7,8-TCDF	ND		10	0.27	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDD	ND		50	0.56	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDF	ND		50	0.47	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,7,8-PeCDF	ND		50	0.48	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDD	ND		50	0.41	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDD	ND		50	0.42	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDD	ND		50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDF	ND		50	0.32	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDF	ND		50	0.31	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDF	ND		50	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,6,7,8-HxCDF	ND		50	0.33	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDD	1.10	J	50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDF	0.430	J q	50	0.19	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.22	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDD	3.50	J	100	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDF	ND		100	0.40	pg/L		09/19/16 15:17	09/25/16 19:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-OCDD	*72*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	191		pg/L		95	64 - 142
2,3,7,8-TCDF	200	199		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135
2,3,4,7,8-PeCDF	1000	1030		pg/L		103	74 - 137
1,2,3,4,7,8-HxCDD	1000	853		pg/L		85	56 - 146
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	73 - 144
1,2,3,7,8,9-HxCDD	1000	949		pg/L		95	71 - 151
1,2,3,4,7,8-HxCDF	1000	1040		pg/L		104	75 - 131
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	77 - 142
2,3,4,6,7,8-HxCDF	1000	1080		pg/L		108	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	999		pg/L		100	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8,9-HpCDF			1000	942		pg/L		94	83 - 130		
OCDD			2000	2000		pg/L		100	80 - 132		
OCDF			2000	2170		pg/L		109	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*64*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*83*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*77*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-127940/3-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	213		pg/L		107	64 - 142	11	20
2,3,7,8-TCDF			200	212		pg/L		106	71 - 142	6	20
1,2,3,7,8-PeCDD			1000	1070		pg/L		107	71 - 140	6	20
1,2,3,7,8-PeCDF			1000	1070		pg/L		107	76 - 135	1	20
2,3,4,7,8-PeCDF			1000	1050		pg/L		105	74 - 137	2	20
1,2,3,4,7,8-HxCDD			1000	969		pg/L		97	56 - 146	13	20
1,2,3,6,7,8-HxCDD			1000	1080		pg/L		108	73 - 144	5	20
1,2,3,7,8,9-HxCDD			1000	1030		pg/L		103	71 - 151	9	20
1,2,3,4,7,8-HxCDF			1000	1100		pg/L		110	75 - 131	6	20
1,2,3,6,7,8-HxCDF			1000	1200		pg/L		120	76 - 133	5	20
1,2,3,7,8,9-HxCDF			1000	1120		pg/L		112	77 - 142	8	20
2,3,4,6,7,8-HxCDF			1000	1170		pg/L		117	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD			1000	1060		pg/L		106	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF			1000	1070		pg/L		107	79 - 133	5	20
1,2,3,4,7,8,9-HpCDF			1000	1010		pg/L		101	83 - 130	7	20
OCDD			2000	2170		pg/L		108	80 - 132	8	20
OCDF			2000	2380		pg/L		119	72 - 140	9	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*86*		*40 - 135*
13C-2,3,7,8-TCDF	*83*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*80*		*40 - 135*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-2

Client Sample ID: MW-14:082416

Lab Sample ID: 590-4302-1

Date Collected: 08/24/16 10:55

Matrix: Water

Date Received: 08/24/16 16:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1054.6 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129092	09/25/16 22:32	SMA	TAL SAC

Client Sample ID: MW-11A:082416

Lab Sample ID: 590-4302-2

Date Collected: 08/24/16 12:40

Matrix: Water

Date Received: 08/24/16 16:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			939.4 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129092	09/25/16 23:18	SMA	TAL SAC

Client Sample ID: MW-7D:082416

Lab Sample ID: 590-4302-3

Date Collected: 08/24/16 14:25

Matrix: Water

Date Received: 08/24/16 16:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1045.8 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129092	09/26/16 00:04	SMA	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-2

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4302-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

9/30/2016

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Aqueous)	8290A - Dioxins of Interest List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_DOC_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-14:082416	8/24/16	1055	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-11A:082416	↓	1240	↓	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-71:082416	↓	1425	↓	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4302 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	2.5 FedEx
Relinquished by: Josh Lee	Date/Time: 8/24/16 1650	Company: GEI	Received by:		Date/Time: 8/24/16 1650	Company: TA Spok	
Relinquished by:	Date/Time:	Company:	Received by:		Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:		Date/Time:	Company:	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:				

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee / Jon Ruddes	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - Nacle, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC E coli	3011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-14: 082416	8/24/16	1055	G	Water	N		X	X	X	X	25	
MW-11A: 082416	↓	1240	↓	Water	N		X	X	X	X	25	
MW-7D: 082416	↓	1425	↓	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/24/2016 1650	GEI	Sheila Kadu	8/24/16 1650	TAL SPK
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

2.5 C IR003

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

9/30/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1960.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 590-4302-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/8/2016			Preservation Codes:
City: West Sacramento	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-14:082416 (590-4302-1)	8/24/16	10:55 Pacific		Water			X	2	
MW-11A:082416 (590-4302-2)	8/24/16	12:40 Pacific		Water			X	2	
MW-7D:082416 (590-4302-3)	8/24/16	14:25 Pacific		Water			X	2	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Kraft	8/25/16 1600	TAS Spok	[illegible]	8/26/16 0910	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.9

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4302-2

Login Number: 4302

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4302-2

Login Number: 4302
List Number: 5
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 08/30/16 12:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4322-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/29/2016 1:06:46 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Job ID: 590-4322-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/25/2016 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9º C.

Receipt Exceptions
One 250ml nitric preserved poly and two 250ml unpreserved poly containers were received not labeled. The client was contacted and the laboratory was instructed to label the containers according to the client's instructions.

The unpreserved 1 Liter amber containers for sample MW-1A-082516 (590-4322-2) were submitted to the lab at a later date than all other containers. The containers were submitted on 08/26/16 at 1620.

GC/MS VOA
Method NWTPH-Gx: The matrix spike (MS) recoveries for analytical batch 590-8292 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8293 recovered above the upper control limit for Acetone and 2-Butanone (MEK). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the recovery for Acetone was greater than 40%D, results for this analyte are estimates. The following sample is impacted: MW-12A-082516 (590-4322-1).

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8293 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8260C: The matrix spike (MS) recoveries for analytical batch 590-8293 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The laboratory control sample (LCS) for analytical batch 590-8293 recovered outside control limits for the following analyte: Acetone. This analyte was biased high in the LCS and not detected above the reporting limit in the associated samples; therefore, the data have been reported.

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8295 recovered outside acceptance criteria, low biased, for Bromomethane, 2,2-Dichloropropane and Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8295 recovered above the upper control limit for Acetone and 2-Butanone (MEK). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the recovery for Acetone was greater than 40%D, results for this analyte are estimates. The following samples are impacted: MW-1A-082516 (590-4322-2), MW-7B-082516 (590-4322-3) and DUP-082516 (590-4322-4).

Method 8260C: The matrix spike (MS) recoveries for analytical batch 590-8295 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The laboratory control sample (LCS) for analytical batch 590-8295 recovered outside control limits for the following analyte: Acetone. This analyte was biased high in the LCS and not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226512 recovered above the upper control limit for N-Nitrosodiphenylamine and 3,3'-Dichlorobenzidine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-12A-082516 (590-4322-1), MW-1A-082516 (590-4322-2), MW-7B-082516 (590-4322-3), DUP-082516 (590-4322-4) and (CCVIS 580-226512/3).

Job ID: 590-4322-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226512 recovered outside acceptance criteria, low biased, for 4-Nitrophenol, Pentachlorophenol and 4-Nitroaniline. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-226512 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The following analytes recovered outside control limits for the LCS/LCSD associated with preparation batch 580-226299 and analytical batch 580-226512: 2,6-Dinitrotoluene, 4-Chloroaniline and Hexachlorocyclopentadiene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226299 recovered outside control limits for the multip analytes.

Method 8270D: The method blank for preparation batch 580-226299 and analytical batch 580-226512 contained Di-n-butyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8270D: The laboratory control sample duplicate (LCSD) for preparation batch 580-226299 and analytical batch 580-226512 recovered outside control limits for the following analytes: Bis(2-ethylhexyl) phthalate, Butyl benzyl phthalate and Benzyl alcohol. These analytes were biased high in the LCSD and were not detected at the reporting limit in the associated samples; therefore, the data have been reported.

Method 8270D: The method blank for preparation batch 580-226299 contained Benzyl alcohol above the reporting limit (RL). There was insufficient holding time remaining to perform a re-extraction and/or re-analysis within holding time; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method 8151A: The continuing calibration verification (CCV) for 2,4-D, Dalapon and 2,4-DB associated with analytical batch 280-340865 recovered outside the control limit on one column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the column which is in control.

Method 8151A: The continuing calibration verification (CCV) for several compounds associated with analytical batch 280-341438 recovered outside the control limit on one column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the column which is in control. The surrogate 2,4-Dichlorophenylacetic acid is in control on both columns and reported from the column that is in control in the CCV.

Method 8141B: The initial calibration verification (ICV) for 8141 exceeded control criteria for mevinphos on the back (confirmation) column. The impacted samples were ND for mevinphos and are reported from the front, in control, column. Per the laboratory SOP the ICV is acceptable if the average of the percent differences (%D) values for all of the analytes is within +/- 15% and the %D for all individual analytes is within +/- 30%.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-343654 recovered below the lower control limit for Simazine on the confirmation column. The client samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the column in control (front). The following samples are impacted: MW-12A-082516 (590-4322-1), MW-7B-082516 (590-4322-3) and DUP-082516 (590-4322-4).

Method 300.0: Because the correct container was not labeled by the client, the aliquot used for the initial analysis for sample MW-1A-082516 (590-4322-2) was taken from an unpreserved amber container. The concentration of Nitrate as N in this sample exceeded the calibration range. The sample was then re-analyzed outside of the holding time for the method. Both sets of data have been qualified and reported.

Job ID: 590-4322-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 300.0: The continuing calibration blank (CCB) for analytical batch 590-8311 contained Nitrate as N above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 200.8: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-226128 and 580-226335.

Method 245.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-226278 and 580-226470.

Method 200.8: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-226278 and 580-226471.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 335.4: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 490-368088 and analytical batch 490-368113 were outside control limits. Sample matrix interference suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-339916.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 340052.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 340257.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4322-1	MW-12A-082516	Water	08/25/16 10:00	08/25/16 16:30
590-4322-2	MW-1A-082516	Water	08/25/16 12:00	08/25/16 16:30
590-4322-3	MW-7B-082516	Water	08/25/16 14:55	08/25/16 16:30
590-4322-4	DUP-082516	Water	08/25/16 08:00	08/25/16 16:30

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-12A-082516
Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 23:48	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 23:48	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 23:48	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 23:48	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 23:48	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 23:48	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 23:48	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 23:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 23:48	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 23:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 23:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 23:48	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 23:48	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 23:48	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 23:48	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 23:48	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 23:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 23:48	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 23:48	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 23:48	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 23:48	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 23:48	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 23:48	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 23:48	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 23:48	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 23:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 23:48	1
Acetone	**11**	**J ***	25	4.1	ug/L			08/26/16 23:48	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 23:48	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 23:48	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 23:48	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 23:48	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 23:48	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 23:48	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 23:48	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 23:48	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 23:48	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 23:48	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 23:48	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 23:48	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 23:48	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 23:48	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 23:48	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 23:48	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 23:48	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 23:48	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 23:48	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 23:48	1
Hexane	ND		1.0	0.084	ug/L			08/26/16 23:48	1

Client Sample ID: MW-12A-082516
Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 23:48	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 23:48	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 23:48	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 23:48	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 23:48	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 23:48	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 23:48	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 23:48	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 23:48	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 23:48	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 23:48	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 23:48	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 23:48	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 23:48	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 23:48	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 23:48	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 23:48	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 23:48	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 23:48	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*08/26/16 23:48*	*1*
4-Bromofluorobenzene (Surr)	*106*		*69 - 120*		*08/26/16 23:48*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/26/16 23:48*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/26/16 23:48*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*08/26/16 23:48*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
1,2-Dichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
1,3-Dichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
1,4-Dichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2,6-Dinitrotoluene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-12A-082516
Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2-Nitroaniline	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/30/16 16:43	09/01/16 19:28	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.95	ug/L		08/30/16 16:43	09/01/16 19:28	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
4-Nitroaniline	ND		0.57	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
4-Nitrophenol	ND		2.9	0.95	ug/L		08/30/16 16:43	09/01/16 19:28	1
Acenaphthene	ND		0.095	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Anthracene	ND		0.038	0.0095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzoic acid	ND		2.9	0.57	ug/L		08/30/16 16:43	09/01/16 19:28	1
Benzyl alcohol	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		08/30/16 16:43	09/01/16 19:28	1
Butyl benzyl phthalate	**0.19**	**J * B**	0.57	0.19	ug/L		08/30/16 16:43	09/01/16 19:28	1
Carbazole	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Chrysene	ND		0.038	0.012	ug/L		08/30/16 16:43	09/01/16 19:28	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		08/30/16 16:43	09/01/16 19:28	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/30/16 16:43	09/01/16 19:28	1
Fluoranthene	ND		0.048	0.012	ug/L		08/30/16 16:43	09/01/16 19:28	1
Fluorene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Hexachlorobutadiene	ND	*	0.57	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Hexachlorocyclopentadiene	ND	*	1.9	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Hexachloroethane	ND	*	0.57	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Isophorone	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Naphthalene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1

Client Sample ID: MW-12A-082516
Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Phenanthrene	ND		0.076	0.019	ug/L		08/30/16 16:43	09/01/16 19:28	1
Phenol	ND		0.57	0.095	ug/L		08/30/16 16:43	09/01/16 19:28	1
Pyrene	ND		0.057	0.012	ug/L		08/30/16 16:43	09/01/16 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*92*		*57 - 132*	*08/30/16 16:43*	*09/01/16 19:28*	*1*
2-Fluorobiphenyl	*78*		*50 - 120*	*08/30/16 16:43*	*09/01/16 19:28*	*1*
2-Fluorophenol	*72*		*50 - 113*	*08/30/16 16:43*	*09/01/16 19:28*	*1*
Nitrobenzene-d5	*93*		*59 - 120*	*08/30/16 16:43*	*09/01/16 19:28*	*1*
Phenol-d5	*78*		*52 - 120*	*08/30/16 16:43*	*09/01/16 19:28*	*1*
Terphenyl-d14	*88*		*72 - 140*	*08/30/16 16:43*	*09/01/16 19:28*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 15:40	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/31/16 10:32	08/31/16 21:27	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 21:27	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 21:27	1
Aldrin	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 21:27	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 21:27	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 21:27	1
beta-BHC	ND		0.050	0.012	ug/L		08/31/16 10:32	08/31/16 21:27	1
delta-BHC	ND		0.050	0.010	ug/L		08/31/16 10:32	08/31/16 21:27	1
Dieldrin	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 21:27	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 21:27	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 21:27	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 21:27	1
Endrin	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 21:27	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/31/16 10:32	08/31/16 21:27	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 21:27	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 21:27	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 21:27	1
Heptachlor	ND		0.020	0.0040	ug/L		08/31/16 10:32	08/31/16 21:27	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 21:27	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/31/16 10:32	08/31/16 21:27	1
Toxaphene	ND		1.0	0.22	ug/L		08/31/16 10:32	08/31/16 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*66*		*22 - 150*	*08/31/16 10:32*	*08/31/16 21:27*	*1*
Tetrachloro-m-xylene	*70*		*40 - 113*	*08/31/16 10:32*	*08/31/16 21:27*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 23:53	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 23:53	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 23:53	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 23:53	1

Client Sample ID: MW-12A-082516
Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 23:53	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 23:53	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/30/16 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*20 - 120*	*08/30/16 13:27*	*08/30/16 23:53*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*36 - 138*	*08/30/16 13:27*	*08/30/16 23:53*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.9	0.29	ug/L		08/29/16 13:00	09/25/16 22:29	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/29/16 13:00	09/25/16 22:29	1
Bolstar	ND		0.99	0.31	ug/L		08/29/16 13:00	09/25/16 22:29	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/29/16 13:00	09/25/16 22:29	1
Coumaphos	ND		0.99	0.13	ug/L		08/29/16 13:00	09/25/16 22:29	1
Demeton, Total	ND		3.0	0.21	ug/L		08/29/16 13:00	09/25/16 22:29	1
Diazinon	ND		0.50	0.15	ug/L		08/29/16 13:00	09/25/16 22:29	1
Dichlorvos	ND		0.50	0.16	ug/L		08/29/16 13:00	09/25/16 22:29	1
Dimethoate	ND		1.5	0.45	ug/L		08/29/16 13:00	09/25/16 22:29	1
Disulfoton	ND		0.99	0.32	ug/L		08/29/16 13:00	09/25/16 22:29	1
EPN	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 22:29	1
Famphur	ND		0.99	0.18	ug/L		08/29/16 13:00	09/25/16 22:29	1
Fensulfothion	ND		2.5	0.54	ug/L		08/29/16 13:00	09/25/16 22:29	1
Fenthion	ND		2.5	0.15	ug/L		08/29/16 13:00	09/25/16 22:29	1
Malathion	ND		2.0	0.13	ug/L		08/29/16 13:00	09/25/16 22:29	1
Merphos	ND		5.0	0.17	ug/L		08/29/16 13:00	09/25/16 22:29	1
Methyl parathion	ND		4.0	0.14	ug/L		08/29/16 13:00	09/25/16 22:29	1
Mevinphos	ND		6.1	0.46	ug/L		08/29/16 13:00	09/25/16 22:29	1
Ethyl Parathion	ND		0.99	0.14	ug/L		08/29/16 13:00	09/25/16 22:29	1
Phorate	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 22:29	1
Ronnel	ND		9.9	0.12	ug/L		08/29/16 13:00	09/25/16 22:29	1
Simazine	ND		9.9	0.22	ug/L		08/29/16 13:00	09/25/16 22:29	1
Sulfotepp	ND		1.5	0.17	ug/L		08/29/16 13:00	09/25/16 22:29	1
Thionazin	ND		0.99	0.31	ug/L		08/29/16 13:00	09/25/16 22:29	1
Tokuthion	ND		1.6	0.12	ug/L		08/29/16 13:00	09/25/16 22:29	1
Trichloronate	ND		1.5	0.24	ug/L		08/29/16 13:00	09/25/16 22:29	1
Ethoprop	ND		1.5	0.18	ug/L		08/29/16 13:00	09/25/16 22:29	1
Propazine	ND		9.9	0.29	ug/L		08/29/16 13:00	09/25/16 22:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*08/29/16 13:00*	*09/25/16 22:29*	*1*
Triphenylphosphate	*99*		*60 - 154*	*08/29/16 13:00*	*09/25/16 22:29*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		08/30/16 09:02	09/06/16 15:44	1
2,4-D	ND		3.8	0.20	ug/L		08/30/16 09:02	09/06/16 15:44	1
2,4-DB	ND		3.8	0.34	ug/L		08/30/16 09:02	09/06/16 15:44	1
Dalapon	ND		1.9	0.87	ug/L		08/30/16 09:02	09/06/16 15:44	1
Dicamba	ND		1.9	0.14	ug/L		08/30/16 09:02	09/06/16 15:44	1

Client Sample ID: MW-12A-082516
Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		08/30/16 09:02	09/06/16 15:44	1
MCPA	ND		380	16	ug/L		08/30/16 09:02	09/06/16 15:44	1
MCPP	ND		380	32	ug/L		08/30/16 09:02	09/06/16 15:44	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		08/30/16 09:02	09/06/16 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*80*		*39 - 135*	*08/30/16 09:02*	*09/06/16 15:44*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		08/26/16 10:57	08/26/16 17:27	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		08/26/16 10:57	08/26/16 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/26/16 10:57*	*08/26/16 17:27*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*08/26/16 10:57*	*08/26/16 17:27*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.4**		0.80	0.42	mg/L			08/26/16 14:01	1
Nitrate as N	**3.9**		0.20	0.039	mg/L			08/26/16 14:01	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 14:01	1
Sulfate	**25**		0.50	0.13	mg/L			08/26/16 14:01	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:23	1
Antimony	**0.000093**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:23	1
Barium	**0.010**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:23	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:23	1
Cadmium	**0.000064**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:23	1
Chromium	**0.00030**	**J**	0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:23	1
Copper	**0.0015**	**J**	0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:23	1
Iron	**1.0**		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:23	1
Lead	**0.0013**		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:23	1
Manganese	**0.023**		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:23	1
Nickel	**0.00061**	**J**	0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:23	1
Selenium	**0.00036**	**J**	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:23	1
Silver	**0.00024**	**J**	0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:23	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:23	1
Vanadium	**0.010**		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:23	1
Zinc	**0.017**		0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:23	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		08/31/16 09:38	09/01/16 16:33	1
Antimony	**0.000080**	**J**	0.00040	0.000080	mg/L		08/31/16 09:38	09/01/16 16:33	1
Barium	**0.0074**		0.0012	0.000054	mg/L		08/31/16 09:38	09/01/16 16:33	1
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:38	09/01/16 16:33	1

Client Sample ID: MW-12A-082516

Lab Sample ID: 590-4322-1

Date Collected: 08/25/16 10:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.000059**	**J B**	0.00040	0.000028	mg/L		08/31/16 09:38	09/01/16 16:33	1
Chromium	**0.0011**		0.00040	0.00014	mg/L		08/31/16 09:38	09/01/16 16:33	1
Copper	ND		0.0020	0.00060	mg/L		08/31/16 09:38	09/01/16 16:33	1
Iron	**0.014**	**J**	0.040	0.0058	mg/L		08/31/16 09:38	09/01/16 16:33	1
Lead	**0.000078**	**J**	0.00040	0.000034	mg/L		08/31/16 09:38	09/01/16 16:33	1
Manganese	**0.0037**		0.0020	0.00035	mg/L		08/31/16 09:38	09/01/16 16:33	1
Nickel	ND		0.0030	0.00040	mg/L		08/31/16 09:38	09/01/16 16:33	1
Selenium	ND		0.0010	0.00030	mg/L		08/31/16 09:38	09/01/16 16:33	1
Silver	ND		0.00040	0.000030	mg/L		08/31/16 09:38	09/01/16 16:33	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:38	09/01/16 16:33	1
Vanadium	**0.011**		0.0040	0.00098	mg/L		08/31/16 09:38	09/01/16 16:33	1
Zinc	**0.0051**	**J**	0.0070	0.0019	mg/L		08/31/16 09:38	09/01/16 16:33	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:39	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:51	09/01/16 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:40	1
Ammonia (as N)	**0.098**	**J**	0.10	0.060	mg/L		08/29/16 15:12	08/30/16 09:21	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:33	1
Total Organic Carbon	**2.6**		1.0	0.50	mg/L			09/06/16 15:53	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/25/16 16:40	1
Escherichia coli	**0.00**				MPN/100mL			08/25/16 16:40	1

Client Sample ID: MW-1A-082516

Lab Sample ID: 590-4322-2

Date Collected: 08/25/16 12:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/27/16 02:43	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/27/16 02:43	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/27/16 02:43	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/27/16 02:43	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/27/16 02:43	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/27/16 02:43	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/27/16 02:43	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/27/16 02:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/27/16 02:43	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/27/16 02:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/27/16 02:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/27/16 02:43	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-1A-082516
Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/27/16 02:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/27/16 02:43	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/27/16 02:43	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/27/16 02:43	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/27/16 02:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/27/16 02:43	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/27/16 02:43	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/27/16 02:43	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/27/16 02:43	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/27/16 02:43	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/27/16 02:43	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/27/16 02:43	1
2-Hexanone	ND		10	0.75	ug/L			08/27/16 02:43	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/27/16 02:43	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/27/16 02:43	1
Acetone	ND	*	25	4.1	ug/L			08/27/16 02:43	1
Benzene	ND		0.20	0.093	ug/L			08/27/16 02:43	1
Bromobenzene	ND		1.0	0.28	ug/L			08/27/16 02:43	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/27/16 02:43	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/27/16 02:43	1
Bromoform	ND		2.0	0.80	ug/L			08/27/16 02:43	1
Bromomethane	ND		5.0	0.22	ug/L			08/27/16 02:43	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/27/16 02:43	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/27/16 02:43	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/27/16 02:43	1
Chloroethane	ND		2.0	1.1	ug/L			08/27/16 02:43	1
Chloroform	ND		1.0	0.41	ug/L			08/27/16 02:43	1
Chloromethane	ND		3.0	0.22	ug/L			08/27/16 02:43	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/27/16 02:43	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/27/16 02:43	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/27/16 02:43	1
Dibromomethane	ND		1.0	0.50	ug/L			08/27/16 02:43	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/27/16 02:43	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/27/16 02:43	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/27/16 02:43	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/27/16 02:43	1
Hexane	ND		1.0	0.084	ug/L			08/27/16 02:43	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/27/16 02:43	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/27/16 02:43	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/27/16 02:43	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/27/16 02:43	1
Naphthalene	ND		2.0	0.63	ug/L			08/27/16 02:43	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/27/16 02:43	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/27/16 02:43	1
o-Xylene	ND		1.0	0.16	ug/L			08/27/16 02:43	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/27/16 02:43	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/27/16 02:43	1
Styrene	ND		1.0	0.10	ug/L			08/27/16 02:43	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/27/16 02:43	1

Client Sample ID: MW-1A-082516
Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.0		1.0	0.45	ug/L			08/27/16 02:43	1
Toluene	ND		1.0	0.31	ug/L			08/27/16 02:43	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/27/16 02:43	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/27/16 02:43	1
Trichloroethene	ND		1.0	0.44	ug/L			08/27/16 02:43	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/27/16 02:43	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/27/16 02:43	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/27/16 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*08/27/16 02:43*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*08/27/16 02:43*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*08/27/16 02:43*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/27/16 02:43*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/27/16 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*08/27/16 02:43*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
1,2-Dichlorobenzene	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
1,3-Dichlorobenzene	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
1,4-Dichlorobenzene	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
1-Methylnaphthalene	ND		0.074	0.037	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,4,5-Trichlorophenol	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,4,6-Trichlorophenol	ND		0.74	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,4-Dichlorophenol	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,4-Dimethylphenol	ND		2.5	0.37	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,4-Dinitrophenol	ND		6.2	1.2	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,4-Dinitrotoluene	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2,6-Dinitrotoluene	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2-Chloronaphthalene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
2-Chlorophenol	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2-Methylnaphthalene	ND		0.25	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
2-Methylphenol	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2-Nitroaniline	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
2-Nitrophenol	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
3 & 4 Methylphenol	ND		0.99	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
3,3'-Dichlorobenzidine	ND		2.5	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
3-Nitroaniline	ND		0.49	0.15	ug/L		08/30/16 16:43	09/01/16 19:54	1
4,6-Dinitro-2-methylphenol	ND	*	4.9	1.2	ug/L		08/30/16 16:43	09/01/16 19:54	1
4-Bromophenyl phenyl ether	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
4-Chloro-3-methylphenol	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
4-Chloroaniline	ND	*	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
4-Chlorophenyl phenyl ether	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-1A-082516
Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND		0.74	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
4-Nitrophenol	ND		3.7	1.2	ug/L		08/30/16 16:43	09/01/16 19:54	1
Acenaphthene	ND		0.12	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Acenaphthylene	ND		0.099	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Anthracene	ND		0.049	0.012	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzo[a]anthracene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzo[a]pyrene	ND		0.049	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzo[b]fluoranthene	ND		0.099	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzo[g,h,i]perylene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzo[k]fluoranthene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzoic acid	**0.99**	**J**	3.7	0.74	ug/L		08/30/16 16:43	09/01/16 19:54	1
Benzyl alcohol	**0.58**	*** B**	0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
bis (2-chloroisopropyl) ether	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Bis(2-chloroethoxy)methane	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Bis(2-chloroethyl)ether	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Bis(2-ethylhexyl) phthalate	**1.7**	**J ***	3.7	1.5	ug/L		08/30/16 16:43	09/01/16 19:54	1
Butyl benzyl phthalate	**0.51**	**J * B**	0.74	0.25	ug/L		08/30/16 16:43	09/01/16 19:54	1
Carbazole	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Chrysene	ND		0.049	0.016	ug/L		08/30/16 16:43	09/01/16 19:54	1
Dibenz(a,h)anthracene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Dibenzofuran	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Diethyl phthalate	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Dimethyl phthalate	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Di-n-butyl phthalate	**0.34**	**J B**	0.49	0.16	ug/L		08/30/16 16:43	09/01/16 19:54	1
Di-n-octyl phthalate	ND		0.49	0.22	ug/L		08/30/16 16:43	09/01/16 19:54	1
Fluoranthene	ND		0.062	0.016	ug/L		08/30/16 16:43	09/01/16 19:54	1
Fluorene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Hexachlorobenzene	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Hexachlorobutadiene	ND	*	0.74	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Hexachlorocyclopentadiene	ND	*	2.5	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Hexachloroethane	ND	*	0.74	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Indeno[1,2,3-cd]pyrene	ND		0.074	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Isophorone	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Naphthalene	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Nitrobenzene	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
N-Nitrosodi-n-propylamine	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
N-Nitrosodiphenylamine	ND		0.49	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Pentachlorophenol	ND		0.86	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Phenanthrene	ND		0.099	0.025	ug/L		08/30/16 16:43	09/01/16 19:54	1
Phenol	ND		0.74	0.12	ug/L		08/30/16 16:43	09/01/16 19:54	1
Pyrene	ND		0.074	0.016	ug/L		08/30/16 16:43	09/01/16 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*97*		*57 - 132*	*08/30/16 16:43*	*09/01/16 19:54*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*08/30/16 16:43*	*09/01/16 19:54*	*1*
2-Fluorophenol	*65*		*50 - 113*	*08/30/16 16:43*	*09/01/16 19:54*	*1*
Nitrobenzene-d5	*86*		*59 - 120*	*08/30/16 16:43*	*09/01/16 19:54*	*1*
Phenol-d5	*74*		*52 - 120*	*08/30/16 16:43*	*09/01/16 19:54*	*1*
Terphenyl-d14	*88*		*72 - 140*	*08/30/16 16:43*	*09/01/16 19:54*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-1A-082516
Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2
Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 15:56	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.036	0.0071	ug/L		08/31/16 10:32	08/31/16 21:44	1
4,4'-DDE	ND		0.024	0.0036	ug/L		08/31/16 10:32	08/31/16 21:44	1
4,4'-DDT	ND		0.036	0.0060	ug/L		08/31/16 10:32	08/31/16 21:44	1
Aldrin	ND		0.036	0.0083	ug/L		08/31/16 10:32	08/31/16 21:44	1
alpha-BHC	ND		0.036	0.0083	ug/L		08/31/16 10:32	08/31/16 21:44	1
alpha-Chlordane	ND		0.024	0.0036	ug/L		08/31/16 10:32	08/31/16 21:44	1
beta-BHC	ND		0.060	0.014	ug/L		08/31/16 10:32	08/31/16 21:44	1
delta-BHC	ND		0.060	0.012	ug/L		08/31/16 10:32	08/31/16 21:44	1
Dieldrin	ND		0.036	0.0060	ug/L		08/31/16 10:32	08/31/16 21:44	1
Endosulfan I	ND		0.024	0.0036	ug/L		08/31/16 10:32	08/31/16 21:44	1
Endosulfan II	ND		0.024	0.0024	ug/L		08/31/16 10:32	08/31/16 21:44	1
Endosulfan sulfate	ND		0.024	0.0024	ug/L		08/31/16 10:32	08/31/16 21:44	1
Endrin	ND		0.024	0.0036	ug/L		08/31/16 10:32	08/31/16 21:44	1
Endrin aldehyde	ND		0.24	0.040	ug/L		08/31/16 10:32	08/31/16 21:44	1
Endrin ketone	ND		0.024	0.0024	ug/L		08/31/16 10:32	08/31/16 21:44	1
gamma-BHC (Lindane)	ND		0.036	0.0060	ug/L		08/31/16 10:32	08/31/16 21:44	1
gamma-Chlordane	ND		0.024	0.0036	ug/L		08/31/16 10:32	08/31/16 21:44	1
Heptachlor	ND		0.024	0.0048	ug/L		08/31/16 10:32	08/31/16 21:44	1
Heptachlor epoxide	ND		0.024	0.0036	ug/L		08/31/16 10:32	08/31/16 21:44	1
Methoxychlor	ND		0.12	0.0024	ug/L		08/31/16 10:32	08/31/16 21:44	1
Toxaphene	ND		1.2	0.26	ug/L		08/31/16 10:32	08/31/16 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*51*		*22 - 150*	*08/31/16 10:32*	*08/31/16 21:44*	*1*
Tetrachloro-m-xylene	*69*		*40 - 113*	*08/31/16 10:32*	*08/31/16 21:44*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:12	1
PCB-1221	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:12	1
PCB-1232	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:12	1
PCB-1242	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:12	1
PCB-1248	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:12	1
PCB-1254	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:12	1
PCB-1260	ND		0.12	0.050	ug/L		08/30/16 13:27	08/31/16 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*20 - 120*	*08/30/16 13:27*	*08/31/16 00:12*	*1*
DCB Decachlorobiphenyl (Surr)	*90*		*36 - 138*	*08/30/16 13:27*	*08/31/16 00:12*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/31/16 07:59	09/22/16 09:34	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/31/16 07:59	09/22/16 09:34	1
Bolstar	ND		1.0	0.31	ug/L		08/31/16 07:59	09/22/16 09:34	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/31/16 07:59	09/22/16 09:34	1
Coumaphos	ND		1.0	0.13	ug/L		08/31/16 07:59	09/22/16 09:34	1

Client Sample ID: MW-1A-082516
Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Demeton, Total	ND		3.0	0.21	ug/L		08/31/16 07:59	09/22/16 09:34	1
Diazinon	ND		0.50	0.15	ug/L		08/31/16 07:59	09/22/16 09:34	1
Dichlorvos	ND		0.50	0.16	ug/L		08/31/16 07:59	09/22/16 09:34	1
Dimethoate	ND		1.5	0.45	ug/L		08/31/16 07:59	09/22/16 09:34	1
Disulfoton	ND		1.0	0.32	ug/L		08/31/16 07:59	09/22/16 09:34	1
EPN	ND		1.2	0.15	ug/L		08/31/16 07:59	09/22/16 09:34	1
Famphur	ND		1.0	0.18	ug/L		08/31/16 07:59	09/22/16 09:34	1
Fensulfothion	ND		2.5	0.54	ug/L		08/31/16 07:59	09/22/16 09:34	1
Fenthion	ND		2.5	0.15	ug/L		08/31/16 07:59	09/22/16 09:34	1
Malathion	ND		2.0	0.13	ug/L		08/31/16 07:59	09/22/16 09:34	1
Merphos	ND		5.0	0.17	ug/L		08/31/16 07:59	09/22/16 09:34	1
Methyl parathion	ND		4.0	0.14	ug/L		08/31/16 07:59	09/22/16 09:34	1
Mevinphos	ND		6.2	0.46	ug/L		08/31/16 07:59	09/22/16 09:34	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/31/16 07:59	09/22/16 09:34	1
Phorate	ND		1.2	0.15	ug/L		08/31/16 07:59	09/22/16 09:34	1
Ronnel	ND		10	0.12	ug/L		08/31/16 07:59	09/22/16 09:34	1
Simazine	ND		10	0.22	ug/L		08/31/16 07:59	09/22/16 09:34	1
Sulfotepp	ND		1.5	0.17	ug/L		08/31/16 07:59	09/22/16 09:34	1
Thionazin	ND		1.0	0.31	ug/L		08/31/16 07:59	09/22/16 09:34	1
Tokuthion	ND		1.6	0.12	ug/L		08/31/16 07:59	09/22/16 09:34	1
Trichloronate	ND		1.5	0.24	ug/L		08/31/16 07:59	09/22/16 09:34	1
Ethoprop	ND		1.5	0.18	ug/L		08/31/16 07:59	09/22/16 09:34	1
Propazine	ND		10	0.29	ug/L		08/31/16 07:59	09/22/16 09:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*70*		*49 - 171*	*08/31/16 07:59*	*09/22/16 09:34*	*1*
Triphenylphosphate	*90*		*60 - 154*	*08/31/16 07:59*	*09/22/16 09:34*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.1	0.20	ug/L		08/31/16 08:09	09/09/16 15:13	1
2,4-D	ND		4.2	0.22	ug/L		08/31/16 08:09	09/09/16 15:13	1
2,4-DB	ND		4.2	0.38	ug/L		08/31/16 08:09	09/09/16 15:13	1
Dalapon	ND		2.1	0.96	ug/L		08/31/16 08:09	09/09/16 15:13	1
Dicamba	ND		2.1	0.16	ug/L		08/31/16 08:09	09/09/16 15:13	1
Dichlorprop	ND		4.2	0.69	ug/L		08/31/16 08:09	09/09/16 15:13	1
MCPA	ND		420	18	ug/L		08/31/16 08:09	09/09/16 15:13	1
MCPP	ND		420	35	ug/L		08/31/16 08:09	09/09/16 15:13	1
Silvex (2,4,5-TP)	ND		1.1	0.18	ug/L		08/31/16 08:09	09/09/16 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*77*		*39 - 135*	*08/31/16 08:09*	*09/09/16 15:13*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.066**	**J**	0.13	0.044	mg/L		08/26/16 10:57	08/26/16 17:45	1
Residual Range Organics (RRO) (C25-C36)	ND		0.22	0.066	mg/L		08/26/16 10:57	08/26/16 17:45	1

Client Sample ID: MW-1A-082516

Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*87*		*50 - 150*	*08/26/16 10:57*	*08/26/16 17:45*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*08/26/16 10:57*	*08/26/16 17:45*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**270**		8.0	4.2	mg/L			08/29/16 13:48	10
Nitrate as N	**59**	**E**	0.20	0.039	mg/L			08/26/16 14:14	1
Nitrate as N	**80**	**H**	2.0	0.39	mg/L			08/29/16 13:48	10
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 14:14	1
Nitrite as N	ND	H	2.0	0.69	mg/L			08/29/16 13:48	10
Sulfate	**150**		5.0	1.3	mg/L			08/29/16 13:48	10

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0046**		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:27	1
Antimony	**0.00032**	**J**	0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:27	1
Barium	**0.47**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:27	1
Beryllium	**0.00044**		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:27	1
Cadmium	**0.017**		0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:27	1
Chromium	**0.0012**		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:27	1
Copper	**0.12**		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:27	1
Iron	**2.3**		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:27	1
Lead	**0.097**		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:27	1
Manganese	**0.043**		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:27	1
Nickel	**0.017**		0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:27	1
Selenium	**0.00053**	**J**	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:27	1
Silver	**0.000057**	**J**	0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:27	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:27	1
Vanadium	**0.015**		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:27	1
Zinc	**4.5**		0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:27	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0042**		0.0010	0.00027	mg/L		09/01/16 10:54	09/02/16 13:05	1
Antimony	**0.00022**	**J**	0.00040	0.000080	mg/L		09/01/16 10:54	09/02/16 13:05	1
Barium	**0.54**		0.0012	0.000054	mg/L		09/01/16 10:54	09/02/16 13:05	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 10:54	09/02/16 13:05	1
Cadmium	**0.00097**		0.00040	0.000028	mg/L		09/01/16 10:54	09/02/16 13:05	1
Chromium	**0.0010**		0.00040	0.00014	mg/L		09/01/16 10:54	09/02/16 13:05	1
Copper	**0.039**		0.0020	0.00060	mg/L		09/01/16 10:54	09/02/16 13:05	1
Iron	ND		0.040	0.0058	mg/L		09/01/16 10:54	09/02/16 13:05	1
Lead	**0.0045**		0.00040	0.000034	mg/L		09/01/16 10:54	09/02/16 13:05	1
Manganese	**0.031**		0.0020	0.00035	mg/L		09/01/16 10:54	09/02/16 13:05	1
Nickel	**0.016**		0.0030	0.00040	mg/L		09/01/16 10:54	09/02/16 13:05	1
Selenium	**0.00031**	**J**	0.0010	0.00030	mg/L		09/01/16 10:54	09/02/16 13:05	1
Silver	ND		0.00040	0.000030	mg/L		09/01/16 10:54	09/02/16 13:05	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 10:54	09/02/16 13:05	1
Vanadium	**0.0085**		0.0040	0.00098	mg/L		09/01/16 10:54	09/02/16 13:05	1
Zinc	**1.9**		0.0070	0.0019	mg/L		09/01/16 10:54	09/02/16 13:05	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-1A-082516

Lab Sample ID: 590-4322-2

Date Collected: 08/25/16 12:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:41	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 10:31	09/01/16 13:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:41	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:12	08/30/16 09:26	1
Chemical Oxygen Demand	**15**	**J**	20	4.0	mg/L			08/29/16 14:33	1
Total Organic Carbon	**6.8**		1.0	0.50	mg/L			09/06/16 15:53	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/25/16 16:40	1
Escherichia coli	**0.00**				MPN/100mL			08/25/16 16:40	1

Client Sample ID: MW-7B-082516

Lab Sample ID: 590-4322-3

Date Collected: 08/25/16 14:55

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/27/16 03:05	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/27/16 03:05	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/27/16 03:05	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/27/16 03:05	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/27/16 03:05	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/27/16 03:05	1
1,1-Dichloroethene	ND	F1	1.0	0.50	ug/L			08/27/16 03:05	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/27/16 03:05	1
1,2,3-Trichlorobenzene	ND	F1	1.0	0.16	ug/L			08/27/16 03:05	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/27/16 03:05	1
1,2,4-Trichlorobenzene	ND	F1	1.0	0.16	ug/L			08/27/16 03:05	1
1,2,4-Trimethylbenzene	ND	F1	1.0	0.13	ug/L			08/27/16 03:05	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/27/16 03:05	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/27/16 03:05	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/27/16 03:05	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/27/16 03:05	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/27/16 03:05	1
1,3,5-Trimethylbenzene	ND	F1	1.0	0.074	ug/L			08/27/16 03:05	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/27/16 03:05	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/27/16 03:05	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/27/16 03:05	1
2,2-Dichloropropane	ND	F1	2.0	0.66	ug/L			08/27/16 03:05	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/27/16 03:05	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/27/16 03:05	1
2-Hexanone	ND		10	0.75	ug/L			08/27/16 03:05	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/27/16 03:05	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-7B-082516
Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/27/16 03:05	1
Acetone	ND	*	25	4.1	ug/L			08/27/16 03:05	1
Benzene	ND		0.20	0.093	ug/L			08/27/16 03:05	1
Bromobenzene	ND		1.0	0.28	ug/L			08/27/16 03:05	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/27/16 03:05	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/27/16 03:05	1
Bromoform	ND	F1	2.0	0.80	ug/L			08/27/16 03:05	1
Bromomethane	ND	F1	5.0	0.22	ug/L			08/27/16 03:05	1
Carbon disulfide	ND	F1	1.0	0.052	ug/L			08/27/16 03:05	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/27/16 03:05	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/27/16 03:05	1
Chloroethane	ND		2.0	1.1	ug/L			08/27/16 03:05	1
Chloroform	ND		1.0	0.41	ug/L			08/27/16 03:05	1
Chloromethane	ND		3.0	0.22	ug/L			08/27/16 03:05	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/27/16 03:05	1
cis-1,3-Dichloropropene	ND	F1	1.0	0.098	ug/L			08/27/16 03:05	1
Dibromochloromethane	ND	F1	1.0	0.35	ug/L			08/27/16 03:05	1
Dibromomethane	ND	F1	1.0	0.50	ug/L			08/27/16 03:05	1
Dichlorodifluoromethane	ND	F1	2.0	0.90	ug/L			08/27/16 03:05	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/27/16 03:05	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/27/16 03:05	1
Hexachlorobutadiene	ND	F1	2.0	0.62	ug/L			08/27/16 03:05	1
Hexane	ND	F1	1.0	0.084	ug/L			08/27/16 03:05	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/27/16 03:05	1
m,p-Xylene	ND	F1	2.0	0.28	ug/L			08/27/16 03:05	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/27/16 03:05	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/27/16 03:05	1
Naphthalene	ND	F1	2.0	0.63	ug/L			08/27/16 03:05	1
n-Butylbenzene	ND	F1	1.0	0.20	ug/L			08/27/16 03:05	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/27/16 03:05	1
o-Xylene	ND	F1	1.0	0.16	ug/L			08/27/16 03:05	1
p-Isopropyltoluene	ND	F1	1.0	0.070	ug/L			08/27/16 03:05	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/27/16 03:05	1
Styrene	ND	F1	1.0	0.10	ug/L			08/27/16 03:05	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/27/16 03:05	1
Tetrachloroethene	ND	F1	1.0	0.45	ug/L			08/27/16 03:05	1
Toluene	ND		1.0	0.31	ug/L			08/27/16 03:05	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/27/16 03:05	1
trans-1,3-Dichloropropene	ND	F1	1.0	0.45	ug/L			08/27/16 03:05	1
Trichloroethene	ND	F1	1.0	0.44	ug/L			08/27/16 03:05	1
Trichlorofluoromethane	ND	F1	1.0	0.20	ug/L			08/27/16 03:05	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/27/16 03:05	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/27/16 03:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*		*08/27/16 03:05*	*1*
4-Bromofluorobenzene (Surr)	*93*		*69 - 120*		*08/27/16 03:05*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/27/16 03:05*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/27/16 03:05*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-7B-082516
Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3
Matrix: Water

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/27/16 03:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*68.7 - 141*		*08/27/16 03:05*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
1,2-Dichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
1,3-Dichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
1,4-Dichlorobenzene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2,6-Dinitrotoluene	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
2-Chlorophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
2-Methylphenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2-Nitroaniline	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
2-Nitrophenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
3-Nitroaniline	ND		0.38	0.11	ug/L		08/30/16 16:43	09/01/16 20:20	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.95	ug/L		08/30/16 16:43	09/01/16 20:20	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
4-Nitroaniline	ND		0.57	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
4-Nitrophenol	ND		2.8	0.95	ug/L		08/30/16 16:43	09/01/16 20:20	1
Acenaphthene	ND		0.095	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Acenaphthylene	ND		0.076	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Anthracene	ND		0.038	0.0095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzoic acid	ND		2.8	0.57	ug/L		08/30/16 16:43	09/01/16 20:20	1
Benzyl alcohol	**0.60**	*** B**	0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Bis(2-ethylhexyl) phthalate	**1.4**	**J ***	2.8	1.1	ug/L		08/30/16 16:43	09/01/16 20:20	1
Butyl benzyl phthalate	**0.54**	**J * B**	0.57	0.19	ug/L		08/30/16 16:43	09/01/16 20:20	1

Client Sample ID: MW-7B-082516
Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Chrysene	ND		0.038	0.012	ug/L		08/30/16 16:43	09/01/16 20:20	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Dibenzofuran	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Diethyl phthalate	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Di-n-butyl phthalate	**0.21**	**J B**	0.38	0.12	ug/L		08/30/16 16:43	09/01/16 20:20	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/30/16 16:43	09/01/16 20:20	1
Fluoranthene	ND		0.047	0.012	ug/L		08/30/16 16:43	09/01/16 20:20	1
Fluorene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Hexachlorobutadiene	ND	*	0.57	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Hexachlorocyclopentadiene	ND	*	1.9	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Hexachloroethane	ND	*	0.57	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Isophorone	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Naphthalene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Nitrobenzene	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Pentachlorophenol	ND		0.66	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Phenanthrene	ND		0.076	0.019	ug/L		08/30/16 16:43	09/01/16 20:20	1
Phenol	ND		0.57	0.095	ug/L		08/30/16 16:43	09/01/16 20:20	1
Pyrene	ND		0.057	0.012	ug/L		08/30/16 16:43	09/01/16 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*94*		*57 - 132*	*08/30/16 16:43*	*09/01/16 20:20*	*1*
2-Fluorobiphenyl	*70*		*50 - 120*	*08/30/16 16:43*	*09/01/16 20:20*	*1*
2-Fluorophenol	*66*		*50 - 113*	*08/30/16 16:43*	*09/01/16 20:20*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*08/30/16 16:43*	*09/01/16 20:20*	*1*
Phenol-d5	*71*		*52 - 120*	*08/30/16 16:43*	*09/01/16 20:20*	*1*
Terphenyl-d14	*92*		*72 - 140*	*08/30/16 16:43*	*09/01/16 20:20*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 16:11	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.033	0.0067	ug/L		08/31/16 10:32	08/31/16 22:00	1
4,4'-DDE	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:00	1
4,4'-DDT	ND		0.033	0.0056	ug/L		08/31/16 10:32	08/31/16 22:00	1
Aldrin	ND		0.033	0.0078	ug/L		08/31/16 10:32	08/31/16 22:00	1
alpha-BHC	ND		0.033	0.0078	ug/L		08/31/16 10:32	08/31/16 22:00	1
alpha-Chlordane	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:00	1
beta-BHC	ND		0.056	0.013	ug/L		08/31/16 10:32	08/31/16 22:00	1
delta-BHC	ND		0.056	0.011	ug/L		08/31/16 10:32	08/31/16 22:00	1
Dieldrin	ND		0.033	0.0056	ug/L		08/31/16 10:32	08/31/16 22:00	1
Endosulfan I	**0.013**	**J**	0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:00	1
Endosulfan II	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:00	1

Client Sample ID: MW-7B-082516
Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan sulfate	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:00	1
Endrin	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:00	1
Endrin aldehyde	ND		0.22	0.038	ug/L		08/31/16 10:32	08/31/16 22:00	1
Endrin ketone	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:00	1
gamma-BHC (Lindane)	ND		0.033	0.0056	ug/L		08/31/16 10:32	08/31/16 22:00	1
gamma-Chlordane	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:00	1
Heptachlor	ND		0.022	0.0045	ug/L		08/31/16 10:32	08/31/16 22:00	1
Heptachlor epoxide	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:00	1
Methoxychlor	ND		0.11	0.0022	ug/L		08/31/16 10:32	08/31/16 22:00	1
Toxaphene	ND		1.1	0.25	ug/L		08/31/16 10:32	08/31/16 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*60*		*22 - 150*	*08/31/16 10:32*	*08/31/16 22:00*	*1*
Tetrachloro-m-xylene	*74*		*40 - 113*	*08/31/16 10:32*	*08/31/16 22:00*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 00:32	1
PCB-1221	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 00:32	1
PCB-1232	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 00:32	1
PCB-1242	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 00:32	1
PCB-1248	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 00:32	1
PCB-1254	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 00:32	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/31/16 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*20 - 120*	*08/30/16 13:27*	*08/31/16 00:32*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*36 - 138*	*08/30/16 13:27*	*08/31/16 00:32*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		08/29/16 13:00	09/25/16 23:00	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 23:00	1
Bolstar	ND		0.96	0.30	ug/L		08/29/16 13:00	09/25/16 23:00	1
Chlorpyrifos	ND		1.4	0.35	ug/L		08/29/16 13:00	09/25/16 23:00	1
Coumaphos	ND		0.96	0.13	ug/L		08/29/16 13:00	09/25/16 23:00	1
Demeton, Total	ND		2.9	0.20	ug/L		08/29/16 13:00	09/25/16 23:00	1
Diazinon	ND		0.48	0.14	ug/L		08/29/16 13:00	09/25/16 23:00	1
Dichlorvos	ND		0.48	0.16	ug/L		08/29/16 13:00	09/25/16 23:00	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 23:00	1
Disulfoton	ND		0.96	0.31	ug/L		08/29/16 13:00	09/25/16 23:00	1
EPN	ND		1.2	0.14	ug/L		08/29/16 13:00	09/25/16 23:00	1
Famphur	ND		0.96	0.17	ug/L		08/29/16 13:00	09/25/16 23:00	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 23:00	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 23:00	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 23:00	1
Merphos	ND		4.8	0.17	ug/L		08/29/16 13:00	09/25/16 23:00	1
Methyl parathion	ND		3.9	0.14	ug/L		08/29/16 13:00	09/25/16 23:00	1
Mevinphos	ND		6.0	0.44	ug/L		08/29/16 13:00	09/25/16 23:00	1
Ethyl Parathion	ND		0.96	0.14	ug/L		08/29/16 13:00	09/25/16 23:00	1

Client Sample ID: MW-7B-082516
Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phorate	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 23:00	1
Ronnel	ND		9.6	0.11	ug/L		08/29/16 13:00	09/25/16 23:00	1
Simazine	ND		9.6	0.21	ug/L		08/29/16 13:00	09/25/16 23:00	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 23:00	1
Thionazin	ND		0.96	0.30	ug/L		08/29/16 13:00	09/25/16 23:00	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 23:00	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 23:00	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 23:00	1
Propazine	ND		9.6	0.28	ug/L		08/29/16 13:00	09/25/16 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*08/29/16 13:00*	*09/25/16 23:00*	*1*
Triphenylphosphate	*99*		*60 - 154*	*08/29/16 13:00*	*09/25/16 23:00*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		08/30/16 09:02	09/06/16 16:06	1
2,4-D	ND		3.9	0.20	ug/L		08/30/16 09:02	09/06/16 16:06	1
2,4-DB	ND		3.9	0.35	ug/L		08/30/16 09:02	09/06/16 16:06	1
Dalapon	ND		1.9	0.88	ug/L		08/30/16 09:02	09/06/16 16:06	1
Dicamba	ND		1.9	0.14	ug/L		08/30/16 09:02	09/06/16 16:06	1
Dichlorprop	ND		3.9	0.63	ug/L		08/30/16 09:02	09/06/16 16:06	1
MCPA	ND		390	16	ug/L		08/30/16 09:02	09/06/16 16:06	1
MCPP	ND		390	32	ug/L		08/30/16 09:02	09/06/16 16:06	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		08/30/16 09:02	09/06/16 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*83*		*39 - 135*	*08/30/16 09:02*	*09/06/16 16:06*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 18:03	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*08/26/16 10:57*	*08/26/16 18:03*	*1*
n-Triacontane-d62	*80*		*50 - 150*	*08/26/16 10:57*	*08/26/16 18:03*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.4**		0.80	0.42	mg/L			08/26/16 14:26	1
Nitrate as N	**0.38**		0.20	0.039	mg/L			08/26/16 14:26	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 14:26	1
Sulfate	**4.5**		0.50	0.13	mg/L			08/26/16 14:26	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00065**	**J**	0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 20:32	1
Antimony	**0.0010**		0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 20:32	1
Barium	**0.065**		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 20:32	1

Client Sample ID: MW-7B-082516

Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 20:32	1
Cadmium	**0.00018**	**J**	0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 20:32	1
Chromium	**0.0021**		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 20:32	1
Copper	**0.015**		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 20:32	1
Iron	**1.1**		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 20:32	1
Lead	**0.0049**		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 20:32	1
Manganese	**0.0099**		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 20:32	1
Nickel	**0.0040**		0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 20:32	1
Selenium	**0.00059**	**J**	0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 20:32	1
Silver	**0.00030**	**J**	0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 20:32	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 20:32	1
Vanadium	**0.0032**	**J**	0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 20:32	1
Zinc	**0.18**		0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 20:32	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0040**		0.0010	0.00027	mg/L		09/01/16 10:54	09/02/16 12:57	1
Antimony	**0.00022**	**J**	0.00040	0.000080	mg/L		09/01/16 10:54	09/02/16 12:57	1
Barium	**0.55**		0.0012	0.000054	mg/L		09/01/16 10:54	09/02/16 12:57	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 10:54	09/02/16 12:57	1
Cadmium	**0.00091**		0.00040	0.000028	mg/L		09/01/16 10:54	09/02/16 12:57	1
Chromium	**0.0010**		0.00040	0.00014	mg/L		09/01/16 10:54	09/02/16 12:57	1
Copper	**0.033**		0.0020	0.00060	mg/L		09/01/16 10:54	09/02/16 12:57	1
Iron	**0.0079**	**J**	0.040	0.0058	mg/L		09/01/16 10:54	09/02/16 12:57	1
Lead	**0.0039**		0.00040	0.000034	mg/L		09/01/16 10:54	09/02/16 12:57	1
Manganese	**0.030**		0.0020	0.00035	mg/L		09/01/16 10:54	09/02/16 12:57	1
Nickel	**0.015**		0.0030	0.00040	mg/L		09/01/16 10:54	09/02/16 12:57	1
Selenium	**0.00032**	**J**	0.0010	0.00030	mg/L		09/01/16 10:54	09/02/16 12:57	1
Silver	ND		0.00040	0.000030	mg/L		09/01/16 10:54	09/02/16 12:57	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 10:54	09/02/16 12:57	1
Vanadium	**0.0079**		0.0040	0.00098	mg/L		09/01/16 10:54	09/02/16 12:57	1
Zinc	**1.5**		0.0070	0.0019	mg/L		09/01/16 10:54	09/02/16 12:57	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:43	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 10:31	09/01/16 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:42	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:52	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:33	1
Total Organic Carbon	ND		1.0	0.50	mg/L			09/06/16 15:53	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**12**				MPN/100mL			08/25/16 16:40	1

Client Sample ID: MW-7B-082516

Lab Sample ID: 590-4322-3

Date Collected: 08/25/16 14:55

Matrix: Water

Date Received: 08/25/16 16:30

Method: SM 9223B - Coliforms, Total, and E.Coli (Continued)

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Escherichia coli	0.00				MPN/100mL			08/25/16 16:40	1

Client Sample ID: DUP-082516

Lab Sample ID: 590-4322-4

Date Collected: 08/25/16 08:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/27/16 03:49	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/27/16 03:49	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/27/16 03:49	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/27/16 03:49	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/27/16 03:49	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/27/16 03:49	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/27/16 03:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/27/16 03:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/27/16 03:49	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/27/16 03:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/27/16 03:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/27/16 03:49	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/27/16 03:49	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/27/16 03:49	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/27/16 03:49	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/27/16 03:49	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/27/16 03:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/27/16 03:49	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/27/16 03:49	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/27/16 03:49	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/27/16 03:49	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/27/16 03:49	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/27/16 03:49	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/27/16 03:49	1
2-Hexanone	ND		10	0.75	ug/L			08/27/16 03:49	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/27/16 03:49	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/27/16 03:49	1
Acetone	ND	*	25	4.1	ug/L			08/27/16 03:49	1
Benzene	ND		0.20	0.093	ug/L			08/27/16 03:49	1
Bromobenzene	ND		1.0	0.28	ug/L			08/27/16 03:49	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/27/16 03:49	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/27/16 03:49	1
Bromoform	ND		2.0	0.80	ug/L			08/27/16 03:49	1
Bromomethane	ND		5.0	0.22	ug/L			08/27/16 03:49	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/27/16 03:49	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/27/16 03:49	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/27/16 03:49	1
Chloroethane	ND		2.0	1.1	ug/L			08/27/16 03:49	1
Chloroform	ND		1.0	0.41	ug/L			08/27/16 03:49	1
Chloromethane	ND		3.0	0.22	ug/L			08/27/16 03:49	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/27/16 03:49	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/27/16 03:49	1

Client Sample ID: DUP-082516
Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.0	0.35	ug/L			08/27/16 03:49	1
Dibromomethane	ND		1.0	0.50	ug/L			08/27/16 03:49	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/27/16 03:49	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/27/16 03:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/27/16 03:49	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/27/16 03:49	1
Hexane	ND		1.0	0.084	ug/L			08/27/16 03:49	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/27/16 03:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/27/16 03:49	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/27/16 03:49	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/27/16 03:49	1
Naphthalene	ND		2.0	0.63	ug/L			08/27/16 03:49	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/27/16 03:49	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/27/16 03:49	1
o-Xylene	ND		1.0	0.16	ug/L			08/27/16 03:49	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/27/16 03:49	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/27/16 03:49	1
Styrene	ND		1.0	0.10	ug/L			08/27/16 03:49	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/27/16 03:49	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/27/16 03:49	1
Toluene	ND		1.0	0.31	ug/L			08/27/16 03:49	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/27/16 03:49	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/27/16 03:49	1
Trichloroethene	ND		1.0	0.44	ug/L			08/27/16 03:49	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/27/16 03:49	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/27/16 03:49	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/27/16 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*08/27/16 03:49*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*08/27/16 03:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/27/16 03:49*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/27/16 03:49*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/27/16 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*08/27/16 03:49*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
1,2-Dichlorobenzene	ND	*	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
1,3-Dichlorobenzene	ND	*	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
1,4-Dichlorobenzene	ND	*	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		08/30/16 16:43	09/01/16 20:45	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: DUP-082516
Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		08/30/16 16:43	09/01/16 20:45	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		08/30/16 16:43	09/01/16 20:45	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2,6-Dinitrotoluene	**0.27**	**J ***	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
2-Chlorophenol	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
2-Methylphenol	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2-Nitroaniline	ND	*	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
2-Nitrophenol	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
3-Nitroaniline	ND		0.38	0.12	ug/L		08/30/16 16:43	09/01/16 20:45	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.96	ug/L		08/30/16 16:43	09/01/16 20:45	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
4-Nitroaniline	ND		0.58	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
4-Nitrophenol	ND		2.9	0.96	ug/L		08/30/16 16:43	09/01/16 20:45	1
Acenaphthene	ND		0.096	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Acenaphthylene	ND		0.077	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Anthracene	ND		0.038	0.0096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzoic acid	**0.62**	**J**	2.9	0.58	ug/L		08/30/16 16:43	09/01/16 20:45	1
Benzyl alcohol	**0.13**	**J * B**	0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Bis(2-ethylhexyl) phthalate	**2.7**	**J ***	2.9	1.1	ug/L		08/30/16 16:43	09/01/16 20:45	1
Butyl benzyl phthalate	ND	*	0.58	0.19	ug/L		08/30/16 16:43	09/01/16 20:45	1
Carbazole	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Chrysene	ND		0.038	0.012	ug/L		08/30/16 16:43	09/01/16 20:45	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Dibenzofuran	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Diethyl phthalate	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Di-n-butyl phthalate	**0.17**	**J B**	0.38	0.12	ug/L		08/30/16 16:43	09/01/16 20:45	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		08/30/16 16:43	09/01/16 20:45	1
Fluoranthene	ND		0.048	0.012	ug/L		08/30/16 16:43	09/01/16 20:45	1
Fluorene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Hexachlorobutadiene	ND	*	0.58	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Hexachlorocyclopentadiene	ND	*	1.9	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1

Client Sample ID: DUP-082516
Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	ND	*	0.58	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Isophorone	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Naphthalene	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Nitrobenzene	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Pentachlorophenol	ND		0.67	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Phenanthrene	ND		0.077	0.019	ug/L		08/30/16 16:43	09/01/16 20:45	1
Phenol	ND		0.58	0.096	ug/L		08/30/16 16:43	09/01/16 20:45	1
Pyrene	ND		0.058	0.012	ug/L		08/30/16 16:43	09/01/16 20:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*94*		*57 - 132*	*08/30/16 16:43*	*09/01/16 20:45*	*1*
2-Fluorobiphenyl	*75*		*50 - 120*	*08/30/16 16:43*	*09/01/16 20:45*	*1*
2-Fluorophenol	*72*		*50 - 113*	*08/30/16 16:43*	*09/01/16 20:45*	*1*
Nitrobenzene-d5	*84*		*59 - 120*	*08/30/16 16:43*	*09/01/16 20:45*	*1*
Phenol-d5	*78*		*52 - 120*	*08/30/16 16:43*	*09/01/16 20:45*	*1*
Terphenyl-d14	*95*		*72 - 140*	*08/30/16 16:43*	*09/01/16 20:45*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 16:27	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.033	0.0066	ug/L		08/31/16 10:32	08/31/16 22:17	1
4,4'-DDE	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:17	1
4,4'-DDT	ND		0.033	0.0055	ug/L		08/31/16 10:32	08/31/16 22:17	1
Aldrin	ND		0.033	0.0077	ug/L		08/31/16 10:32	08/31/16 22:17	1
alpha-BHC	ND		0.033	0.0077	ug/L		08/31/16 10:32	08/31/16 22:17	1
alpha-Chlordane	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:17	1
beta-BHC	ND		0.055	0.013	ug/L		08/31/16 10:32	08/31/16 22:17	1
delta-BHC	ND		0.055	0.011	ug/L		08/31/16 10:32	08/31/16 22:17	1
Dieldrin	ND		0.033	0.0055	ug/L		08/31/16 10:32	08/31/16 22:17	1
Endosulfan I	**0.016**	**J**	0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:17	1
Endosulfan II	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:17	1
Endosulfan sulfate	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:17	1
Endrin	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:17	1
Endrin aldehyde	ND		0.22	0.037	ug/L		08/31/16 10:32	08/31/16 22:17	1
Endrin ketone	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:17	1
gamma-BHC (Lindane)	ND		0.033	0.0055	ug/L		08/31/16 10:32	08/31/16 22:17	1
gamma-Chlordane	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:17	1
Heptachlor	ND		0.022	0.0044	ug/L		08/31/16 10:32	08/31/16 22:17	1
Heptachlor epoxide	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:17	1
Methoxychlor	ND		0.11	0.0022	ug/L		08/31/16 10:32	08/31/16 22:17	1
Toxaphene	ND		1.1	0.24	ug/L		08/31/16 10:32	08/31/16 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*71*		*22 - 150*	*08/31/16 10:32*	*08/31/16 22:17*	*1*

Client Sample ID: DUP-082516
Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*77*		*40 - 113*	*08/31/16 10:32*	*08/31/16 22:17*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:51	1
PCB-1221	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:51	1
PCB-1232	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:51	1
PCB-1242	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:51	1
PCB-1248	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:51	1
PCB-1254	ND		0.12	0.072	ug/L		08/30/16 13:27	08/31/16 00:51	1
PCB-1260	ND		0.12	0.050	ug/L		08/30/16 13:27	08/31/16 00:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*78*		*20 - 120*	*08/30/16 13:27*	*08/31/16 00:51*	*1*
DCB Decachlorobiphenyl (Surr)	*107*		*36 - 138*	*08/30/16 13:27*	*08/31/16 00:51*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 23:31	1
Azinphos-methyl	ND		2.4	0.16	ug/L		08/29/16 13:00	09/25/16 23:31	1
Bolstar	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 23:31	1
Chlorpyrifos	ND		1.4	0.34	ug/L		08/29/16 13:00	09/25/16 23:31	1
Coumaphos	ND		0.95	0.13	ug/L		08/29/16 13:00	09/25/16 23:31	1
Demeton, Total	ND		2.8	0.20	ug/L		08/29/16 13:00	09/25/16 23:31	1
Diazinon	ND		0.47	0.14	ug/L		08/29/16 13:00	09/25/16 23:31	1
Dichlorvos	ND		0.47	0.15	ug/L		08/29/16 13:00	09/25/16 23:31	1
Dimethoate	ND		1.4	0.43	ug/L		08/29/16 13:00	09/25/16 23:31	1
Disulfoton	ND		0.95	0.31	ug/L		08/29/16 13:00	09/25/16 23:31	1
EPN	ND		1.1	0.14	ug/L		08/29/16 13:00	09/25/16 23:31	1
Famphur	ND		0.95	0.17	ug/L		08/29/16 13:00	09/25/16 23:31	1
Fensulfothion	ND		2.4	0.52	ug/L		08/29/16 13:00	09/25/16 23:31	1
Fenthion	ND		2.4	0.15	ug/L		08/29/16 13:00	09/25/16 23:31	1
Malathion	ND		1.9	0.13	ug/L		08/29/16 13:00	09/25/16 23:31	1
Merphos	ND		4.7	0.16	ug/L		08/29/16 13:00	09/25/16 23:31	1
Methyl parathion	ND		3.8	0.13	ug/L		08/29/16 13:00	09/25/16 23:31	1
Mevinphos	ND		5.9	0.44	ug/L		08/29/16 13:00	09/25/16 23:31	1
Ethyl Parathion	ND		0.95	0.14	ug/L		08/29/16 13:00	09/25/16 23:31	1
Phorate	ND		1.1	0.15	ug/L		08/29/16 13:00	09/25/16 23:31	1
Ronnel	ND		9.5	0.11	ug/L		08/29/16 13:00	09/25/16 23:31	1
Simazine	ND		9.5	0.21	ug/L		08/29/16 13:00	09/25/16 23:31	1
Sulfotepp	ND		1.4	0.16	ug/L		08/29/16 13:00	09/25/16 23:31	1
Thionazin	ND		0.95	0.30	ug/L		08/29/16 13:00	09/25/16 23:31	1
Tokuthion	ND		1.5	0.12	ug/L		08/29/16 13:00	09/25/16 23:31	1
Trichloronate	ND		1.4	0.23	ug/L		08/29/16 13:00	09/25/16 23:31	1
Ethoprop	ND		1.4	0.17	ug/L		08/29/16 13:00	09/25/16 23:31	1
Propazine	ND		9.5	0.28	ug/L		08/29/16 13:00	09/25/16 23:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	*79*		*49 - 171*	*08/29/16 13:00*	*09/25/16 23:31*	*1*
Triphenylphosphate	*101*		*60 - 154*	*08/29/16 13:00*	*09/25/16 23:31*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		08/30/16 09:02	09/06/16 16:29	1
2,4-D	ND		3.9	0.20	ug/L		08/30/16 09:02	09/06/16 16:29	1
2,4-DB	ND		3.9	0.35	ug/L		08/30/16 09:02	09/06/16 16:29	1
Dalapon	ND		1.9	0.88	ug/L		08/30/16 09:02	09/06/16 16:29	1
Dicamba	ND		1.9	0.15	ug/L		08/30/16 09:02	09/06/16 16:29	1
Dichlorprop	ND		3.9	0.63	ug/L		08/30/16 09:02	09/06/16 16:29	1
MCPA	ND		390	16	ug/L		08/30/16 09:02	09/06/16 16:29	1
MCPP	ND		390	32	ug/L		08/30/16 09:02	09/06/16 16:29	1
Silvex (2,4,5-TP)	ND		0.97	0.16	ug/L		08/30/16 09:02	09/06/16 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*81*		*39 - 135*	*08/30/16 09:02*	*09/06/16 16:29*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 18:21	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/26/16 10:57*	*08/26/16 18:21*	*1*
n-Triacontane-d62	*89*		*50 - 150*	*08/26/16 10:57*	*08/26/16 18:21*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**0.99**		0.80	0.42	mg/L			08/26/16 15:14	1
Nitrate as N	**0.29**		0.20	0.039	mg/L			08/26/16 15:14	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 15:14	1
Sulfate	**4.1**		0.50	0.13	mg/L			08/26/16 15:14	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00089**	**J**	0.0010	0.00027	mg/L		08/30/16 13:40	08/31/16 15:04	1
Antimony	**0.0012**		0.00040	0.000080	mg/L		08/30/16 13:40	08/31/16 15:04	1
Barium	**0.082**		0.0012	0.000054	mg/L		08/30/16 13:40	08/31/16 15:04	1
Beryllium	**0.00011**	**J**	0.00040	0.00010	mg/L		08/30/16 13:40	08/31/16 15:04	1
Cadmium	**0.00026**	**J**	0.00040	0.000028	mg/L		08/30/16 13:40	08/31/16 15:04	1
Chromium	**0.0043**		0.00040	0.00014	mg/L		08/30/16 13:40	08/31/16 15:04	1
Copper	**0.067**		0.0020	0.00060	mg/L		08/30/16 13:40	08/31/16 15:04	1
Iron	**11**	**B**	0.040	0.0058	mg/L		08/30/16 13:40	08/31/16 15:04	1
Lead	**0.018**		0.00040	0.000034	mg/L		08/30/16 13:40	08/31/16 15:04	1
Manganese	**0.037**		0.0020	0.00035	mg/L		08/30/16 13:40	08/31/16 15:04	1
Nickel	**0.0068**		0.0030	0.00040	mg/L		08/30/16 13:40	08/31/16 15:04	1
Selenium	**0.00047**	**J**	0.0010	0.00030	mg/L		08/30/16 13:40	08/31/16 15:04	1
Silver	**0.0016**		0.00040	0.000030	mg/L		08/30/16 13:40	08/31/16 15:04	1
Thallium	ND		0.0010	0.00014	mg/L		08/30/16 13:40	08/31/16 15:04	1
Vanadium	**0.0052**		0.0040	0.00098	mg/L		08/30/16 13:40	08/31/16 15:04	1
Zinc	**0.31**		0.0070	0.0019	mg/L		08/30/16 13:40	08/31/16 15:04	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00089**	**J**	0.0010	0.00027	mg/L		08/31/16 09:38	09/01/16 16:41	1
Antimony	**0.00096**		0.00040	0.000080	mg/L		08/31/16 09:38	09/01/16 16:41	1
Barium	**0.059**		0.0012	0.000054	mg/L		08/31/16 09:38	09/01/16 16:41	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: DUP-082516
Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:38	09/01/16 16:41	1
Cadmium	**0.000085**	**J B**	0.00040	0.000028	mg/L		08/31/16 09:38	09/01/16 16:41	1
Chromium	**0.0018**		0.00040	0.00014	mg/L		08/31/16 09:38	09/01/16 16:41	1
Copper	**0.0025**		0.0020	0.00060	mg/L		08/31/16 09:38	09/01/16 16:41	1
Iron	**0.0058**	**J**	0.040	0.0058	mg/L		08/31/16 09:38	09/01/16 16:41	1
Lead	**0.000040**	**J**	0.00040	0.000034	mg/L		08/31/16 09:38	09/01/16 16:41	1
Manganese	**0.00068**	**J**	0.0020	0.00035	mg/L		08/31/16 09:38	09/01/16 16:41	1
Nickel	**0.0028**	**J**	0.0030	0.00040	mg/L		08/31/16 09:38	09/01/16 16:41	1
Selenium	**0.00034**	**J**	0.0010	0.00030	mg/L		08/31/16 09:38	09/01/16 16:41	1
Silver	ND		0.00040	0.000030	mg/L		08/31/16 09:38	09/01/16 16:41	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:38	09/01/16 16:41	1
Vanadium	**0.0047**		0.0040	0.00098	mg/L		08/31/16 09:38	09/01/16 16:41	1
Zinc	**0.10**		0.0070	0.0019	mg/L		08/31/16 09:38	09/01/16 16:41	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 15:46	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:51	09/01/16 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:45	1
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:53	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:33	1
Total Organic Carbon	ND		1.0	0.50	mg/L			09/06/16 15:53	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			08/25/16 16:40	1
Escherichia coli	**0.00**				MPN/100mL			08/25/16 16:40	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8293/6
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/26/16 15:29	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/26/16 15:29	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/26/16 15:29	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/26/16 15:29	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/26/16 15:29	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/26/16 15:29	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/26/16 15:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/26/16 15:29	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/26/16 15:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/26/16 15:29	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/26/16 15:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/26/16 15:29	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/26/16 15:29	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/26/16 15:29	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/26/16 15:29	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/26/16 15:29	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/26/16 15:29	1
2-Hexanone	ND		10	0.75	ug/L			08/26/16 15:29	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/26/16 15:29	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/26/16 15:29	1
Acetone	ND		25	4.1	ug/L			08/26/16 15:29	1
Benzene	ND		0.20	0.093	ug/L			08/26/16 15:29	1
Bromobenzene	ND		1.0	0.28	ug/L			08/26/16 15:29	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/26/16 15:29	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/26/16 15:29	1
Bromoform	ND		2.0	0.80	ug/L			08/26/16 15:29	1
Bromomethane	ND		5.0	0.22	ug/L			08/26/16 15:29	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/26/16 15:29	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/26/16 15:29	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/26/16 15:29	1
Chloroethane	ND		2.0	1.1	ug/L			08/26/16 15:29	1
Chloroform	ND		1.0	0.41	ug/L			08/26/16 15:29	1
Chloromethane	ND		3.0	0.22	ug/L			08/26/16 15:29	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/26/16 15:29	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/26/16 15:29	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/26/16 15:29	1
Dibromomethane	ND		1.0	0.50	ug/L			08/26/16 15:29	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/26/16 15:29	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/26/16 15:29	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/26/16 15:29	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/26/16 15:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8293/6
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			08/26/16 15:29	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/26/16 15:29	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/26/16 15:29	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/26/16 15:29	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/26/16 15:29	1
Naphthalene	ND		2.0	0.63	ug/L			08/26/16 15:29	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/26/16 15:29	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/26/16 15:29	1
o-Xylene	ND		1.0	0.16	ug/L			08/26/16 15:29	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/26/16 15:29	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/26/16 15:29	1
Styrene	ND		1.0	0.10	ug/L			08/26/16 15:29	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/26/16 15:29	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/26/16 15:29	1
Toluene	ND		1.0	0.31	ug/L			08/26/16 15:29	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/26/16 15:29	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/26/16 15:29	1
Trichloroethene	ND		1.0	0.44	ug/L			08/26/16 15:29	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/26/16 15:29	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/26/16 15:29	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/26/16 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*08/26/16 15:29*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*08/26/16 15:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/26/16 15:29*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/26/16 15:29*	*1*

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.6		ug/L		106	75 - 124
1,1,1-Trichloroethane	10.0	10.8		ug/L		108	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.8		ug/L		108	66 - 122
1,1,2-Trichloroethane	10.0	9.69		ug/L		97	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	11.4		ug/L		114	70 - 127
1,1-Dichloroethane	10.0	10.1		ug/L		101	79 - 121
1,1-Dichloroethene	10.0	10.1		ug/L		101	69 - 127
1,1-Dichloropropene	10.0	10.7		ug/L		107	76 - 125
1,2,3-Trichlorobenzene	10.0	10.9		ug/L		109	60 - 125
1,2,3-Trichloropropane	10.0	10.1		ug/L		101	60 - 124
1,2,4-Trichlorobenzene	10.0	11.4		ug/L		114	66 - 124
1,2,4-Trimethylbenzene	10.0	11.3		ug/L		113	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.7		ug/L		117	36 - 140
1,2-Dichlorobenzene	10.0	10.8		ug/L		108	78 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.1		ug/L		111	76 - 121
1,3,5-Trimethylbenzene	10.0	11.3		ug/L		113	75 - 122
1,3-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 120
1,3-Dichloropropane	10.0	9.84		ug/L		98	75 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 121
2,2-Dichloropropane	10.0	11.7		ug/L		117	49 - 147
2-Butanone (MEK)	50.0	61.5		ug/L		123	40 - 150
2-Chlorotoluene	10.0	11.2		ug/L		112	75 - 121
2-Hexanone	50.0	53.8		ug/L		108	46 - 146
4-Chlorotoluene	10.0	11.2		ug/L		112	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	48.0		ug/L		96	60 - 127
Acetone	50.0	95.8	*	ug/L		192	20 - 150
Benzene	10.0	10.5		ug/L		105	80 - 120
Bromobenzene	10.0	10.7		ug/L		107	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	10.1		ug/L		101	67 - 125
Bromoform	10.0	8.93		ug/L		89	60 - 122
Bromomethane	10.0	10.0		ug/L		100	45 - 150
Carbon disulfide	10.0	10.4		ug/L		104	67 - 129
Carbon tetrachloride	10.0	10.8		ug/L		108	68 - 134
Chlorobenzene	10.0	10.6		ug/L		106	79 - 125
Chloroethane	10.0	9.98		ug/L		100	48 - 150
Chloroform	10.0	10.2		ug/L		102	73 - 126
Chloromethane	10.0	8.69		ug/L		87	51 - 150
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	76 - 121
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	72 - 120
Dibromochloromethane	10.0	9.74		ug/L		97	72 - 120
Dibromomethane	10.0	9.51		ug/L		95	71 - 120
Dichlorodifluoromethane	10.0	7.84		ug/L		78	32 - 150
Dichlorofluoromethane	10.0	10.8		ug/L		108	60 - 140
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
Hexachlorobutadiene	10.0	11.0		ug/L		110	62 - 132
Hexane	10.0	10.8		ug/L		108	68 - 125
Isopropylbenzene	10.0	11.1		ug/L		111	77 - 123
m,p-Xylene	10.0	10.6		ug/L		106	80 - 120
Methyl tert-butyl ether	10.0	10.4		ug/L		104	71 - 128
Methylene Chloride	10.0	10.8		ug/L		108	20 - 150
Naphthalene	10.0	10.8		ug/L		108	63 - 124
n-Butylbenzene	10.0	11.5		ug/L		115	71 - 120
N-Propylbenzene	10.0	11.4		ug/L		114	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	11.4		ug/L		114	77 - 120
sec-Butylbenzene	10.0	11.4		ug/L		114	74 - 121
Styrene	10.0	10.1		ug/L		101	73 - 120
tert-Butylbenzene	10.0	11.3		ug/L		113	79 - 120
Tetrachloroethene	10.0	10.6		ug/L		106	71 - 132
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,2-Dichloroethene	10.0	9.97		ug/L		100	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8293/1003
Matrix: Water
Analysis Batch: 8293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.68		ug/L		97	70 - 121
Trichloroethene	10.0	9.92		ug/L		99	75 - 129
Trichlorofluoromethane	10.0	10.2		ug/L		102	60 - 140
Vinyl chloride	10.0	8.91		ug/L		89	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 590-8295/6
Matrix: Water
Analysis Batch: 8295

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			08/27/16 02:21	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			08/27/16 02:21	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			08/27/16 02:21	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			08/27/16 02:21	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			08/27/16 02:21	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			08/27/16 02:21	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			08/27/16 02:21	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			08/27/16 02:21	1
1,2,3-Trichlorobenzene	0.638	J	1.0	0.16	ug/L			08/27/16 02:21	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			08/27/16 02:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			08/27/16 02:21	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			08/27/16 02:21	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			08/27/16 02:21	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			08/27/16 02:21	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			08/27/16 02:21	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/27/16 02:21	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			08/27/16 02:21	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			08/27/16 02:21	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			08/27/16 02:21	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			08/27/16 02:21	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			08/27/16 02:21	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			08/27/16 02:21	1
2-Butanone (MEK)	ND		10	4.4	ug/L			08/27/16 02:21	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			08/27/16 02:21	1
2-Hexanone	ND		10	0.75	ug/L			08/27/16 02:21	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			08/27/16 02:21	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			08/27/16 02:21	1
Acetone	ND		25	4.1	ug/L			08/27/16 02:21	1
Benzene	ND		0.20	0.093	ug/L			08/27/16 02:21	1
Bromobenzene	ND		1.0	0.28	ug/L			08/27/16 02:21	1
Bromochloromethane	ND		1.0	0.44	ug/L			08/27/16 02:21	1
Bromodichloromethane	ND		1.0	0.43	ug/L			08/27/16 02:21	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8295/6
Matrix: Water
Analysis Batch: 8295

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		2.0	0.80	ug/L			08/27/16 02:21	1
Bromomethane	ND		5.0	0.22	ug/L			08/27/16 02:21	1
Carbon disulfide	ND		1.0	0.052	ug/L			08/27/16 02:21	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			08/27/16 02:21	1
Chlorobenzene	ND		1.0	0.14	ug/L			08/27/16 02:21	1
Chloroethane	ND		2.0	1.1	ug/L			08/27/16 02:21	1
Chloroform	ND		1.0	0.41	ug/L			08/27/16 02:21	1
Chloromethane	ND		3.0	0.22	ug/L			08/27/16 02:21	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			08/27/16 02:21	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			08/27/16 02:21	1
Dibromochloromethane	ND		1.0	0.35	ug/L			08/27/16 02:21	1
Dibromomethane	ND		1.0	0.50	ug/L			08/27/16 02:21	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			08/27/16 02:21	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			08/27/16 02:21	1
Ethylbenzene	ND		1.0	0.20	ug/L			08/27/16 02:21	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			08/27/16 02:21	1
Hexane	ND		1.0	0.084	ug/L			08/27/16 02:21	1
Isopropylbenzene	ND		1.0	0.063	ug/L			08/27/16 02:21	1
m,p-Xylene	ND		2.0	0.28	ug/L			08/27/16 02:21	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			08/27/16 02:21	1
Methylene Chloride	ND		5.0	3.4	ug/L			08/27/16 02:21	1
Naphthalene	ND		2.0	0.63	ug/L			08/27/16 02:21	1
n-Butylbenzene	ND		1.0	0.20	ug/L			08/27/16 02:21	1
N-Propylbenzene	ND		1.0	0.063	ug/L			08/27/16 02:21	1
o-Xylene	ND		1.0	0.16	ug/L			08/27/16 02:21	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			08/27/16 02:21	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			08/27/16 02:21	1
Styrene	ND		1.0	0.10	ug/L			08/27/16 02:21	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			08/27/16 02:21	1
Tetrachloroethene	ND		1.0	0.45	ug/L			08/27/16 02:21	1
Toluene	ND		1.0	0.31	ug/L			08/27/16 02:21	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			08/27/16 02:21	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			08/27/16 02:21	1
Trichloroethene	ND		1.0	0.44	ug/L			08/27/16 02:21	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			08/27/16 02:21	1
Vinyl chloride	ND		0.20	0.13	ug/L			08/27/16 02:21	1
Xylenes, Total	ND		3.0	0.16	ug/L			08/27/16 02:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*08/27/16 02:21*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*08/27/16 02:21*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/27/16 02:21*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/27/16 02:21*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8295/1004
Matrix: Water
Analysis Batch: 8295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.15		ug/L		91	75 - 124
1,1,1-Trichloroethane	10.0	9.38		ug/L		94	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	66 - 122
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	10.4		ug/L		104	70 - 127
1,1-Dichloroethane	10.0	9.78		ug/L		98	79 - 121
1,1-Dichloroethene	10.0	9.60		ug/L		96	69 - 127
1,1-Dichloropropene	10.0	10.2		ug/L		102	76 - 125
1,2,3-Trichlorobenzene	10.0	10.1		ug/L		101	60 - 125
1,2,3-Trichloropropane	10.0	10.9		ug/L		109	60 - 124
1,2,4-Trichlorobenzene	10.0	9.33		ug/L		93	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.41	J	ug/L		94	36 - 140
1,2-Dichlorobenzene	10.0	9.69		ug/L		97	78 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 127
1,2-Dichloropropane	10.0	10.7		ug/L		107	76 - 121
1,3,5-Trimethylbenzene	10.0	10.5		ug/L		105	75 - 122
1,3-Dichlorobenzene	10.0	9.87		ug/L		99	77 - 120
1,3-Dichloropropane	10.0	9.37		ug/L		94	75 - 120
1,4-Dichlorobenzene	10.0	10.6		ug/L		106	77 - 121
2,2-Dichloropropane	10.0	7.92		ug/L		79	49 - 147
2-Butanone (MEK)	50.0	66.9		ug/L		134	40 - 150
2-Chlorotoluene	10.0	10.5		ug/L		105	75 - 121
2-Hexanone	50.0	56.7		ug/L		113	46 - 146
4-Chlorotoluene	10.0	10.1		ug/L		101	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	51.7		ug/L		103	60 - 127
Acetone	50.0	92.0	*	ug/L		184	20 - 150
Benzene	10.0	10.4		ug/L		104	80 - 120
Bromobenzene	10.0	10.3		ug/L		103	74 - 121
Bromochloromethane	10.0	9.88		ug/L		99	70 - 126
Bromodichloromethane	10.0	10.2		ug/L		102	67 - 125
Bromoform	10.0	9.23		ug/L		92	60 - 122
Bromomethane	10.0	7.92		ug/L		79	45 - 150
Carbon disulfide	10.0	9.51		ug/L		95	67 - 129
Carbon tetrachloride	10.0	10.2		ug/L		102	68 - 134
Chlorobenzene	10.0	10.0		ug/L		100	79 - 125
Chloroethane	10.0	9.80		ug/L		98	48 - 150
Chloroform	10.0	9.80		ug/L		98	73 - 126
Chloromethane	10.0	8.73		ug/L		87	51 - 150
cis-1,2-Dichloroethene	10.0	9.63		ug/L		96	76 - 121
cis-1,3-Dichloropropene	10.0	9.52		ug/L		95	72 - 120
Dibromochloromethane	10.0	9.13		ug/L		91	72 - 120
Dibromomethane	10.0	9.81		ug/L		98	71 - 120
Dichlorodifluoromethane	10.0	7.20		ug/L		72	32 - 150
Dichlorofluoromethane	10.0	9.57		ug/L		96	60 - 140
Ethylbenzene	10.0	9.76		ug/L		98	80 - 120
Hexachlorobutadiene	10.0	9.57		ug/L		96	62 - 132
Hexane	10.0	9.87		ug/L		99	68 - 125

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8295/1004
Matrix: Water
Analysis Batch: 8295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	10.0	9.72		ug/L		97	77 - 123
m,p-Xylene	10.0	9.96		ug/L		100	80 - 120
Methyl tert-butyl ether	10.0	10.5		ug/L		105	71 - 128
Methylene Chloride	10.0	10.3		ug/L		103	20 - 150
Naphthalene	10.0	10.1		ug/L		101	63 - 124
n-Butylbenzene	10.0	10.3		ug/L		103	71 - 120
N-Propylbenzene	10.0	10.6		ug/L		106	76 - 120
o-Xylene	10.0	9.86		ug/L		99	80 - 120
p-Isopropyltoluene	10.0	10.3		ug/L		103	77 - 120
sec-Butylbenzene	10.0	10.2		ug/L		102	74 - 121
Styrene	10.0	9.29		ug/L		93	73 - 120
tert-Butylbenzene	10.0	10.3		ug/L		103	79 - 120
Tetrachloroethene	10.0	9.36		ug/L		94	71 - 132
Toluene	10.0	9.89		ug/L		99	80 - 123
trans-1,2-Dichloroethene	10.0	9.90		ug/L		99	75 - 124
trans-1,3-Dichloropropene	10.0	9.06		ug/L		91	70 - 121
Trichloroethene	10.0	10.0		ug/L		100	75 - 129
Trichlorofluoromethane	10.0	9.52		ug/L		95	60 - 140
Vinyl chloride	10.0	8.61		ug/L		86	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 125*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: 590-4322-3 MS
Matrix: Water
Analysis Batch: 8295

Client Sample ID: MW-7B-082516
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	5.14		ug/L		51	50 - 150
1,1,1-Trichloroethane	ND		10.0	5.22		ug/L		52	50 - 150
1,1,2,2-Tetrachloroethane	ND		10.0	6.25		ug/L		62	50 - 150
1,1,2-Trichloroethane	ND		10.0	5.48		ug/L		55	50 - 150
1,1,2-Trichlorotrifluoroethane	ND		10.0	5.14		ug/L		51	50 - 150
1,1-Dichloroethane	ND		10.0	5.14		ug/L		51	50 - 150
1,1-Dichloroethene	ND	F1	10.0	4.89	F1	ug/L		49	50 - 150
1,1-Dichloropropene	ND		10.0	5.26		ug/L		53	50 - 150
1,2,3-Trichlorobenzene	ND	F1	10.0	4.66	F1	ug/L		47	50 - 150
1,2,3-Trichloropropane	ND		10.0	5.45		ug/L		54	50 - 150
1,2,4-Trichlorobenzene	ND	F1	10.0	4.62	F1	ug/L		46	50 - 150
1,2,4-Trimethylbenzene	ND	F1	10.0	4.33	F1	ug/L		43	50 - 150
1,2-Dibromo-3-Chloropropane	ND		10.0	7.91	J	ug/L		79	50 - 150
1,2-Dichlorobenzene	ND		10.0	5.00		ug/L		50	50 - 150
1,2-Dichloroethane	ND		10.0	5.87		ug/L		59	50 - 150
1,2-Dichloropropane	ND		10.0	5.40		ug/L		54	50 - 150
1,3,5-Trimethylbenzene	ND	F1	10.0	4.12	F1	ug/L		41	50 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 590-4322-3 MS
Matrix: Water
Analysis Batch: 8295

Client Sample ID: MW-7B-082516
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	ND		10.0	5.12		ug/L		51	50 - 150
1,3-Dichloropropane	ND		10.0	5.49		ug/L		55	50 - 150
1,4-Dichlorobenzene	ND		10.0	5.23		ug/L		52	50 - 150
2,2-Dichloropropane	ND	F1	10.0	3.92	F1	ug/L		39	50 - 150
2-Butanone (MEK)	ND		50.0	37.9		ug/L		76	50 - 150
2-Chlorotoluene	ND		10.0	5.70		ug/L		57	50 - 150
2-Hexanone	ND		50.0	29.5		ug/L		59	50 - 150
4-Chlorotoluene	ND		10.0	5.45		ug/L		54	50 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	26.3		ug/L		53	50 - 150
Acetone	ND	*	50.0	52.0		ug/L		104	50 - 150
Benzene	ND		10.0	5.68		ug/L		57	50 - 150
Bromobenzene	ND		10.0	5.69		ug/L		57	50 - 150
Bromochloromethane	ND		10.0	5.97		ug/L		60	50 - 150
Bromodichloromethane	ND		10.0	5.05		ug/L		51	50 - 150
Bromoform	ND	F1	10.0	3.98	F1	ug/L		40	50 - 150
Bromomethane	ND	F1	10.0	4.65	J F1	ug/L		47	50 - 150
Carbon disulfide	ND	F1	10.0	3.97	F1	ug/L		40	50 - 150
Carbon tetrachloride	ND		10.0	5.40		ug/L		54	50 - 150
Chlorobenzene	ND		10.0	5.60		ug/L		56	50 - 150
Chloroethane	ND		10.0	5.12		ug/L		51	50 - 150
Chloroform	ND		10.0	5.29		ug/L		53	50 - 150
Chloromethane	ND		10.0	5.35		ug/L		54	50 - 150
cis-1,2-Dichloroethene	ND		10.0	5.30		ug/L		53	50 - 150
cis-1,3-Dichloropropene	ND	F1	10.0	4.80	F1	ug/L		48	50 - 150
Dibromochloromethane	ND	F1	10.0	4.55	F1	ug/L		45	50 - 150
Dibromomethane	ND	F1	10.0	4.69	F1	ug/L		47	50 - 150
Dichlorodifluoromethane	ND	F1	10.0	3.43	F1	ug/L		34	50 - 150
Dichlorofluoromethane	ND		10.0	5.31		ug/L		53	50 - 150
Ethylbenzene	ND		10.0	5.21		ug/L		52	50 - 150
Hexachlorobutadiene	ND	F1	10.0	4.30	F1	ug/L		43	50 - 150
Hexane	ND	F1	10.0	4.71	F1	ug/L		47	50 - 150
Isopropylbenzene	ND		10.0	5.03		ug/L		50	50 - 150
m,p-Xylene	ND	F1	10.0	4.88	F1	ug/L		49	50 - 150
Methyl tert-butyl ether	ND		10.0	5.27		ug/L		53	50 - 150
Methylene Chloride	ND		10.0	6.83		ug/L		68	50 - 150
Naphthalene	ND	F1	10.0	4.84	F1	ug/L		48	50 - 150
n-Butylbenzene	ND	F1	10.0	4.76	F1	ug/L		48	50 - 150
N-Propylbenzene	ND		10.0	5.19		ug/L		52	50 - 150
o-Xylene	ND	F1	10.0	4.74	F1	ug/L		47	50 - 150
p-Isopropyltoluene	ND	F1	10.0	4.95	F1	ug/L		49	50 - 150
sec-Butylbenzene	ND		10.0	5.22		ug/L		52	50 - 150
Styrene	ND	F1	10.0	3.04	F1	ug/L		30	50 - 150
tert-Butylbenzene	ND		10.0	5.18		ug/L		52	50 - 150
Tetrachloroethene	ND	F1	10.0	4.62	F1	ug/L		46	50 - 150
Toluene	ND		10.0	5.21		ug/L		52	50 - 150
trans-1,2-Dichloroethene	ND		10.0	5.64		ug/L		56	50 - 150
trans-1,3-Dichloropropene	ND	F1	10.0	4.77	F1	ug/L		48	50 - 150
Trichloroethene	ND	F1	10.0	4.92	F1	ug/L		49	50 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 590-4322-3 MS
Matrix: Water
Analysis Batch: 8295

Client Sample ID: MW-7B-082516
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	ND	F1	10.0	4.89	F1	ug/L		49	50 - 150
Vinyl chloride	ND		10.0	5.02		ug/L		50	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8292/6
Matrix: Water
Analysis Batch: 8292

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/26/16 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*08/26/16 15:29*	*1*

Lab Sample ID: LCS 590-8292/1004
Matrix: Water
Analysis Batch: 8292

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	1060		ug/L		106	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*

Lab Sample ID: MB 590-8294/6
Matrix: Water
Analysis Batch: 8294

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			08/27/16 02:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*08/27/16 02:21*	*1*

Lab Sample ID: LCS 590-8294/1001
Matrix: Water
Analysis Batch: 8294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	997		ug/L		100	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		68.7 - 141

Lab Sample ID: 590-4322-4 MS
Matrix: Water
Analysis Batch: 8294

Client Sample ID: DUP-082516
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	ND		998	788		ug/L		79	55.6 - 126

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		68.7 - 141

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226299/1-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226299

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
2-Chlorophenol	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
2-Methylphenol	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2-Nitroaniline	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
2-Nitrophenol	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
3-Nitroaniline	ND		0.40	0.12	ug/L		08/30/16 16:43	09/01/16 17:20	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		08/30/16 16:43	09/01/16 17:20	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
4-Chloroaniline	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
4-Nitroaniline	ND		0.60	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
4-Nitrophenol	ND		3.0	1.0	ug/L		08/30/16 16:43	09/01/16 17:20	1
Acenaphthene	ND		0.10	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Acenaphthylene	ND		0.080	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Anthracene	ND		0.040	0.010	ug/L		08/30/16 16:43	09/01/16 17:20	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226299/1-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226299

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Benzoic acid	ND		3.0	0.60	ug/L		08/30/16 16:43	09/01/16 17:20	1
Benzyl alcohol	1.01		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		08/30/16 16:43	09/01/16 17:20	1
Butyl benzyl phthalate	0.602		0.60	0.20	ug/L		08/30/16 16:43	09/01/16 17:20	1
Carbazole	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Chrysene	ND		0.040	0.013	ug/L		08/30/16 16:43	09/01/16 17:20	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Dibenzofuran	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Diethyl phthalate	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Di-n-butyl phthalate	0.343	J	0.40	0.13	ug/L		08/30/16 16:43	09/01/16 17:20	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		08/30/16 16:43	09/01/16 17:20	1
Fluoranthene	ND		0.050	0.013	ug/L		08/30/16 16:43	09/01/16 17:20	1
Fluorene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Hexachloroethane	ND		0.60	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Isophorone	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Naphthalene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Nitrobenzene	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Pentachlorophenol	ND		0.70	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Phenanthrene	ND		0.080	0.020	ug/L		08/30/16 16:43	09/01/16 17:20	1
Phenol	ND		0.60	0.10	ug/L		08/30/16 16:43	09/01/16 17:20	1
Pyrene	ND		0.060	0.013	ug/L		08/30/16 16:43	09/01/16 17:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*84*		*57 - 132*	*08/30/16 16:43*	*09/01/16 17:20*	*1*
2-Fluorobiphenyl	*69*		*50 - 120*	*08/30/16 16:43*	*09/01/16 17:20*	*1*
2-Fluorophenol	*62*		*50 - 113*	*08/30/16 16:43*	*09/01/16 17:20*	*1*
Nitrobenzene-d5	*69*		*59 - 120*	*08/30/16 16:43*	*09/01/16 17:20*	*1*
Phenol-d5	*71*		*52 - 120*	*08/30/16 16:43*	*09/01/16 17:20*	*1*
Terphenyl-d14	*88*		*72 - 140*	*08/30/16 16:43*	*09/01/16 17:20*	*1*

Lab Sample ID: LCS 580-226299/2-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.47		ug/L		74	40 - 115

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226299/2-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	2.00	1.60		ug/L		80	44 - 119
1,3-Dichlorobenzene	2.00	1.27		ug/L		64	34 - 116
1,4-Dichlorobenzene	2.00	1.29		ug/L		64	40 - 118
1-Methylnaphthalene	2.00	1.62		ug/L		81	54 - 119
2,4,5-Trichlorophenol	2.00	1.95		ug/L		97	56 - 122
2,4,6-Trichlorophenol	2.00	1.65		ug/L		83	55 - 134
2,4-Dichlorophenol	2.00	1.83		ug/L		92	50 - 125
2,4-Dimethylphenol	2.00	1.36	J	ug/L		68	20 - 106
2,4-Dinitrophenol	4.00	1.27	J	ug/L		32	24 - 139
2,4-Dinitrotoluene	2.00	1.75		ug/L		87	40 - 143
2,6-Dinitrotoluene	2.00	0.128	J *	ug/L		6	45 - 134
2-Chloronaphthalene	2.00	1.67		ug/L		84	55 - 125
2-Chlorophenol	2.00	1.85		ug/L		92	57 - 125
2-Methylnaphthalene	2.00	1.61		ug/L		80	56 - 117
2-Methylphenol	2.00	1.49		ug/L		74	53 - 118
2-Nitroaniline	2.00	1.83		ug/L		91	58 - 124
2-Nitrophenol	2.00	1.33		ug/L		66	20 - 150
3 & 4 Methylphenol	2.00	1.68		ug/L		84	54 - 112
3,3'-Dichlorobenzidine	4.00	1.32	J	ug/L		33	20 - 121
3-Nitroaniline	2.00	1.10		ug/L		55	22 - 124
4,6-Dinitro-2-methylphenol	4.00	1.32	J	ug/L		33	20 - 150
4-Bromophenyl phenyl ether	2.00	1.97		ug/L		98	62 - 132
4-Chloro-3-methylphenol	2.00	1.82		ug/L		91	56 - 133
4-Chloroaniline	2.00	0.156	J *	ug/L		8	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.61		ug/L		80	59 - 125
4-Nitroaniline	2.00	1.42		ug/L		71	40 - 118
4-Nitrophenol	4.00	2.74	J	ug/L		68	20 - 150
Acenaphthene	2.00	1.59		ug/L		79	55 - 113
Acenaphthylene	2.00	1.30		ug/L		65	24 - 135
Anthracene	2.00	1.41		ug/L		70	20 - 125
Benzo[a]anthracene	2.00	1.92		ug/L		96	49 - 115
Benzo[a]pyrene	2.00	1.47		ug/L		73	20 - 115
Benzo[b]fluoranthene	2.00	1.80		ug/L		90	63 - 129
Benzo[g,h,i]perylene	2.00	1.99		ug/L		99	58 - 127
Benzo[k]fluoranthene	2.00	1.84		ug/L		92	60 - 134
Benzoic acid	4.00	4.36		ug/L		109	20 - 150
Benzyl alcohol	2.00	1.83		ug/L		91	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.64		ug/L		82	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.85		ug/L		93	59 - 125
Bis(2-chloroethyl)ether	2.00	1.81		ug/L		91	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.73	J	ug/L		137	22 - 150
Butyl benzyl phthalate	2.00	2.88		ug/L		144	46 - 150
Carbazole	2.00	2.19		ug/L		110	68 - 142
Chrysene	2.00	2.02		ug/L		101	57 - 131
Dibenz(a,h)anthracene	2.00	1.94		ug/L		97	56 - 124
Dibenzofuran	2.00	1.72		ug/L		86	60 - 125
Diethyl phthalate	2.00	1.69		ug/L		85	60 - 134
Dimethyl phthalate	2.00	1.96		ug/L		98	65 - 134

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226299/2-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-butyl phthalate	2.00	2.42		ug/L		121	67 - 140
Di-n-octyl phthalate	2.00	2.14		ug/L		107	55 - 150
Fluoranthene	2.00	2.11		ug/L		105	70 - 135
Fluorene	2.00	1.73		ug/L		86	57 - 125
Hexachlorobenzene	2.00	1.76		ug/L		88	55 - 135
Hexachlorobutadiene	2.00	1.16		ug/L		58	25 - 125
Hexachlorocyclopentadiene	2.00	0.127	J *	ug/L		6	20 - 110
Hexachloroethane	2.00	1.21		ug/L		61	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.96		ug/L		98	54 - 124
Isophorone	2.00	1.77		ug/L		89	64 - 125
Naphthalene	2.00	1.64		ug/L		82	56 - 119
Nitrobenzene	2.00	1.73		ug/L		86	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.71		ug/L		85	54 - 120
N-Nitrosodiphenylamine	2.00	1.46		ug/L		73	40 - 124
Pentachlorophenol	4.00	2.46		ug/L		62	30 - 122
Phenanthrene	2.00	1.91		ug/L		95	57 - 125
Phenol	2.00	1.64		ug/L		82	53 - 113
Pyrene	2.00	1.82		ug/L		91	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*102*		*57 - 132*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol	*74*		*50 - 113*
Nitrobenzene-d5	*94*		*59 - 120*
Phenol-d5	*82*		*52 - 120*
Terphenyl-d14	*93*		*72 - 140*

Lab Sample ID: LCSD 580-226299/3-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226299

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.91	*	ug/L		96	40 - 115	26	20
1,2-Dichlorobenzene	2.00	2.06	*	ug/L		103	44 - 119	25	20
1,3-Dichlorobenzene	2.00	1.85	*	ug/L		92	34 - 116	37	29
1,4-Dichlorobenzene	2.00	1.71	*	ug/L		86	40 - 118	28	20
1-Methylnaphthalene	2.00	1.91		ug/L		95	54 - 119	16	20
2,4,5-Trichlorophenol	2.00	2.24		ug/L		112	56 - 122	14	20
2,4,6-Trichlorophenol	2.00	1.82		ug/L		91	55 - 134	9	20
2,4-Dichlorophenol	2.00	1.93		ug/L		97	50 - 125	5	26
2,4-Dimethylphenol	2.00	1.52	J	ug/L		76	20 - 106	11	35
2,4-Dinitrophenol	4.00	1.57	J	ug/L		39	24 - 139	21	35
2,4-Dinitrotoluene	2.00	1.93		ug/L		97	40 - 143	10	29
2,6-Dinitrotoluene	2.00	0.156	J *	ug/L		8	45 - 134	19	31
2-Chloronaphthalene	2.00	2.02		ug/L		101	55 - 125	19	20
2-Chlorophenol	2.00	1.97		ug/L		99	57 - 125	6	20
2-Methylnaphthalene	2.00	1.91		ug/L		96	56 - 117	17	20
2-Methylphenol	2.00	1.76		ug/L		88	53 - 118	17	33

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226299/3-A
Matrix: Water
Analysis Batch: 226512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226299

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Nitroaniline	2.00	2.34	*	ug/L		117	58 - 124	25	20
2-Nitrophenol	2.00	1.59		ug/L		80	20 - 150	18	35
3 & 4 Methylphenol	2.00	1.84		ug/L		92	54 - 112	9	20
3,3'-Dichlorobenzidine	4.00	1.01	J	ug/L		25	20 - 121	27	35
3-Nitroaniline	2.00	1.00		ug/L		50	22 - 124	9	35
4,6-Dinitro-2-methylphenol	4.00	1.84	J *	ug/L		46	20 - 150	33	30
4-Bromophenyl phenyl ether	2.00	2.31		ug/L		115	62 - 132	16	20
4-Chloro-3-methylphenol	2.00	2.02		ug/L		101	56 - 133	10	20
4-Chloroaniline	2.00	ND	*	ug/L		4	20 - 110	60	35
4-Chlorophenyl phenyl ether	2.00	1.82		ug/L		91	59 - 125	12	20
4-Nitroaniline	2.00	1.20		ug/L		60	40 - 118	17	20
4-Nitrophenol	4.00	2.95	J	ug/L		74	20 - 150	7	29
Acenaphthene	2.00	1.79		ug/L		89	55 - 113	12	20
Acenaphthylene	2.00	1.53		ug/L		77	24 - 135	16	20
Anthracene	2.00	1.62		ug/L		81	20 - 125	14	26
Benzo[a]anthracene	2.00	2.18		ug/L		109	49 - 115	12	20
Benzo[a]pyrene	2.00	1.57		ug/L		78	20 - 115	7	35
Benzo[b]fluoranthene	2.00	2.06		ug/L		103	63 - 129	14	20
Benzo[g,h,i]perylene	2.00	2.13		ug/L		106	58 - 127	7	20
Benzo[k]fluoranthene	2.00	1.88		ug/L		94	60 - 134	2	20
Benzoic acid	4.00	5.00		ug/L		125	20 - 150	14	35
Benzyl alcohol	2.00	2.73	*	ug/L		137	52 - 124	40	20
bis (2-chloroisopropyl) ether	2.00	1.80		ug/L		90	44 - 123	9	20
Bis(2-chloroethoxy)methane	2.00	2.01		ug/L		100	59 - 125	8	20
Bis(2-chloroethyl)ether	2.00	2.02		ug/L		101	55 - 125	11	20
Bis(2-ethylhexyl) phthalate	2.00	3.57	*	ug/L		178	22 - 150	27	20
Butyl benzyl phthalate	2.00	3.46	*	ug/L		173	46 - 150	18	20
Carbazole	2.00	2.44		ug/L		122	68 - 142	11	20
Chrysene	2.00	2.09		ug/L		105	57 - 131	4	20
Dibenz(a,h)anthracene	2.00	2.08		ug/L		104	56 - 124	7	20
Dibenzofuran	2.00	1.95		ug/L		97	60 - 125	13	20
Diethyl phthalate	2.00	2.00		ug/L		100	60 - 134	17	20
Dimethyl phthalate	2.00	2.17		ug/L		108	65 - 134	10	20
Di-n-butyl phthalate	2.00	2.78		ug/L		139	67 - 140	14	20
Di-n-octyl phthalate	2.00	2.36		ug/L		118	55 - 150	10	20
Fluoranthene	2.00	2.36		ug/L		118	70 - 135	11	20
Fluorene	2.00	1.90		ug/L		95	57 - 125	9	20
Hexachlorobenzene	2.00	2.02		ug/L		101	55 - 135	14	20
Hexachlorobutadiene	2.00	1.82	*	ug/L		91	25 - 125	44	31
Hexachlorocyclopentadiene	2.00	0.260	J *	ug/L		13	20 - 110	69	35
Hexachloroethane	2.00	1.82	*	ug/L		91	24 - 125	40	35
Indeno[1,2,3-cd]pyrene	2.00	2.18		ug/L		109	54 - 124	11	20
Isophorone	2.00	2.03		ug/L		101	64 - 125	13	20
Naphthalene	2.00	1.90		ug/L		95	56 - 119	15	20
Nitrobenzene	2.00	1.96		ug/L		98	62 - 125	13	20
N-Nitrosodi-n-propylamine	2.00	1.84		ug/L		92	54 - 120	8	20
N-Nitrosodiphenylamine	2.00	1.72		ug/L		86	40 - 124	16	20
Pentachlorophenol	4.00	2.55		ug/L		64	30 - 122	4	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226299/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226512 — **Prep Batch: 226299**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenanthrene			2.00	2.19		ug/L		110	57 - 125	14	20
Phenol			2.00	1.83		ug/L		92	53 - 113	11	20
Pyrene			2.00	2.05		ug/L		102	64 - 128	12	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*113*		*57 - 132*
2-Fluorobiphenyl	*91*		*50 - 120*
2-Fluorophenol	*79*		*50 - 113*
Nitrobenzene-d5	*100*		*59 - 120*
Phenol-d5	*89*		*52 - 120*
Terphenyl-d14	*106*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8316 — **Prep Batch: 8317**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Lab Sample ID: LCS 590-8317/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 8316 — **Prep Batch: 8317**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.125	0.135		ug/L		108	60 - 140		

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226346/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 226447 — **Prep Batch: 226346**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/31/16 10:32	08/31/16 20:36	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
Aldrin	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 20:36	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 20:36	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
beta-BHC	ND		0.050	0.012	ug/L		08/31/16 10:32	08/31/16 20:36	1
delta-BHC	ND		0.050	0.010	ug/L		08/31/16 10:32	08/31/16 20:36	1
Dieldrin	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-226346/1-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin aldehyde	ND		0.20	0.034	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Heptachlor	ND		0.020	0.0040	ug/L		08/31/16 10:32	08/31/16 20:36	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Toxaphene	ND		1.0	0.22	ug/L		08/31/16 10:32	08/31/16 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*67*		*22 - 150*	*08/31/16 10:32*	*08/31/16 20:36*	*1*
Tetrachloro-m-xylene	*71*		*40 - 113*	*08/31/16 10:32*	*08/31/16 20:36*	*1*

Lab Sample ID: LCS 580-226346/2-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.148		ug/L		74	32 - 133
4,4'-DDE	0.200	0.146		ug/L		73	30 - 138
4,4'-DDT	0.200	0.162		ug/L		81	34 - 131
Aldrin	0.200	0.143		ug/L		71	35 - 124
alpha-BHC	0.200	0.145		ug/L		73	39 - 126
alpha-Chlordane	0.200	0.139		ug/L		69	37 - 133
beta-BHC	0.200	0.140		ug/L		70	38 - 114
delta-BHC	0.200	0.140		ug/L		70	20 - 138
Dieldrin	0.200	0.145		ug/L		73	39 - 140
Endosulfan I	0.200	0.146		ug/L		73	23 - 142
Endosulfan II	0.200	0.147		ug/L		74	20 - 150
Endosulfan sulfate	0.200	0.143		ug/L		71	36 - 130
Endrin	0.200	0.180		ug/L		90	32 - 130
Endrin aldehyde	0.200	0.201		ug/L		100	37 - 139
Endrin ketone	0.200	0.141		ug/L		71	32 - 136
gamma-BHC (Lindane)	0.200	0.137		ug/L		69	40 - 121
gamma-Chlordane	0.200	0.141		ug/L		71	38 - 136
Heptachlor	0.200	0.148		ug/L		74	39 - 129
Heptachlor epoxide	0.200	0.139		ug/L		70	34 - 135
Methoxychlor	0.200	0.172		ug/L		86	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*84*		*22 - 150*
Tetrachloro-m-xylene	*79*		*40 - 113*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-226346/3-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226346

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.165		ug/L		83	32 - 133	11	35
4,4'-DDE	0.200	0.162		ug/L		81	30 - 138	10	35
4,4'-DDT	0.200	0.180		ug/L		90	34 - 131	11	35
Aldrin	0.200	0.158		ug/L		79	35 - 124	10	35
alpha-BHC	0.200	0.162		ug/L		81	39 - 126	11	35
alpha-Chlordane	0.200	0.155		ug/L		77	37 - 133	11	35
beta-BHC	0.200	0.158		ug/L		79	38 - 114	12	35
delta-BHC	0.200	0.156		ug/L		78	20 - 138	11	35
Dieldrin	0.200	0.160		ug/L		80	39 - 140	10	35
Endosulfan I	0.200	0.162		ug/L		81	23 - 142	10	35
Endosulfan II	0.200	0.164		ug/L		82	20 - 150	11	35
Endosulfan sulfate	0.200	0.161		ug/L		80	36 - 130	12	35
Endrin	0.200	0.199		ug/L		99	32 - 130	10	35
Endrin aldehyde	0.200	0.227		ug/L		114	37 - 139	12	35
Endrin ketone	0.200	0.158		ug/L		79	32 - 136	11	35
gamma-BHC (Lindane)	0.200	0.156		ug/L		78	40 - 121	13	35
gamma-Chlordane	0.200	0.158		ug/L		79	38 - 136	11	35
Heptachlor	0.200	0.167		ug/L		84	39 - 129	12	35
Heptachlor epoxide	0.200	0.155		ug/L		78	34 - 135	11	35
Methoxychlor	0.200	0.194		ug/L		97	33 - 139	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*90*		*22 - 150*
Tetrachloro-m-xylene	*86*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.60	1.56		ug/L		98	23 - 140
PCB-1260	1.60	1.47		ug/L		92	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-339916/1-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/29/16 13:00	09/25/16 14:39	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Bolstar	ND		1.0	0.31	ug/L		08/29/16 13:00	09/25/16 14:39	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/29/16 13:00	09/25/16 14:39	1
Coumaphos	ND		1.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Demeton, Total	ND		3.0	0.21	ug/L		08/29/16 13:00	09/25/16 14:39	1
Diazinon	ND		0.50	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Dichlorvos	ND		0.50	0.16	ug/L		08/29/16 13:00	09/25/16 14:39	1
Dimethoate	ND		1.5	0.45	ug/L		08/29/16 13:00	09/25/16 14:39	1
Disulfoton	ND		1.0	0.32	ug/L		08/29/16 13:00	09/25/16 14:39	1
EPN	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Famphur	ND		1.0	0.18	ug/L		08/29/16 13:00	09/25/16 14:39	1
Fensulfothion	ND		2.5	0.54	ug/L		08/29/16 13:00	09/25/16 14:39	1
Fenthion	ND		2.5	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Malathion	ND		2.0	0.13	ug/L		08/29/16 13:00	09/25/16 14:39	1
Merphos	ND		5.0	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Methyl parathion	ND		4.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Mevinphos	ND		6.2	0.46	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/29/16 13:00	09/25/16 14:39	1
Phorate	ND		1.2	0.15	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ronnel	ND		10	0.12	ug/L		08/29/16 13:00	09/25/16 14:39	1
Simazine	ND		10	0.22	ug/L		08/29/16 13:00	09/25/16 14:39	1
Sulfotepp	ND		1.5	0.17	ug/L		08/29/16 13:00	09/25/16 14:39	1
Thionazin	ND		1.0	0.31	ug/L		08/29/16 13:00	09/25/16 14:39	1
Tokuthion	ND		1.6	0.12	ug/L		08/29/16 13:00	09/25/16 14:39	1
Trichloronate	ND		1.5	0.24	ug/L		08/29/16 13:00	09/25/16 14:39	1
Ethoprop	ND		1.5	0.18	ug/L		08/29/16 13:00	09/25/16 14:39	1
Propazine	ND		10	0.29	ug/L		08/29/16 13:00	09/25/16 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*87*		*49 - 171*	*08/29/16 13:00*	*09/25/16 14:39*	*1*
Triphenylphosphate	*101*		*60 - 154*	*08/29/16 13:00*	*09/25/16 14:39*	*1*

Lab Sample ID: LCS 280-339916/2-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.92	J	ug/L		73	52 - 115
Azinphos-methyl	4.00	3.89		ug/L		97	59 - 115
Chlorpyrifos	4.00	3.17		ug/L		79	54 - 115
Coumaphos	4.00	3.87		ug/L		97	63 - 118
Demeton, Total	4.00	3.22		ug/L		80	44 - 115
Diazinon	4.00	2.98		ug/L		74	47 - 115
Dichlorvos	4.00	4.67		ug/L		117	53 - 128
Dimethoate	4.00	3.24		ug/L		81	42 - 115
Disulfoton	4.00	2.97		ug/L		74	45 - 115
EPN	4.00	3.69		ug/L		92	56 - 115
Famphur	4.00	3.62		ug/L		91	62 - 115
Fensulfothion	4.00	4.13		ug/L		103	50 - 115
Fenthion	4.00	3.33		ug/L		83	55 - 115
Malathion	4.00	2.98		ug/L		75	52 - 115
Merphos	4.00	1.90	J	ug/L		48	31 - 115
Methyl parathion	4.00	3.48	J	ug/L		87	58 - 115
Mevinphos	4.00	2.95	J	ug/L		74	42 - 115
Ethyl Parathion	4.00	3.42		ug/L		86	55 - 115
Phorate	4.00	2.66		ug/L		67	40 - 115
Ronnel	4.00	3.29	J	ug/L		82	55 - 115
Simazine	4.00	2.80	J	ug/L		70	39 - 115
Sulfotepp	4.00	3.24		ug/L		81	53 - 115
Thionazin	4.00	3.23		ug/L		81	54 - 115
Trichloronate	4.00	2.94		ug/L		74	48 - 115
Ethoprop	4.00	3.19		ug/L		80	50 - 115
BolstarFamphur	4.00	7.27		ug/L		182	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*82*		*49 - 171*
Triphenylphosphate	*100*		*60 - 154*

Lab Sample ID: LCSD 280-339916/3-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339916

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	2.79	J	ug/L		70	52 - 115	5	45
Azinphos-methyl	4.00	3.90		ug/L		97	59 - 115	0	20
Chlorpyrifos	4.00	3.25		ug/L		81	54 - 115	2	24
Coumaphos	4.00	3.91		ug/L		98	63 - 118	1	20
Demeton, Total	4.00	3.30		ug/L		83	44 - 115	2	38
Diazinon	4.00	3.15		ug/L		79	47 - 115	6	37
Dichlorvos	4.00	3.86		ug/L		97	53 - 128	19	37
Dimethoate	4.00	3.10		ug/L		78	42 - 115	4	38
Disulfoton	4.00	3.09		ug/L		77	45 - 115	4	31
EPN	4.00	3.66		ug/L		92	56 - 115	1	20
Famphur	4.00	3.59		ug/L		90	62 - 115	1	20
Fensulfothion	4.00	3.83		ug/L		96	50 - 115	7	27
Fenthion	4.00	3.40		ug/L		85	55 - 115	2	22
Malathion	4.00	3.01		ug/L		75	52 - 115	1	20

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCSD 280-339916/3-A
Matrix: Water
Analysis Batch: 343654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339916

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Merphos			4.00	1.91	J	ug/L		48	31 - 115	0	25
Methyl parathion			4.00	3.64	J	ug/L		91	58 - 115	4	20
Mevinphos			4.00	2.79	J	ug/L		70	42 - 115	6	27
Ethyl Parathion			4.00	3.48		ug/L		87	55 - 115	2	20
Phorate			4.00	2.77		ug/L		69	40 - 115	4	32
Ronnel			4.00	3.43	J	ug/L		86	55 - 115	4	28
Simazine			4.00	2.27	J	ug/L		57	39 - 115	21	53
Sulfotepp			4.00	3.38		ug/L		85	53 - 115	4	27
Thionazin			4.00	3.29		ug/L		82	54 - 115	2	27
Trichloronate			4.00	3.03		ug/L		76	48 - 115	3	26
Ethoprop			4.00	3.32		ug/L		83	50 - 115	4	29
BolstarFamphur			4.00	7.32		ug/L		183		1	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*78*		*49 - 171*
Triphenylphosphate	*101*		*60 - 154*

Lab Sample ID: MB 280-340258/1-A
Matrix: Water
Analysis Batch: 343148

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340258

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		08/31/16 07:59	09/22/16 00:41	1
Azinphos-methyl	ND		2.5	0.17	ug/L		08/31/16 07:59	09/22/16 00:41	1
Bolstar	ND		1.0	0.31	ug/L		08/31/16 07:59	09/22/16 00:41	1
Chlorpyrifos	ND		1.5	0.36	ug/L		08/31/16 07:59	09/22/16 00:41	1
Coumaphos	ND		1.0	0.14	ug/L		08/31/16 07:59	09/22/16 00:41	1
Demeton, Total	ND		3.0	0.21	ug/L		08/31/16 07:59	09/22/16 00:41	1
Diazinon	ND		0.50	0.15	ug/L		08/31/16 07:59	09/22/16 00:41	1
Dichlorvos	ND		0.50	0.16	ug/L		08/31/16 07:59	09/22/16 00:41	1
Dimethoate	ND		1.5	0.45	ug/L		08/31/16 07:59	09/22/16 00:41	1
Disulfoton	ND		1.0	0.32	ug/L		08/31/16 07:59	09/22/16 00:41	1
EPN	ND		1.2	0.15	ug/L		08/31/16 07:59	09/22/16 00:41	1
Famphur	ND		1.0	0.18	ug/L		08/31/16 07:59	09/22/16 00:41	1
Fensulfothion	ND		2.5	0.54	ug/L		08/31/16 07:59	09/22/16 00:41	1
Fenthion	ND		2.5	0.15	ug/L		08/31/16 07:59	09/22/16 00:41	1
Malathion	ND		2.0	0.13	ug/L		08/31/16 07:59	09/22/16 00:41	1
Merphos	ND		5.0	0.17	ug/L		08/31/16 07:59	09/22/16 00:41	1
Methyl parathion	ND		4.0	0.14	ug/L		08/31/16 07:59	09/22/16 00:41	1
Mevinphos	ND		6.2	0.46	ug/L		08/31/16 07:59	09/22/16 00:41	1
Ethyl Parathion	ND		1.0	0.14	ug/L		08/31/16 07:59	09/22/16 00:41	1
Phorate	ND		1.2	0.15	ug/L		08/31/16 07:59	09/22/16 00:41	1
Ronnel	ND		10	0.12	ug/L		08/31/16 07:59	09/22/16 00:41	1
Simazine	ND		10	0.22	ug/L		08/31/16 07:59	09/22/16 00:41	1
Sulfotepp	ND		1.5	0.17	ug/L		08/31/16 07:59	09/22/16 00:41	1
Thionazin	ND		1.0	0.31	ug/L		08/31/16 07:59	09/22/16 00:41	1
Tokuthion	ND		1.6	0.12	ug/L		08/31/16 07:59	09/22/16 00:41	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-340258/1-A
Matrix: Water
Analysis Batch: 343148

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340258

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.5	0.24	ug/L		08/31/16 07:59	09/22/16 00:41	1
Ethoprop	ND		1.5	0.18	ug/L		08/31/16 07:59	09/22/16 00:41	1
Propazine	ND		10	0.29	ug/L		08/31/16 07:59	09/22/16 00:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*75*		*49 - 171*	*08/31/16 07:59*	*09/22/16 00:41*	*1*
Triphenylphosphate	*97*		*60 - 154*	*08/31/16 07:59*	*09/22/16 00:41*	*1*

Lab Sample ID: LCS 280-340258/2-A
Matrix: Water
Analysis Batch: 343148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340258

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.89	J	ug/L		72	52 - 115
Azinphos-methyl	4.00	3.33		ug/L		83	59 - 115
Chlorpyrifos	4.00	3.00		ug/L		75	54 - 115
Coumaphos	4.00	3.40		ug/L		85	63 - 118
Demeton, Total	4.00	2.97	J	ug/L		74	44 - 115
Diazinon	4.00	2.68		ug/L		67	47 - 115
Dichlorvos	4.00	4.77		ug/L		119	53 - 128
Dimethoate	4.00	2.92		ug/L		73	42 - 115
Disulfoton	4.00	2.72		ug/L		68	45 - 115
EPN	4.00	3.21		ug/L		80	56 - 115
Famphur	4.00	3.26		ug/L		81	62 - 115
Fensulfothion	4.00	3.55		ug/L		89	50 - 115
Fenthion	4.00	3.17		ug/L		79	55 - 115
Malathion	4.00	2.75		ug/L		69	52 - 115
Merphos	4.00	1.82	J	ug/L		46	31 - 115
Methyl parathion	4.00	3.25	J	ug/L		81	58 - 115
Mevinphos	4.00	2.82	J	ug/L		71	42 - 115
Ethyl Parathion	4.00	3.14		ug/L		79	55 - 115
Phorate	4.00	2.43		ug/L		61	40 - 115
Ronnel	4.00	3.16	J	ug/L		79	55 - 115
Simazine	4.00	2.72	J	ug/L		68	39 - 115
Sulfotepp	4.00	3.05		ug/L		76	53 - 115
Thionazin	4.00	3.07		ug/L		77	54 - 115
Trichloronate	4.00	2.78		ug/L		70	48 - 115
Ethoprop	4.00	2.91		ug/L		73	50 - 115
BolstarFamphur	4.00	6.78		ug/L		169	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*74*		*49 - 171*
Triphenylphosphate	*92*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-340052/1-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340052

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/30/16 09:02	09/06/16 13:28	1
2,4-D	ND		4.0	0.21	ug/L		08/30/16 09:02	09/06/16 13:28	1
2,4-DB	ND		4.0	0.36	ug/L		08/30/16 09:02	09/06/16 13:28	1
Dalapon	ND		2.0	0.91	ug/L		08/30/16 09:02	09/06/16 13:28	1
Dicamba	ND		2.0	0.15	ug/L		08/30/16 09:02	09/06/16 13:28	1
Dichlorprop	ND		4.0	0.65	ug/L		08/30/16 09:02	09/06/16 13:28	1
MCPA	ND		400	17	ug/L		08/30/16 09:02	09/06/16 13:28	1
MCPP	ND		400	33	ug/L		08/30/16 09:02	09/06/16 13:28	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/30/16 09:02	09/06/16 13:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*08/30/16 09:02*	*09/06/16 13:28*	*1*

Lab Sample ID: LCS 280-340052/2-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340052

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	4.43		ug/L		89	45 - 135		
2,4-D			5.00	4.61		ug/L		92	46 - 126		
2,4-DB			5.00	4.76		ug/L		95	18 - 135		
Dalapon			5.00	3.91		ug/L		78	52 - 119		
Dicamba			5.00	4.18		ug/L		84	50 - 128		
Dichlorprop			5.00	4.33		ug/L		87	44 - 121		
MCPA			500	438		ug/L		88	43 - 118		
MCPP			500	478		ug/L		96	45 - 121		
Silvex (2,4,5-TP)			5.00	4.71		ug/L		94	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*86*		*39 - 135*

Lab Sample ID: LCSD 280-340052/3-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340052

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	3.92		ug/L		78	45 - 135	12	30
2,4-D			5.00	4.43		ug/L		89	46 - 126	4	30
2,4-DB			5.00	3.71	J	ug/L		74	18 - 135	25	30
Dalapon			5.00	3.88		ug/L		78	52 - 119	1	30
Dicamba			5.00	3.90		ug/L		78	50 - 128	7	30
Dichlorprop			5.00	3.84	J	ug/L		77	44 - 121	12	30
MCPA			500	396	J	ug/L		79	43 - 118	10	30
MCPP			500	405		ug/L		81	45 - 121	17	30
Silvex (2,4,5-TP)			5.00	4.03		ug/L		81	48 - 127	16	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-340052/3-A
Matrix: Water
Analysis Batch: 340865

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340052

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*78*		*39 - 135*

Lab Sample ID: MB 280-340257/1-A
Matrix: Water
Analysis Batch: 341438

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		08/31/16 08:09	09/09/16 15:36	1
2,4-D	ND		4.0	0.21	ug/L		08/31/16 08:09	09/09/16 15:36	1
2,4-DB	ND		4.0	0.36	ug/L		08/31/16 08:09	09/09/16 15:36	1
Dalapon	ND		2.0	0.91	ug/L		08/31/16 08:09	09/09/16 15:36	1
Dicamba	ND		2.0	0.15	ug/L		08/31/16 08:09	09/09/16 15:36	1
Dichlorprop	ND		4.0	0.65	ug/L		08/31/16 08:09	09/09/16 15:36	1
MCPA	ND		400	17	ug/L		08/31/16 08:09	09/09/16 15:36	1
MCPP	ND		400	33	ug/L		08/31/16 08:09	09/09/16 15:36	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		08/31/16 08:09	09/09/16 15:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*77*		*39 - 135*	*08/31/16 08:09*	*09/09/16 15:36*	*1*

Lab Sample ID: LCS 280-340257/2-A
Matrix: Water
Analysis Batch: 341438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340257

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	4.44		ug/L		89	45 - 135
2,4-D	5.00	4.61		ug/L		92	46 - 126
2,4-DB	5.00	4.36		ug/L		87	18 - 135
Dalapon	5.00	3.96		ug/L		79	52 - 119
Dicamba	5.00	4.20		ug/L		84	50 - 128
Dichlorprop	5.00	4.18		ug/L		84	44 - 121
MCPA	500	421		ug/L		84	43 - 118
MCPP	500	474		ug/L		95	45 - 121
Silvex (2,4,5-TP)	5.00	4.75		ug/L		95	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*83*		*39 - 135*

Lab Sample ID: LCSD 280-340257/3-A
Matrix: Water
Analysis Batch: 341438

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340257

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	4.60		ug/L		92	45 - 135	4	30
2,4-D	5.00	4.65		ug/L		93	46 - 126	1	30
2,4-DB	5.00	4.17		ug/L		83	18 - 135	4	30
Dalapon	5.00	4.21		ug/L		84	52 - 119	6	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-340257/3-A
Matrix: Water
Analysis Batch: 341438

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340257

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dicamba			5.00	4.41		ug/L		88	50 - 128	5	30
Dichlorprop			5.00	4.35		ug/L		87	44 - 121	4	30
MCPA			500	421		ug/L		84	43 - 118	0	30
MCPP			500	486		ug/L		97	45 - 121	3	30
Silvex (2,4,5-TP)			5.00	4.79		ug/L		96	48 - 127	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*85*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8283/1-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		08/26/16 10:57	08/26/16 13:12	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		08/26/16 10:57	08/26/16 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*08/26/16 10:57*	*08/26/16 13:12*	*1*

Lab Sample ID: LCS 590-8283/2-A
Matrix: Water
Analysis Batch: 8286

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 8283

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)			1.61	1.24		mg/L		77	50 - 150
Residual Range Organics (RRO) (C25-C36)			1.60	1.58		mg/L		99	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*80*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8284/1003
Matrix: Water
Analysis Batch: 8284

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/26/16 12:01	1
Sulfate	ND		0.50	0.13	mg/L			08/26/16 12:01	1

Lab Sample ID: MB 590-8284/1015
Matrix: Water
Analysis Batch: 8284

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/26/16 14:50	1
Sulfate	ND		0.50	0.13	mg/L			08/26/16 14:50	1

Lab Sample ID: LCS 590-8284/1002
Matrix: Water
Analysis Batch: 8284

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.0		mg/L		104	90 - 110
Sulfate	12.5	13.4		mg/L		107	90 - 110

Lab Sample ID: LCS 590-8284/1014
Matrix: Water
Analysis Batch: 8284

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.1		mg/L		105	90 - 110
Sulfate	12.5	13.2		mg/L		106	90 - 110

Lab Sample ID: MB 590-8285/1003
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/26/16 12:01	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 12:01	1

Lab Sample ID: MB 590-8285/1015
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/26/16 14:50	1
Nitrite as N	ND		0.20	0.069	mg/L			08/26/16 14:50	1

Lab Sample ID: LCS 590-8285/1002
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.24		mg/L		105	90 - 110
Nitrite as N	5.00	5.07		mg/L		101	90 - 110

Lab Sample ID: LCS 590-8285/1014
Matrix: Water
Analysis Batch: 8285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.23		mg/L		105	90 - 110
Nitrite as N	5.00	5.15		mg/L		103	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 590-8310/1002
Matrix: Water
Analysis Batch: 8310

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/29/16 13:24	1
Sulfate	ND		0.50	0.13	mg/L			08/29/16 13:24	1

Lab Sample ID: LCS 590-8310/1003
Matrix: Water
Analysis Batch: 8310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.3		mg/L		106	90 - 110
Sulfate	12.5	13.4		mg/L		107	90 - 110

Lab Sample ID: MB 590-8311/1002
Matrix: Water
Analysis Batch: 8311

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/29/16 13:24	1
Nitrite as N	ND		0.20	0.069	mg/L			08/29/16 13:24	1

Lab Sample ID: LCS 590-8311/1003
Matrix: Water
Analysis Batch: 8311

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.30		mg/L		106	90 - 110
Nitrite as N	5.00	5.20		mg/L		104	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-226150/14-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226150

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/29/16 13:05	08/31/16 19:20	1
Antimony	ND		0.00040	0.000080	mg/L		08/29/16 13:05	08/31/16 19:20	1
Barium	ND		0.0012	0.000054	mg/L		08/29/16 13:05	08/31/16 19:20	1
Beryllium	ND		0.00040	0.00010	mg/L		08/29/16 13:05	08/31/16 19:20	1
Cadmium	ND		0.00040	0.000028	mg/L		08/29/16 13:05	08/31/16 19:20	1
Chromium	ND		0.00040	0.00014	mg/L		08/29/16 13:05	08/31/16 19:20	1
Copper	ND		0.0020	0.00060	mg/L		08/29/16 13:05	08/31/16 19:20	1
Iron	ND		0.040	0.0058	mg/L		08/29/16 13:05	08/31/16 19:20	1
Lead	ND		0.00040	0.000034	mg/L		08/29/16 13:05	08/31/16 19:20	1
Manganese	ND		0.0020	0.00035	mg/L		08/29/16 13:05	08/31/16 19:20	1
Nickel	ND		0.0030	0.00040	mg/L		08/29/16 13:05	08/31/16 19:20	1
Selenium	ND		0.0010	0.00030	mg/L		08/29/16 13:05	08/31/16 19:20	1
Silver	ND		0.00040	0.000030	mg/L		08/29/16 13:05	08/31/16 19:20	1
Thallium	ND		0.0010	0.00014	mg/L		08/29/16 13:05	08/31/16 19:20	1
Vanadium	ND		0.0040	0.00098	mg/L		08/29/16 13:05	08/31/16 19:20	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226150/14-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226150

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070	0.0019	mg/L		08/29/16 13:05	08/31/16 19:20	1

Lab Sample ID: LCS 580-226150/15-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.107		mg/L		107	85 - 115
Antimony	0.100	0.110		mg/L		110	85 - 115
Barium	0.100	0.112		mg/L		112	85 - 115
Beryllium	0.100	0.106		mg/L		106	85 - 115
Cadmium	0.100	0.105		mg/L		105	85 - 115
Chromium	0.100	0.103		mg/L		103	85 - 115
Copper	0.100	0.105		mg/L		105	85 - 115
Iron	10.0	10.3		mg/L		103	85 - 115
Lead	0.100	0.106		mg/L		106	85 - 115
Manganese	0.100	0.105		mg/L		105	85 - 115
Nickel	0.100	0.105		mg/L		105	85 - 115
Selenium	0.100	0.105		mg/L		105	85 - 115
Silver	0.100	0.106		mg/L		106	85 - 115
Thallium	0.100	0.108		mg/L		108	85 - 115
Vanadium	0.100	0.104		mg/L		104	85 - 115
Zinc	0.100	0.105		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226150/16-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226150

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.106		mg/L		106	85 - 115	1	20
Antimony	0.100	0.109		mg/L		109	85 - 115	1	20
Barium	0.100	0.111		mg/L		111	85 - 115	1	20
Beryllium	0.100	0.105		mg/L		105	85 - 115	1	20
Cadmium	0.100	0.105		mg/L		105	85 - 115	1	20
Chromium	0.100	0.103		mg/L		103	85 - 115	0	20
Copper	0.100	0.104		mg/L		104	85 - 115	1	20
Iron	10.0	10.3		mg/L		103	85 - 115	1	20
Lead	0.100	0.106		mg/L		106	85 - 115	0	20
Manganese	0.100	0.105		mg/L		105	85 - 115	1	20
Nickel	0.100	0.104		mg/L		104	85 - 115	1	20
Selenium	0.100	0.105		mg/L		105	85 - 115	0	20
Silver	0.100	0.105		mg/L		105	85 - 115	1	20
Thallium	0.100	0.108		mg/L		108	85 - 115	1	20
Vanadium	0.100	0.105		mg/L		105	85 - 115	1	20
Zinc	0.100	0.104		mg/L		104	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226239/8-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/30/16 13:40	08/31/16 14:32	1
Antimony	ND		0.00040	0.000080	mg/L		08/30/16 13:40	08/31/16 14:32	1
Barium	ND		0.0012	0.000054	mg/L		08/30/16 13:40	08/31/16 14:32	1
Beryllium	ND		0.00040	0.00010	mg/L		08/30/16 13:40	08/31/16 14:32	1
Cadmium	ND		0.00040	0.000028	mg/L		08/30/16 13:40	08/31/16 14:32	1
Chromium	ND		0.00040	0.00014	mg/L		08/30/16 13:40	08/31/16 14:32	1
Copper	ND		0.0020	0.00060	mg/L		08/30/16 13:40	08/31/16 14:32	1
Iron	0.00787	J	0.040	0.0058	mg/L		08/30/16 13:40	08/31/16 14:32	1
Lead	ND		0.00040	0.000034	mg/L		08/30/16 13:40	08/31/16 14:32	1
Manganese	ND		0.0020	0.00035	mg/L		08/30/16 13:40	08/31/16 14:32	1
Nickel	ND		0.0030	0.00040	mg/L		08/30/16 13:40	08/31/16 14:32	1
Selenium	ND		0.0010	0.00030	mg/L		08/30/16 13:40	08/31/16 14:32	1
Silver	ND		0.00040	0.000030	mg/L		08/30/16 13:40	08/31/16 14:32	1
Thallium	ND		0.0010	0.00014	mg/L		08/30/16 13:40	08/31/16 14:32	1
Vanadium	ND		0.0040	0.00098	mg/L		08/30/16 13:40	08/31/16 14:32	1
Zinc	ND		0.0070	0.0019	mg/L		08/30/16 13:40	08/31/16 14:32	1

Lab Sample ID: LCS 580-226239/9-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.107		mg/L		107	85 - 115
Antimony	0.100	0.110		mg/L		110	85 - 115
Barium	0.100	0.113		mg/L		113	85 - 115
Beryllium	0.100	0.107		mg/L		107	85 - 115
Cadmium	0.100	0.107		mg/L		107	85 - 115
Chromium	0.100	0.107		mg/L		107	85 - 115
Copper	0.100	0.109		mg/L		109	85 - 115
Iron	10.0	10.7		mg/L		107	85 - 115
Lead	0.100	0.108		mg/L		108	85 - 115
Manganese	0.100	0.108		mg/L		108	85 - 115
Nickel	0.100	0.109		mg/L		109	85 - 115
Selenium	0.100	0.105		mg/L		105	85 - 115
Silver	0.100	0.108		mg/L		108	85 - 115
Thallium	0.100	0.111		mg/L		111	85 - 115
Vanadium	0.100	0.109		mg/L		109	85 - 115
Zinc	0.100	0.106		mg/L		106	85 - 115

Lab Sample ID: LCSD 580-226239/10-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226239

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.106		mg/L		106	85 - 115	1	20
Antimony	0.100	0.109		mg/L		109	85 - 115	1	20
Barium	0.100	0.111		mg/L		111	85 - 115	2	20
Beryllium	0.100	0.106		mg/L		106	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-226239/10-A
Matrix: Water
Analysis Batch: 226420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226239

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.106		mg/L		106	85 - 115	0	20
Chromium	0.100	0.106		mg/L		106	85 - 115	1	20
Copper	0.100	0.107		mg/L		107	85 - 115	1	20
Iron	10.0	10.6		mg/L		106	85 - 115	2	20
Lead	0.100	0.107		mg/L		107	85 - 115	1	20
Manganese	0.100	0.106		mg/L		106	85 - 115	2	20
Nickel	0.100	0.107		mg/L		107	85 - 115	2	20
Selenium	0.100	0.104		mg/L		104	85 - 115	1	20
Silver	0.100	0.108		mg/L		108	85 - 115	0	20
Thallium	0.100	0.109		mg/L		109	85 - 115	2	20
Vanadium	0.100	0.107		mg/L		107	85 - 115	1	20
Zinc	0.100	0.104		mg/L		104	85 - 115	1	20

Lab Sample ID: LCS 580-226335/5-A
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.104		mg/L		104	85 - 115
Antimony	0.100	0.107		mg/L		107	85 - 115
Barium	0.100	0.110		mg/L		110	85 - 115
Beryllium	0.100	0.105		mg/L		105	85 - 115
Cadmium	0.100	0.106		mg/L		106	85 - 115
Chromium	0.100	0.105		mg/L		105	85 - 115
Copper	0.100	0.104		mg/L		104	85 - 115
Iron	10.0	10.7		mg/L		107	85 - 115
Lead	0.100	0.105		mg/L		105	85 - 115
Manganese	0.100	0.106		mg/L		106	85 - 115
Nickel	0.100	0.105		mg/L		105	85 - 115
Selenium	0.100	0.104		mg/L		104	85 - 115
Silver	0.100	0.106		mg/L		106	85 - 115
Thallium	0.100	0.106		mg/L		106	85 - 115
Vanadium	0.100	0.105		mg/L		105	85 - 115
Zinc	0.100	0.105		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226335/6-A
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226335

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.103		mg/L		103	85 - 115	1	20
Antimony	0.100	0.106		mg/L		106	85 - 115	2	20
Barium	0.100	0.107		mg/L		107	85 - 115	2	20
Beryllium	0.100	0.103		mg/L		103	85 - 115	3	20
Cadmium	0.100	0.104		mg/L		104	85 - 115	2	20
Chromium	0.100	0.104		mg/L		104	85 - 115	1	20
Copper	0.100	0.101		mg/L		101	85 - 115	2	20
Iron	10.0	10.5		mg/L		105	85 - 115	2	20
Lead	0.100	0.103		mg/L		103	85 - 115	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-226335/6-A
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226335

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	0.100	0.105		mg/L		105	85 - 115	1	20
Nickel	0.100	0.103		mg/L		103	85 - 115	2	20
Selenium	0.100	0.103		mg/L		103	85 - 115	1	20
Silver	0.100	0.104		mg/L		104	85 - 115	2	20
Thallium	0.100	0.102		mg/L		102	85 - 115	3	20
Vanadium	0.100	0.103		mg/L		103	85 - 115	2	20
Zinc	0.100	0.101		mg/L		101	85 - 115	4	20

Lab Sample ID: LCS 580-226471/5-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0975		mg/L		97	85 - 115
Antimony	0.100	0.103		mg/L		103	85 - 115
Barium	0.100	0.106		mg/L		106	85 - 115
Beryllium	0.100	0.0941		mg/L		94	85 - 115
Cadmium	0.100	0.100		mg/L		100	85 - 115
Chromium	0.100	0.0968		mg/L		97	85 - 115
Copper	0.100	0.0974		mg/L		97	85 - 115
Iron	10.0	9.54		mg/L		95	85 - 115
Lead	0.100	0.0980		mg/L		98	85 - 115
Manganese	0.100	0.0973		mg/L		97	85 - 115
Nickel	0.100	0.0980		mg/L		98	85 - 115
Selenium	0.100	0.0973		mg/L		97	85 - 115
Silver	0.100	0.0992		mg/L		99	85 - 115
Thallium	0.100	0.106		mg/L		106	85 - 115
Vanadium	0.100	0.0975		mg/L		97	85 - 115
Zinc	0.100	0.0993		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-226471/6-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0985		mg/L		98	85 - 115	1	20
Antimony	0.100	0.108		mg/L		108	85 - 115	5	20
Barium	0.100	0.110		mg/L		110	85 - 115	4	20
Beryllium	0.100	0.0983		mg/L		98	85 - 115	4	20
Cadmium	0.100	0.105		mg/L		105	85 - 115	4	20
Chromium	0.100	0.0978		mg/L		98	85 - 115	1	20
Copper	0.100	0.0981		mg/L		98	85 - 115	1	20
Iron	10.0	9.75		mg/L		97	85 - 115	2	20
Lead	0.100	0.101		mg/L		101	85 - 115	3	20
Manganese	0.100	0.0988		mg/L		99	85 - 115	1	20
Nickel	0.100	0.0986		mg/L		99	85 - 115	1	20
Selenium	0.100	0.0997		mg/L		100	85 - 115	2	20
Silver	0.100	0.103		mg/L		103	85 - 115	4	20
Thallium	0.100	0.109		mg/L		109	85 - 115	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-226471/6-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226471

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vanadium			0.100	0.0984		mg/L		98	85 - 115	1	20
Zinc			0.100	0.0965		mg/L		97	85 - 115	3	20

Lab Sample ID: MB 580-226128/3-B
Matrix: Water
Analysis Batch: 226545

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		08/31/16 09:38	09/01/16 16:29	1
Antimony	ND		0.00040	0.000080	mg/L		08/31/16 09:38	09/01/16 16:29	1
Barium	ND		0.0012	0.000054	mg/L		08/31/16 09:38	09/01/16 16:29	1
Beryllium	ND		0.00040	0.00010	mg/L		08/31/16 09:38	09/01/16 16:29	1
Cadmium	0.0000343	J	0.00040	0.000028	mg/L		08/31/16 09:38	09/01/16 16:29	1
Chromium	ND		0.00040	0.00014	mg/L		08/31/16 09:38	09/01/16 16:29	1
Copper	ND		0.0020	0.00060	mg/L		08/31/16 09:38	09/01/16 16:29	1
Iron	ND		0.040	0.0058	mg/L		08/31/16 09:38	09/01/16 16:29	1
Lead	ND		0.00040	0.000034	mg/L		08/31/16 09:38	09/01/16 16:29	1
Manganese	ND		0.0020	0.00035	mg/L		08/31/16 09:38	09/01/16 16:29	1
Nickel	ND		0.0030	0.00040	mg/L		08/31/16 09:38	09/01/16 16:29	1
Selenium	ND		0.0010	0.00030	mg/L		08/31/16 09:38	09/01/16 16:29	1
Silver	0.0000307	J	0.00040	0.000030	mg/L		08/31/16 09:38	09/01/16 16:29	1
Thallium	ND		0.0010	0.00014	mg/L		08/31/16 09:38	09/01/16 16:29	1
Vanadium	ND		0.0040	0.00098	mg/L		08/31/16 09:38	09/01/16 16:29	1
Zinc	ND		0.0070	0.0019	mg/L		08/31/16 09:38	09/01/16 16:29	1

Lab Sample ID: 590-4322-1 DU
Matrix: Water
Analysis Batch: 226545

Client Sample ID: MW-12A-082516
Prep Type: Dissolved
Prep Batch: 226335

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	0.0014			0.00139		mg/L				3	20
Antimony	0.000080	J		ND		mg/L				NC	20
Barium	0.0074			0.00706		mg/L				4	20
Beryllium	ND			ND		mg/L				NC	20
Cadmium	0.000059	J B		0.0000299	J F5	mg/L				66	20
Chromium	0.0011			0.000924		mg/L				14	20
Copper	ND			ND		mg/L				NC	20
Iron	0.014	J		0.0118	J	mg/L				18	20
Lead	0.000078	J		0.0000496	J F5	mg/L				44	20
Manganese	0.0037			0.00332		mg/L				11	20
Nickel	ND			ND		mg/L				NC	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Thallium	ND			ND		mg/L				NC	20
Vanadium	0.011			0.0109		mg/L				3	20
Zinc	0.0051	J		0.00306	J F5	mg/L				49	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226278/3-C
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		09/01/16 10:54	09/02/16 12:53	1
Antimony	ND		0.00040	0.000080	mg/L		09/01/16 10:54	09/02/16 12:53	1
Barium	ND		0.0012	0.000054	mg/L		09/01/16 10:54	09/02/16 12:53	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 10:54	09/02/16 12:53	1
Cadmium	ND		0.00040	0.000028	mg/L		09/01/16 10:54	09/02/16 12:53	1
Chromium	ND		0.00040	0.00014	mg/L		09/01/16 10:54	09/02/16 12:53	1
Copper	ND		0.0020	0.00060	mg/L		09/01/16 10:54	09/02/16 12:53	1
Iron	ND		0.040	0.0058	mg/L		09/01/16 10:54	09/02/16 12:53	1
Lead	ND		0.00040	0.000034	mg/L		09/01/16 10:54	09/02/16 12:53	1
Manganese	ND		0.0020	0.00035	mg/L		09/01/16 10:54	09/02/16 12:53	1
Nickel	ND		0.0030	0.00040	mg/L		09/01/16 10:54	09/02/16 12:53	1
Selenium	ND		0.0010	0.00030	mg/L		09/01/16 10:54	09/02/16 12:53	1
Silver	ND		0.00040	0.000030	mg/L		09/01/16 10:54	09/02/16 12:53	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 10:54	09/02/16 12:53	1
Vanadium	ND		0.0040	0.00098	mg/L		09/01/16 10:54	09/02/16 12:53	1
Zinc	ND		0.0070	0.0019	mg/L		09/01/16 10:54	09/02/16 12:53	1

Lab Sample ID: 590-4322-3 DU
Matrix: Water
Analysis Batch: 226722

Client Sample ID: MW-7B-082516
Prep Type: Dissolved
Prep Batch: 226471

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0040		0.00399		mg/L		0.4	20
Antimony	0.00022	J	0.000218	J	mg/L		0.3	20
Barium	0.55		0.538		mg/L		2	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	0.00091		0.000849		mg/L		7	20
Chromium	0.0010		0.00100		mg/L		4	20
Copper	0.033		0.0330		mg/L		0.8	20
Iron	0.0079	J	ND		mg/L		NC	20
Lead	0.0039		0.00392		mg/L		0.6	20
Manganese	0.030		0.0302		mg/L		2	20
Nickel	0.015		0.0154		mg/L		0.3	20
Selenium	0.00032	J	ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0079		0.00827		mg/L		4	20
Zinc	1.5		1.54		mg/L		2	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-226226/19-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		08/30/16 11:20	08/30/16 14:56	1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-226226/20-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00210		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-226226/21-A
Matrix: Water
Analysis Batch: 226336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00202		mg/L		101	85 - 115	4	20

Lab Sample ID: LCS 580-226463/5-A
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226463

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00201		mg/L		100	85 - 115

Lab Sample ID: LCSD 580-226463/6-A
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226463

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00200		mg/L		100	85 - 115	0	20

Lab Sample ID: LCS 580-226470/5-A
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00209		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-226470/6-A
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226470

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00202		mg/L		101	85 - 115	3	20

Lab Sample ID: MB 580-226128/3-C
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226463

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 09:51	09/01/16 12:39	1

Lab Sample ID: 590-4322-4 DU
Matrix: Water
Analysis Batch: 226588

Client Sample ID: DUP-082516
Prep Type: Dissolved
Prep Batch: 226463

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Lab Sample ID: MB 580-226278/3-B
Matrix: Water
Analysis Batch: 226588

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		09/01/16 10:31	09/01/16 12:53	1

Lab Sample ID: 590-4322-2 DU
Matrix: Water
Analysis Batch: 226588

Client Sample ID: MW-1A-082516
Prep Type: Dissolved
Prep Batch: 226470

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-368088/1-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 368088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/06/16 15:11	09/06/16 15:23	1

Lab Sample ID: LCS 490-368088/3-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Lab Sample ID: LCSD 490-368088/4-A
Matrix: Water
Analysis Batch: 368113

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.0990		mg/L		99	90 - 110	3	20

Lab Sample ID: 590-4322-3 MS
Matrix: Water
Analysis Batch: 368113

Client Sample ID: MW-7B-082516
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	ND	F1	mg/L		0	90 - 110

Lab Sample ID: 590-4322-4 MS
Matrix: Water
Analysis Batch: 368113

Client Sample ID: DUP-082516
Prep Type: Total/NA
Prep Batch: 368088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	ND	F1	mg/L		0	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-366375/1-A
Matrix: Water
Analysis Batch: 366637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366375

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 08:57	1

Lab Sample ID: LCS 490-366375/2-A
Matrix: Water
Analysis Batch: 366637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.77		mg/L		95	90 - 110

Lab Sample ID: 590-4322-1 MS
Matrix: Water
Analysis Batch: 366637

Client Sample ID: MW-12A-082516
Prep Type: Total/NA
Prep Batch: 366375

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.098	J	5.00	5.31		mg/L		104	90 - 110

Lab Sample ID: MB 490-366376/1-A
Matrix: Water
Analysis Batch: 366638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366376

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		08/29/16 15:06	08/30/16 09:49	1

Lab Sample ID: LCS 490-366376/2-A
Matrix: Water
Analysis Batch: 366638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366376

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.08		mg/L		102	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-366363/3
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			08/29/16 14:30	1

Lab Sample ID: LCS 490-366363/4
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	52.6		mg/L		105	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-366363/5
Matrix: Water
Analysis Batch: 366363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	50.5		mg/L		101	90 - 110	4	20

Lab Sample ID: 590-4322-4 DU
Matrix: Water
Analysis Batch: 366363

Client Sample ID: DUP-082516
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chemical Oxygen Demand	ND			ND		mg/L				NC	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-368182/1
Matrix: Water
Analysis Batch: 368182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			09/06/16 15:53	1

Lab Sample ID: LCS 490-368182/4
Matrix: Water
Analysis Batch: 368182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.3		mg/L		103	90 - 110		
TOC Result 1			10.0	10.3		mg/L		103	90 - 110		
TOC Result 2			10.0	10.2		mg/L		102	90 - 110		

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: MW-12A-082516

Date Collected: 08/25/16 10:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8293	08/26/16 23:48	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8292	08/26/16 23:48	MRS	TAL SPK
Total/NA	Prep	3520C			1049.1 mL	2.0 mL	226299	08/30/16 16:43	JDR	TAL SEA
Total/NA	Analysis	8270D		1			226512	09/01/16 19:28	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 15:40	NMI	TAL SPK
Total/NA	Prep	3510C			249.2 mL	2.5 mL	226346	08/31/16 10:32	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226447	08/31/16 21:27	DCV	TAL SEA
Total/NA	Prep	3510C			249.1 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	8331	08/30/16 23:53	NMI	TAL SPK
Total/NA	Prep	3510C			1008.3 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 22:29	TEM	TAL DEN
Total/NA	Prep	8151A			1046.5 mL	10 mL	340052	08/30/16 09:02	KI	TAL DEN
Total/NA	Analysis	8151A		1			340865	09/06/16 15:44	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			245.4 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 17:27	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8284	08/26/16 14:01	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8285	08/26/16 14:01	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226128	08/29/16 11:19	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226335	08/31/16 09:38	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226545	09/01/16 16:33	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:23	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226128	08/29/16 11:19	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226463	09/01/16 09:51	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 12:51	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:39	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:40	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:12	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:21	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:33	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	368182	09/06/16 15:53	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8287	08/25/16 16:40	SJK	TAL SPK

Client Sample ID: MW-1A-082516

Date Collected: 08/25/16 12:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8295	08/27/16 02:43	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8294	08/27/16 02:43	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			812.1 mL	2.0 mL	226299	08/30/16 16:43	JDR	TAL SEA
Total/NA	Analysis	8270D		1			226512	09/01/16 19:54	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 15:56	NMI	TAL SPK
Total/NA	Prep	3510C			209.9 mL	2.5 mL	226346	08/31/16 10:32	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226447	08/31/16 21:44	DCV	TAL SEA
Total/NA	Prep	3510C			215.1 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/31/16 00:12	NMI	TAL SPK
Total/NA	Prep	3510C			1004.3 mL	2 mL	340258	08/31/16 07:59	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343148	09/22/16 09:34	TEM	TAL DEN
Total/NA	Prep	8151A			945.6 mL	10 mL	340257	08/31/16 08:09	KI	TAL DEN
Total/NA	Analysis	8151A		1			341438	09/09/16 15:13	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			226.6 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 17:45	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8285	08/26/16 14:14	MRS	TAL SPK
Total/NA	Analysis	300.0		10			8310	08/29/16 13:48	MRS	TAL SPK
Total/NA	Analysis	300.0		10			8311	08/29/16 13:48	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			150 mL	150 mL	226278	08/30/16 15:39	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226471	09/01/16 10:54	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226722	09/02/16 13:05	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:27	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			150 mL	150 mL	226278	08/30/16 15:39	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226470	09/01/16 10:31	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 13:00	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:41	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:41	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366375	08/29/16 15:12	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366637	08/30/16 09:26	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:33	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	368182	09/06/16 15:53	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8287	08/25/16 16:40	SJK	TAL SPK

Client Sample ID: MW-7B-082516

Date Collected: 08/25/16 14:55
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8295	08/27/16 03:05	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8294	08/27/16 03:05	MRS	TAL SPK
Total/NA	Prep	3520C			1052.7 mL	2.0 mL	226299	08/30/16 16:43	JDR	TAL SEA
Total/NA	Analysis	8270D		1			226512	09/01/16 20:20	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 16:11	NMI	TAL SPK
Total/NA	Prep	3510C			224.2 mL	2.5 mL	226346	08/31/16 10:32	JCV	TAL SEA

Client Sample ID: MW-7B-082516

Lab Sample ID: 590-4322-3

Date Collected: 08/25/16 14:55

Matrix: Water

Date Received: 08/25/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081B		1			226447	08/31/16 22:00	DCV	TAL SEA
Total/NA	Prep	3510C			247.3 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/31/16 00:32	NMI	TAL SPK
Total/NA	Prep	3510C			1038.7 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 23:00	TEM	TAL DEN
Total/NA	Prep	8151A			1037.3 mL	10 mL	340052	08/30/16 09:02	KI	TAL DEN
Total/NA	Analysis	8151A		1			340865	09/06/16 16:06	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			249.6 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 18:03	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8284	08/26/16 14:26	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8285	08/26/16 14:26	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			150 mL	150 mL	226278	08/30/16 15:39	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226471	09/01/16 10:54	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226722	09/02/16 12:57	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226150	08/29/16 13:05	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 20:32	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			150 mL	150 mL	226278	08/30/16 15:39	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226470	09/01/16 10:31	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 13:05	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:43	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:42	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366376	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366638	08/30/16 09:52	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:33	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	368182	09/06/16 15:53	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8287	08/25/16 16:40	SJK	TAL SPK

Client Sample ID: DUP-082516

Lab Sample ID: 590-4322-4

Date Collected: 08/25/16 08:00

Matrix: Water

Date Received: 08/25/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8295	08/27/16 03:49	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8294	08/27/16 03:49	MRS	TAL SPK
Total/NA	Prep	3520C			1040.1 mL	2.0 mL	226299	08/30/16 16:43	JDR	TAL SEA
Total/NA	Analysis	8270D		1			226512	09/01/16 20:45	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 09:37	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 16:27	NMI	TAL SPK
Total/NA	Prep	3510C			228.5 mL	2.5 mL	226346	08/31/16 10:32	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226447	08/31/16 22:17	DCV	TAL SEA
Total/NA	Prep	3510C			215.5 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Client Sample ID: DUP-082516

Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8082A		1			8331	08/31/16 00:51	NMI	TAL SPK
Total/NA	Prep	3510C			1055.1 mL	2 mL	339916	08/29/16 13:00	MAV	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343654	09/25/16 23:31	TEM	TAL DEN
Total/NA	Prep	8151A			1033.3 mL	10 mL	340052	08/30/16 09:02	KI	TAL DEN
Total/NA	Analysis	8151A		1			340865	09/06/16 16:29	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			248.4 mL	2 mL	8283	08/26/16 10:57	EAF	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8286	08/26/16 18:21	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8284	08/26/16 15:14	MRS	TAL SPK
Total/NA	Analysis	300.0		1			8285	08/26/16 15:14	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226128	08/29/16 11:19	MKN	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226335	08/31/16 09:38	MKN	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	226545	09/01/16 16:41	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226239	08/30/16 13:40	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226420	08/31/16 15:04	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226128	08/29/16 11:19	MKN	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	226463	09/01/16 09:51	MKN	TAL SEA
Dissolved	Analysis	245.1		1			226588	09/01/16 12:46	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	226226	08/30/16 11:20	MKN	TAL SEA
Total/NA	Analysis	245.1		1			226336	08/30/16 15:46	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	368088	09/06/16 15:11	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	368113	09/06/16 15:45	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	366376	08/29/16 15:06	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	366638	08/30/16 09:53	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	366363	08/29/16 14:33	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	368182	09/06/16 15:53	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8287	08/25/16 16:40	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Recor

590-4322 Chain of Custody

TestAmerica

9/29/2016

Client Information	Sampler: JML	Lab PM: Arrington, Ra	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Ruddors	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 2
Company: GeoEngineers Inc			Job #:
Address: 523 East Second Ave	Due Date Requested:	Analysis Requested	Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): STD.		
State, Zip: WA, 99202			
Phone: 509-363-3125	PO #: Purchase Order not required		
Email: jmlee@geoengineers.com	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site: Marshall	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Acetone)	8290A - Dioxins (17 isomers Lab)	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_DW_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	S	N	D	A	N	N	N	N		
MW-12A:082516	8/25/16	1000	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-1A:082516		1200		Water	N					X	X	X	X	X	X		X	X	X	17	
MW-7B:082516		1455		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
Dup:082516	8/25/16	0800	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/25/2016 1630	GEI		08/25/16 1630	TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.9°C

TestAmerica Spokane
11922 East 1st Ave
Spokane WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202	PO #: Purchase Order not required			
Phone: 509-363-3125	WO #:			
Email: jmlee@geoengineers.com	Project #: 59000577			
Project Name: Marshall 0504-104-00	SSOW#:			
Site: Marshall				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	A	R	N	A		
MW-12A:082516	8/25/16	1000	G	Water	N		X	X	X	X	25	
MW-1A:082516		1200		Water	N		X	X	X	X	17	
MW-7B:082516		1455		Water	N		X	X	X	X	25	
dup:082516	8/25/16	0900	G	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/25/2016	GEI		08/25/16 1630	TA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.9°C

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmiller@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Acidic)	8290A - Dioxins / Furans by HRGC/HRMS	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_300_ORGFM	Total Number of containers	Special Instructions/Note:
			Preservation Code				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-1A: 082616	8/26/16	0940	G	Water	N		X	X	X							X				4	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4322 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/26/2016 1620			08/26/16 4:20pm	TA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks: 5.5°C

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1963.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		**Analysis Requested**		Job #: 590-4322-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/7/2016			**Preservation Codes:** A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP Herbicide (Aqueous)	8141B/3510C Standard 8141 list	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-12A-082516 (590-4322-1)	8/25/16	10:00 Pacific		Water			X	X	4	
MW-7B-082516 (590-4322-3)	8/25/16	14:55 Pacific		Water			X	X	4	
DUP-082516 (590-4322-4)	8/25/16	08:00 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Sheila Kratz	Date/Time: 8/26/16 1435	Company: TAL Spok	Received by: [illegible]	Date/Time: 8-27-16 0835	Company: TAL	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.0 IR 5.0 Thermister RP 8-27-16

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1971.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		**Analysis Requested**		Job #: 590-4322-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/7/2016			**Preservation Codes:** A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			Other:
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-1A-082516 (590-4322-2)	8/25/16	12:00 Pacific		Water			X	X	4	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Krady	8/29/16 1600	TA Spok	A	0905 30Aug16	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		0.5 IR-5 0.0 30Aug16 Transfer FAM

9/29/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-4322 Chain of Custody

Cooler Received/Opened On 8/27/2016 @ 0915

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1806 (last 4 digits, FedEx) Courier: _FedEx Sat. Del._

IR Gun ID 14740456 pH Strip Lot HC58117 Chlorine Strip Lot 71130

2. Temperature of rep. sample or temp blank when opened: 3.3 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: IRight

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) SW

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? Bubblewrap (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) HG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) HG

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) HG

I certify that I attached a label with the unique LIMS number to each container (intial) HG

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
4322

tAmerica
ER IN ENVIRONMENTAL TESTING

9/29/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	3.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		**Analysis Requested**	Job #: 590-4322-1
Address: 2960 Foster Creighton Drive,	Due Date Requested: 9/7/2016		**Preservation Codes:**
City: Nashville	TAT Requested (days):		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		Other:
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/ Total Organic Carbon (TOC)	410.4/ Chemical Oxygen Demand (COD)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-12A-082516 (590-4322-1)	8/25/16	10:00 Pacific		Water			X	X	X	X	3	
MW-1A-082516 (590-4322-2)	8/25/16	12:00 Pacific		Water			X	X	X	X	3	
MW-7B-082516 (590-4322-3)	8/25/16	14:55 Pacific		Water			X	X	X	X	3	
DUP-082516 (590-4322-4)	8/25/16	08:00 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Sheila Krack	Date/Time: 8/26/16 14:41	Company TA Spok	Received by: 33
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Received by:	Date/Time: 8/27/16 0915	Company TAN			
Received by:	Date/Time:	Company			
Received by:	Date/Time:	Company			

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:
	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1962.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4322-1
Address: 5755 8th Street East,	Due Date Requested: 9/7/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/FILTRATION Dissolved Mercury - Seattle	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-12A-082516 (590-4322-1)	8/25/16	10:00 Pacific		Water			X	X	X	X	X	X	6	
MW-1A-082516 (590-4322-2)	8/25/16	12:00 Pacific		Water			X	X	X		X	X	3	
MW-7B-082516 (590-4322-3)	8/25/16	14:55 Pacific		Water			X	X	X	X	X	X	6	
DUP-082516 (590-4322-4)	8/25/16	08:00 Pacific		Water			X	X	X	X	X	X	5	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kraft	8/26/16 1435	TA Spok	B. Hall	SEA TA 8.27.16 1045	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: IR2 = 1.7/1.8 w/o CF

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1970.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4322-1
Address: 5755 8th Street East,	Due Date Requested: 9/9/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-1A-082516 (590-4322-2)	8/25/16	12:00 Pacific		Water			X	3	

Possible Hazard Identification		*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*	
Unconfirmed		☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:	
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Sheila Kratz	Date/Time: 8/29/16 545	Company: TheLOOK	Received by: Tom Blank	Date/Time: 8/30/16 1035	Company: TA-Sea
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR2 1.2/1.3

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 3
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 08/27/16 11:59 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 6
Creator: Muniz, Ashley T

List Source: TestAmerica Denver
List Creation: 08/30/16 11:04 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 2
Creator: Gundi, Hozar K

List Source: TestAmerica Nashville
List Creation: 08/27/16 10:30 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 4
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 08/27/16 12:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 5
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 08/27/16 12:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-1

Login Number: 4322
List Number: 7
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 08/30/16 11:27 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	13.2°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	False	COC lists 3 containers and 8270 analysis only, 4 cont. rcvd for 8270 & dis.metal
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Both 1L ambers are filled to well below shoulder.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4322-2
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
10/4/2016 10:48:22 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-2

Job ID: 590-4322-2

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/25/2016 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9º C.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4322-1	MW-12A-082516	Water	08/25/16 10:00	08/25/16 16:30
590-4322-2	MW-1A-082516	Water	08/25/16 12:00	08/25/16 16:30
590-4322-3	MW-7B-082516	Water	08/25/16 14:55	08/25/16 16:30
590-4322-4	DUP-082516	Water	08/25/16 08:00	08/25/16 16:30

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: MW-12A-082516

Lab Sample ID: 590-4322-1

Date Collected: 08/25/16 10:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.89	pg/L		09/19/16 17:09	09/29/16 02:14	1
2,3,7,8-TCDF	ND		9.5	0.51	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,7,8-PeCDD	ND		48	1.1	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,7,8-PeCDF	ND		48	0.86	pg/L		09/19/16 17:09	09/29/16 02:14	1
2,3,4,7,8-PeCDF	ND		48	0.90	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,4,7,8-HxCDD	ND		48	0.66	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,6,7,8-HxCDD	ND		48	0.62	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,7,8,9-HxCDD	ND		48	0.52	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,4,7,8-HxCDF	ND		48	0.49	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,6,7,8-HxCDF	ND		48	0.44	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,7,8,9-HxCDF	ND		48	0.51	pg/L		09/19/16 17:09	09/29/16 02:14	1
2,3,4,6,7,8-HxCDF	ND		48	0.48	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,4,6,7,8-HpCDD	**5.4**	**J B**	48	1.0	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.77	pg/L		09/19/16 17:09	09/29/16 02:14	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.98	pg/L		09/19/16 17:09	09/29/16 02:14	1
OCDD	**23**	**J B**	95	1.2	pg/L		09/19/16 17:09	09/29/16 02:14	1
OCDF	ND		95	1.1	pg/L		09/19/16 17:09	09/29/16 02:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-2,3,7,8-TCDF	*83*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-1,2,3,7,8-PeCDD	*82*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-1,2,3,7,8-PeCDF	*90*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-1,2,3,6,7,8-HxCDD	*86*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*82*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*
13C-OCDD	*93*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:14*	*1*

Client Sample ID: MW-1A-082516

Lab Sample ID: 590-4322-2

Date Collected: 08/25/16 12:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		12	1.2	pg/L		09/19/16 17:09	09/29/16 02:56	1
2,3,7,8-TCDF	ND		12	0.69	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,7,8-PeCDD	ND		59	1.1	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,7,8-PeCDF	ND		59	0.89	pg/L		09/19/16 17:09	09/29/16 02:56	1
2,3,4,7,8-PeCDF	ND		59	0.93	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,4,7,8-HxCDD	ND		59	0.84	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,6,7,8-HxCDD	ND		59	0.79	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,7,8,9-HxCDD	ND		59	0.66	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,4,7,8-HxCDF	ND		59	0.67	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,6,7,8-HxCDF	ND		59	0.60	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,7,8,9-HxCDF	ND		59	0.69	pg/L		09/19/16 17:09	09/29/16 02:56	1
2,3,4,6,7,8-HxCDF	ND		59	0.65	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,4,6,7,8-HpCDD	**3.9**	**J B q**	59	1.1	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,4,6,7,8-HpCDF	ND		59	0.73	pg/L		09/19/16 17:09	09/29/16 02:56	1
1,2,3,4,7,8,9-HpCDF	ND		59	0.94	pg/L		09/19/16 17:09	09/29/16 02:56	1

Client Sample ID: MW-1A-082516

Lab Sample ID: 590-4322-2

Date Collected: 08/25/16 12:00

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	13	J B q	120	1.0	pg/L		09/19/16 17:09	09/29/16 02:56	1
OCDF	1.4	J q	120	0.89	pg/L		09/19/16 17:09	09/29/16 02:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-2,3,7,8-TCDF	*92*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-1,2,3,7,8-PeCDD	*90*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-1,2,3,7,8-PeCDF	*98*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*90*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*88*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*
13C-OCDD	*104*		*40 - 135*	*09/19/16 17:09*	*09/29/16 02:56*	*1*

Client Sample ID: MW-7B-082516

Lab Sample ID: 590-4322-3

Date Collected: 08/25/16 14:55

Matrix: Water

Date Received: 08/25/16 16:30

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.68	pg/L		09/19/16 17:09	09/29/16 03:39	1
2,3,7,8-TCDF	ND		9.6	0.53	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,7,8-PeCDD	ND		48	1.2	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,7,8-PeCDF	ND		48	0.80	pg/L		09/19/16 17:09	09/29/16 03:39	1
2,3,4,7,8-PeCDF	ND		48	0.84	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,4,7,8-HxCDD	ND		48	0.60	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,6,7,8-HxCDD	ND		48	0.56	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,7,8,9-HxCDD	ND		48	0.47	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,4,7,8-HxCDF	ND		48	0.57	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,6,7,8-HxCDF	ND		48	0.51	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,7,8,9-HxCDF	ND		48	0.59	pg/L		09/19/16 17:09	09/29/16 03:39	1
2,3,4,6,7,8-HxCDF	ND		48	0.55	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,4,6,7,8-HpCDD	2.6	J B	48	0.96	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.70	pg/L		09/19/16 17:09	09/29/16 03:39	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.90	pg/L		09/19/16 17:09	09/29/16 03:39	1
OCDD	10	J B	96	0.90	pg/L		09/19/16 17:09	09/29/16 03:39	1
OCDF	ND		96	1.0	pg/L		09/19/16 17:09	09/29/16 03:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-2,3,7,8-TCDF	*88*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-1,2,3,7,8-PeCDF	*93*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*
13C-OCDD	*99*		*40 - 135*	*09/19/16 17:09*	*09/29/16 03:39*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-2

Client Sample ID: DUP-082516
Date Collected: 08/25/16 08:00
Date Received: 08/25/16 16:30

Lab Sample ID: 590-4322-4
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.78	pg/L		09/19/16 17:09	09/29/16 04:22	1
2,3,7,8-TCDF	ND		9.6	0.52	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,7,8-PeCDD	ND		48	0.98	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,7,8-PeCDF	ND		48	0.70	pg/L		09/19/16 17:09	09/29/16 04:22	1
2,3,4,7,8-PeCDF	ND		48	0.74	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,4,7,8-HxCDD	ND		48	0.69	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,6,7,8-HxCDD	ND		48	0.64	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,7,8,9-HxCDD	ND		48	0.54	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,4,7,8-HxCDF	ND		48	0.40	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,6,7,8-HxCDF	ND		48	0.36	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,7,8,9-HxCDF	ND		48	0.42	pg/L		09/19/16 17:09	09/29/16 04:22	1
2,3,4,6,7,8-HxCDF	ND		48	0.40	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,4,6,7,8-HpCDD	**1.8**	**J B q**	48	0.52	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.57	pg/L		09/19/16 17:09	09/29/16 04:22	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.73	pg/L		09/19/16 17:09	09/29/16 04:22	1
OCDD	**6.6**	**J B**	96	0.78	pg/L		09/19/16 17:09	09/29/16 04:22	1
OCDF	ND		96	0.74	pg/L		09/19/16 17:09	09/29/16 04:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*81*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-2,3,7,8-TCDF	*91*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-1,2,3,7,8-PeCDD	*87*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-1,2,3,7,8-PeCDF	*96*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*90*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*
13C-OCDD	*104*		*40 - 135*	*09/19/16 17:09*	*09/29/16 04:22*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-127940/1-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127940

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,7,8-TCDF	ND		10	0.27	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDD	ND		50	0.56	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDF	ND		50	0.47	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,7,8-PeCDF	ND		50	0.48	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDD	ND		50	0.41	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDD	ND		50	0.42	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDD	ND		50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDF	ND		50	0.32	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDF	ND		50	0.31	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDF	ND		50	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,6,7,8-HxCDF	ND		50	0.33	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDD	1.10	J	50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDF	0.430	J q	50	0.19	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.22	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDD	3.50	J	100	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDF	ND		100	0.40	pg/L		09/19/16 15:17	09/25/16 19:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-OCDD	*72*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	191		pg/L		95	64 - 142
2,3,7,8-TCDF	200	199		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135
2,3,4,7,8-PeCDF	1000	1030		pg/L		103	74 - 137
1,2,3,4,7,8-HxCDD	1000	853		pg/L		85	56 - 146
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	73 - 144
1,2,3,7,8,9-HxCDD	1000	949		pg/L		95	71 - 151
1,2,3,4,7,8-HxCDF	1000	1040		pg/L		104	75 - 131
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	77 - 142
2,3,4,6,7,8-HxCDF	1000	1080		pg/L		108	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	999		pg/L		100	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8,9-HpCDF			1000	942		pg/L		94	83 - 130		
OCDD			2000	2000		pg/L		100	80 - 132		
OCDF			2000	2170		pg/L		109	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*64*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*83*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*77*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-127940/3-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	213		pg/L		107	64 - 142	11	20
2,3,7,8-TCDF			200	212		pg/L		106	71 - 142	6	20
1,2,3,7,8-PeCDD			1000	1070		pg/L		107	71 - 140	6	20
1,2,3,7,8-PeCDF			1000	1070		pg/L		107	76 - 135	1	20
2,3,4,7,8-PeCDF			1000	1050		pg/L		105	74 - 137	2	20
1,2,3,4,7,8-HxCDD			1000	969		pg/L		97	56 - 146	13	20
1,2,3,6,7,8-HxCDD			1000	1080		pg/L		108	73 - 144	5	20
1,2,3,7,8,9-HxCDD			1000	1030		pg/L		103	71 - 151	9	20
1,2,3,4,7,8-HxCDF			1000	1100		pg/L		110	75 - 131	6	20
1,2,3,6,7,8-HxCDF			1000	1200		pg/L		120	76 - 133	5	20
1,2,3,7,8,9-HxCDF			1000	1120		pg/L		112	77 - 142	8	20
2,3,4,6,7,8-HxCDF			1000	1170		pg/L		117	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD			1000	1060		pg/L		106	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF			1000	1070		pg/L		107	79 - 133	5	20
1,2,3,4,7,8,9-HpCDF			1000	1010		pg/L		101	83 - 130	7	20
OCDD			2000	2170		pg/L		108	80 - 132	8	20
OCDF			2000	2380		pg/L		119	72 - 140	9	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*86*		*40 - 135*
13C-2,3,7,8-TCDF	*83*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*80*		*40 - 135*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-2

Client Sample ID: MW-12A-082516
Lab Sample ID: 590-4322-1

Date Collected: 08/25/16 10:00
Matrix: Water
Date Received: 08/25/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1050.1 mL	20 uL	127940	09/19/16 17:09	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129780	09/29/16 02:14	KSS	TAL SAC

Client Sample ID: MW-1A-082516
Lab Sample ID: 590-4322-2

Date Collected: 08/25/16 12:00
Matrix: Water
Date Received: 08/25/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			854 mL	20 uL	127940	09/19/16 17:09	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129780	09/29/16 02:56	KSS	TAL SAC

Client Sample ID: MW-7B-082516
Lab Sample ID: 590-4322-3

Date Collected: 08/25/16 14:55
Matrix: Water
Date Received: 08/25/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1041 mL	20 uL	127940	09/19/16 17:09	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129780	09/29/16 03:39	KSS	TAL SAC

Client Sample ID: DUP-082516
Lab Sample ID: 590-4322-4

Date Collected: 08/25/16 08:00
Matrix: Water
Date Received: 08/25/16 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1039.1 mL	20 uL	127940	09/19/16 17:09	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129780	09/29/16 04:22	KSS	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-2

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4322-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Recor

590-4322 Chain of Custody

TestAmerica

10/4/2016

Client Information	Sampler: JML	Lab PM: Arrington, Ra	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested	Job #:
Address: 523 East Second Ave	Due Date Requested:		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Spokane	TAT Requested (days): STD.		
State, Zip: WA, 99202			
Phone: 509-363-3125	PO #: Purchase Order not required		
Email: jmlee@geoengineers.com	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site: Marshall	SSOW#:		Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	3141A - OP Pesticides	3151A - Herbicides (Acetone)	3290A - Dioxins (17 isomers Lab)	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	3260C - Standard List Volatile Organics	3270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_DW_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-12A:082516	8/25/16	1000	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
MW-1A:082516		1200		Water	N					X	X	X	X	X	X		X	X	X	17	
MW-7B:082516		1455		Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
Dup:082516	8/25/16	0800	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/25/2016 1630	GEI		08/25/16 1630	TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.9°C

TestAmerica Spokane
11922 East 1st Ave
Spokane WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202	PO #: Purchase Order not required			
Phone: 509-363-3125	WO #:			
Email: jmlee@geoengineers.com	Project #: 59000577			
Project Name: Marshall 0504-104-00	SSOW#:			
Site: Marshall				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-12A:082516	8/25/16	1000	G	Water	N		X	X	X	X	25	
MW-1A:082516		1200		Water	N		X	X	X	X	17	
MW-7B:082516		1455		Water	N		X	X	X	X	25	
dup:082516	8/25/16	0900	G	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/25/2016	GEI		08/25/16 1630	TA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.9°C

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

10/4/2016

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee \ Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmiller@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Methods)	8290A - Dioxins / Furans by HRMS	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_300_ORGFM	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N	N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-1A: 0826/16	8/26/16	0940	G	Water	N		X	X	X							X				4	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4322 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/26/2016 1620			08/26/16 4:20pm	TA
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks: 5.5°C

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1964.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 590-4322-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/9/2016			Preservation Codes:
City: West Sacramento	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-12A-082516 (590-4322-1)	8/25/16	10:00 Pacific		Water			X	2	
MW-7B-082516 (590-4322-3)	8/25/16	14:55 Pacific		Water			X	2	
DUP-082516 (590-4322-4)	8/25/16	08:00 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Kad	8/26/16 1410	TA Spok	Wayne Sly	8/27/16 0920	TASPK
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.4

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1973.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4322-2
Address: 880 Riverside Parkway,	Due Date Requested: 9/23/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-1A-082516 (590-4322-2)	8/25/16	12:00 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Shelly Knoch	8/29/16 1630	TAS	Wayne Sey	8/30/16 0930	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.7

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-2

Login Number: 4322

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4322-2

Login Number: 4322
List Number: 8
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 08/31/16 05:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4346-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/29/2016 1:38:49 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-4346-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 8/29/2016 4:45 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

Receipt Exceptions
One Voa container for the following sample 590-4346-W-1 was broken in sample control.: MW-16:082916 (590-4346-1). There was enough remaining volume to continue with analysis.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8354 recovered above the upper control limit for 1,1,2-Trichlorotrifluoroethane and Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the recovery of acetone was greater than 40%D, the results for this analyte are considered estimates. The following sample is impacted: MW-16:082916 (590-4346-1).

Method 8260C: The method blank for analytical batch 590-8354 contained Acetone above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226767 recovered above the upper control limit for 3,3'-Dichlorobenzidine and 4-Nitrophenol. The sample associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: MW-16:082916 (590-4346-1).

Method 8270D: The following analyte recovered outside control limits for the LCS associated with preparation batch 580-226610 and analytical batch 580-226767: 4-Chloroaniline. The sample was non-detect for the affected analyte. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226610 recovered outside control limits for the following analytes: 4-Nitrophenol, 4-Chloroaniline and 3,3'-Dichlorobenzidine.

Method 8270D: The method blank for preparation batch 580-226610 and analytical batch 580-226767 contained Di-n-butyl phthalate and Butyl benzyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8270D: Surrogate recovery for the following sample was outside control limits: MW-16:082916 (590-4346-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with analytical batch 341826. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15%D. The grand mean of each CCV met acceptance criteria and sample result was ND for these compounds, therefore, the data has been reported.

Method 8141B: The initial calibration verification (ICV) for 8141 exceeded control criteria for mevinphos on the back (confirmation) column. The impacted sample was ND for mevinphos and was reported from the front, in control, column. Per laboratory SOP the ICV is acceptable if the average of the percent differences (%D) values for all of the analytes is within +/- 15% and the %D for all individual analytes is within +/- 30%. The data has been qualified and reported.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-343604 recovered outside acceptance criteria, low biased, for simazine on the back column. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the

Job ID: 590-4346-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

associated samples were non-detect for this analyte, the data have been reported from the column in control.

Method 8082A: The continuing calibration verification (CCV) associated with batch 590-8331 recovered above the upper control limit for Tetrachloro-m-xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: MW-16:082916 (590-4346-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 340643.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4346-1	MW-16:082916	Water	08/29/16 12:25	08/29/16 16:45

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			09/01/16 13:13	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/01/16 13:13	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			09/01/16 13:13	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			09/01/16 13:13	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			09/01/16 13:13	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			09/01/16 13:13	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/01/16 13:13	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			09/01/16 13:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 13:13	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			09/01/16 13:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 13:13	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			09/01/16 13:13	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			09/01/16 13:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/01/16 13:13	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			09/01/16 13:13	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			09/01/16 13:13	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			09/01/16 13:13	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			09/01/16 13:13	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			09/01/16 13:13	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			09/01/16 13:13	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			09/01/16 13:13	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			09/01/16 13:13	1
2-Butanone (MEK)	ND		10	4.4	ug/L			09/01/16 13:13	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			09/01/16 13:13	1
2-Hexanone	ND		10	0.75	ug/L			09/01/16 13:13	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			09/01/16 13:13	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			09/01/16 13:13	1
Acetone	ND	*	25	4.1	ug/L			09/01/16 13:13	1
Benzene	ND		0.20	0.093	ug/L			09/01/16 13:13	1
Bromobenzene	ND		1.0	0.28	ug/L			09/01/16 13:13	1
Bromochloromethane	ND		1.0	0.44	ug/L			09/01/16 13:13	1
Bromodichloromethane	ND		1.0	0.43	ug/L			09/01/16 13:13	1
Bromoform	ND		2.0	0.80	ug/L			09/01/16 13:13	1
Bromomethane	ND		5.0	0.22	ug/L			09/01/16 13:13	1
Carbon disulfide	ND		1.0	0.052	ug/L			09/01/16 13:13	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			09/01/16 13:13	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/01/16 13:13	1
Chloroethane	ND		2.0	1.1	ug/L			09/01/16 13:13	1
Chloroform	ND		1.0	0.41	ug/L			09/01/16 13:13	1
Chloromethane	ND		3.0	0.22	ug/L			09/01/16 13:13	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			09/01/16 13:13	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			09/01/16 13:13	1
Dibromochloromethane	ND		1.0	0.35	ug/L			09/01/16 13:13	1
Dibromomethane	ND		1.0	0.50	ug/L			09/01/16 13:13	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			09/01/16 13:13	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			09/01/16 13:13	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/01/16 13:13	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			09/01/16 13:13	1
Hexane	ND		1.0	0.084	ug/L			09/01/16 13:13	1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			09/01/16 13:13	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/01/16 13:13	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			09/01/16 13:13	1
Methylene Chloride	ND		5.0	3.4	ug/L			09/01/16 13:13	1
Naphthalene	ND		2.0	0.63	ug/L			09/01/16 13:13	1
n-Butylbenzene	ND		1.0	0.20	ug/L			09/01/16 13:13	1
N-Propylbenzene	ND		1.0	0.063	ug/L			09/01/16 13:13	1
o-Xylene	ND		1.0	0.16	ug/L			09/01/16 13:13	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			09/01/16 13:13	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			09/01/16 13:13	1
Styrene	ND		1.0	0.10	ug/L			09/01/16 13:13	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			09/01/16 13:13	1
Tetrachloroethene	ND		1.0	0.45	ug/L			09/01/16 13:13	1
Toluene	ND		1.0	0.31	ug/L			09/01/16 13:13	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			09/01/16 13:13	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			09/01/16 13:13	1
Trichloroethene	ND		1.0	0.44	ug/L			09/01/16 13:13	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			09/01/16 13:13	1
Vinyl chloride	ND		0.20	0.13	ug/L			09/01/16 13:13	1
Xylenes, Total	ND		3.0	0.16	ug/L			09/01/16 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 125*		*09/01/16 13:13*	*1*
4-Bromofluorobenzene (Surr)	*105*		*69 - 120*		*09/01/16 13:13*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*09/01/16 13:13*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/01/16 13:13*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			09/01/16 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*09/01/16 13:13*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
2-Chlorophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
2-Methylphenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2-Nitroaniline	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
2-Nitrophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
3-Nitroaniline	ND		0.38	0.11	ug/L		09/02/16 12:49	09/06/16 15:55	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		09/02/16 12:49	09/06/16 15:55	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
4-Nitroaniline	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
4-Nitrophenol	ND	*	2.8	0.95	ug/L		09/02/16 12:49	09/06/16 15:55	1
Acenaphthene	ND		0.095	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Acenaphthylene	ND		0.076	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Anthracene	ND		0.038	0.0095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzoic acid	ND		2.8	0.57	ug/L		09/02/16 12:49	09/06/16 15:55	1
Benzyl alcohol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Bis(2-ethylhexyl) phthalate	ND		2.8	1.1	ug/L		09/02/16 12:49	09/06/16 15:55	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		09/02/16 12:49	09/06/16 15:55	1
Carbazole	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Chrysene	ND		0.038	0.012	ug/L		09/02/16 12:49	09/06/16 15:55	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Dibenzofuran	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Diethyl phthalate	**0.36**	**J**	0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Di-n-butyl phthalate	**0.33**	**J B**	0.38	0.12	ug/L		09/02/16 12:49	09/06/16 15:55	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		09/02/16 12:49	09/06/16 15:55	1
Fluoranthene	ND		0.047	0.012	ug/L		09/02/16 12:49	09/06/16 15:55	1
Fluorene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Hexachloroethane	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Isophorone	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Naphthalene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Nitrobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.66	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Phenanthrene	ND		0.076	0.019	ug/L		09/02/16 12:49	09/06/16 15:55	1
Phenol	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:55	1
Pyrene	ND		0.057	0.012	ug/L		09/02/16 12:49	09/06/16 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*57 - 132*	*09/02/16 12:49*	*09/06/16 15:55*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*09/02/16 12:49*	*09/06/16 15:55*	*1*
2-Fluorophenol	*41*	*X*	*50 - 113*	*09/02/16 12:49*	*09/06/16 15:55*	*1*
Nitrobenzene-d5	*97*		*59 - 120*	*09/02/16 12:49*	*09/06/16 15:55*	*1*
Phenol-d5	*26*	*X*	*52 - 120*	*09/02/16 12:49*	*09/06/16 15:55*	*1*
Terphenyl-d14	*97*		*72 - 140*	*09/02/16 12:49*	*09/06/16 15:55*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 11:30	08/30/16 16:59	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.033	0.0066	ug/L		08/31/16 10:32	08/31/16 22:34	1
4,4'-DDE	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:34	1
4,4'-DDT	ND		0.033	0.0055	ug/L		08/31/16 10:32	08/31/16 22:34	1
Aldrin	ND		0.033	0.0077	ug/L		08/31/16 10:32	08/31/16 22:34	1
alpha-BHC	ND		0.033	0.0077	ug/L		08/31/16 10:32	08/31/16 22:34	1
alpha-Chlordane	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:34	1
beta-BHC	ND		0.055	0.013	ug/L		08/31/16 10:32	08/31/16 22:34	1
delta-BHC	ND		0.055	0.011	ug/L		08/31/16 10:32	08/31/16 22:34	1
Dieldrin	ND		0.033	0.0055	ug/L		08/31/16 10:32	08/31/16 22:34	1
Endosulfan I	**0.0098**	**J**	0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:34	1
Endosulfan II	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:34	1
Endosulfan sulfate	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:34	1
Endrin	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:34	1
Endrin aldehyde	ND		0.22	0.037	ug/L		08/31/16 10:32	08/31/16 22:34	1
Endrin ketone	ND		0.022	0.0022	ug/L		08/31/16 10:32	08/31/16 22:34	1
gamma-BHC (Lindane)	ND		0.033	0.0055	ug/L		08/31/16 10:32	08/31/16 22:34	1
gamma-Chlordane	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:34	1
Heptachlor	ND		0.022	0.0044	ug/L		08/31/16 10:32	08/31/16 22:34	1
Heptachlor epoxide	ND		0.022	0.0033	ug/L		08/31/16 10:32	08/31/16 22:34	1
Methoxychlor	ND		0.11	0.0022	ug/L		08/31/16 10:32	08/31/16 22:34	1
Toxaphene	ND		1.1	0.24	ug/L		08/31/16 10:32	08/31/16 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*56*		*22 - 150*	*08/31/16 10:32*	*08/31/16 22:34*	*1*
Tetrachloro-m-xylene	*72*		*40 - 113*	*08/31/16 10:32*	*08/31/16 22:34*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/31/16 01:30	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/31/16 01:30	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/31/16 01:30	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/31/16 01:30	1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/31/16 01:30	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/31/16 01:30	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/31/16 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*		*20 - 120*	*08/30/16 13:27*	*08/31/16 01:30*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*36 - 138*	*08/30/16 13:27*	*08/31/16 01:30*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		09/01/16 09:56	09/25/16 00:30	1
Azinphos-methyl	ND		2.4	0.16	ug/L		09/01/16 09:56	09/25/16 00:30	1
Bolstar	ND		0.97	0.30	ug/L		09/01/16 09:56	09/25/16 00:30	1
Chlorpyrifos	ND		1.5	0.35	ug/L		09/01/16 09:56	09/25/16 00:30	1
Coumaphos	ND		0.97	0.13	ug/L		09/01/16 09:56	09/25/16 00:30	1
Demeton, Total	ND		2.9	0.20	ug/L		09/01/16 09:56	09/25/16 00:30	1
Diazinon	ND		0.49	0.14	ug/L		09/01/16 09:56	09/25/16 00:30	1
Dichlorvos	ND		0.49	0.16	ug/L		09/01/16 09:56	09/25/16 00:30	1
Dimethoate	ND		1.5	0.44	ug/L		09/01/16 09:56	09/25/16 00:30	1
Disulfoton	ND		0.97	0.31	ug/L		09/01/16 09:56	09/25/16 00:30	1
EPN	ND		1.2	0.14	ug/L		09/01/16 09:56	09/25/16 00:30	1
Famphur	ND		0.97	0.17	ug/L		09/01/16 09:56	09/25/16 00:30	1
Fensulfothion	ND		2.4	0.53	ug/L		09/01/16 09:56	09/25/16 00:30	1
Fenthion	ND		2.4	0.15	ug/L		09/01/16 09:56	09/25/16 00:30	1
Malathion	ND		1.9	0.13	ug/L		09/01/16 09:56	09/25/16 00:30	1
Merphos	ND		4.9	0.17	ug/L		09/01/16 09:56	09/25/16 00:30	1
Methyl parathion	ND		3.9	0.14	ug/L		09/01/16 09:56	09/25/16 00:30	1
Mevinphos	ND		6.0	0.45	ug/L		09/01/16 09:56	09/25/16 00:30	1
Ethyl Parathion	ND		0.97	0.14	ug/L		09/01/16 09:56	09/25/16 00:30	1
Phorate	ND		1.2	0.15	ug/L		09/01/16 09:56	09/25/16 00:30	1
Ronnel	ND		9.7	0.11	ug/L		09/01/16 09:56	09/25/16 00:30	1
Simazine	ND		9.7	0.22	ug/L		09/01/16 09:56	09/25/16 00:30	1
Sulfotepp	ND		1.5	0.16	ug/L		09/01/16 09:56	09/25/16 00:30	1
Thionazin	ND		0.97	0.30	ug/L		09/01/16 09:56	09/25/16 00:30	1
Tokuthion	ND		1.6	0.12	ug/L		09/01/16 09:56	09/25/16 00:30	1
Trichloronate	ND		1.5	0.23	ug/L		09/01/16 09:56	09/25/16 00:30	1
Ethoprop	ND		1.5	0.17	ug/L		09/01/16 09:56	09/25/16 00:30	1
Propazine	ND		9.7	0.28	ug/L		09/01/16 09:56	09/25/16 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*67*		*49 - 171*	*09/01/16 09:56*	*09/25/16 00:30*	*1*
Triphenylphosphate	*90*		*60 - 154*	*09/01/16 09:56*	*09/25/16 00:30*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		09/02/16 09:19	09/14/16 19:17	1
2,4-D	ND		3.8	0.20	ug/L		09/02/16 09:19	09/14/16 19:17	1
2,4-DB	ND		3.8	0.34	ug/L		09/02/16 09:19	09/14/16 19:17	1
Dalapon	ND		1.9	0.86	ug/L		09/02/16 09:19	09/14/16 19:17	1
Dicamba	ND		1.9	0.14	ug/L		09/02/16 09:19	09/14/16 19:17	1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		09/02/16 09:19	09/14/16 19:17	1
MCPA	ND		380	16	ug/L		09/02/16 09:19	09/14/16 19:17	1
MCPP	ND		380	31	ug/L		09/02/16 09:19	09/14/16 19:17	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		09/02/16 09:19	09/14/16 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*	*09/02/16 09:19*	*09/14/16 19:17*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.043	mg/L		09/06/16 09:00	09/06/16 12:39	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.064	mg/L		09/06/16 09:00	09/06/16 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*09/06/16 09:00*	*09/06/16 12:39*	*1*
n-Triacontane-d62	*84*		*50 - 150*	*09/06/16 09:00*	*09/06/16 12:39*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15**		0.80	0.42	mg/L			08/30/16 11:27	1
Nitrate as N	**1.0**	**F1**	0.20	0.039	mg/L			08/30/16 11:27	1
Nitrite as N	ND		0.20	0.069	mg/L			08/30/16 11:27	1
Sulfate	**10**		0.50	0.13	mg/L			08/30/16 11:27	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		09/01/16 15:12	09/02/16 14:18	1
Antimony	**0.00026**	**J B**	0.00040	0.000080	mg/L		09/01/16 15:12	09/02/16 14:18	1
Barium	**0.026**	**B**	0.0012	0.000054	mg/L		09/01/16 15:12	09/02/16 14:18	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 15:12	09/02/16 14:18	1
Cadmium	**0.00011**	**J B**	0.00040	0.000028	mg/L		09/01/16 15:12	09/02/16 14:18	1
Chromium	**0.0015**		0.00040	0.00014	mg/L		09/01/16 15:12	09/02/16 14:18	1
Copper	**0.0058**		0.0020	0.00060	mg/L		09/01/16 15:12	09/02/16 14:18	1
Iron	**0.23**		0.040	0.0058	mg/L		09/01/16 15:12	09/02/16 14:18	1
Lead	**0.00031**	**J B**	0.00040	0.000034	mg/L		09/01/16 15:12	09/02/16 14:18	1
Manganese	**0.0085**		0.0020	0.00035	mg/L		09/01/16 15:12	09/02/16 14:18	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		09/01/16 15:12	09/02/16 14:18	1
Selenium	**0.00049**	**J**	0.0010	0.00030	mg/L		09/01/16 15:12	09/02/16 14:18	1
Silver	**0.000061**	**J B**	0.00040	0.000030	mg/L		09/01/16 15:12	09/02/16 14:18	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 15:12	09/02/16 14:18	1
Vanadium	**0.0040**		0.0040	0.00098	mg/L		09/01/16 15:12	09/02/16 14:18	1
Zinc	**0.0031**	**J**	0.0070	0.0019	mg/L		09/01/16 15:12	09/02/16 14:18	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0028**		0.0010	0.00027	mg/L		09/07/16 17:02	09/08/16 13:40	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		09/07/16 17:02	09/08/16 13:40	1
Barium	**0.022**		0.0012	0.000054	mg/L		09/07/16 17:02	09/08/16 13:40	1
Beryllium	ND		0.00040	0.00010	mg/L		09/07/16 17:02	09/08/16 13:40	1

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000063	J	0.00040	0.000028	mg/L		09/07/16 17:02	09/08/16 13:40	1
Chromium	0.00033	J	0.00040	0.00014	mg/L		09/07/16 17:02	09/08/16 13:40	1
Copper	0.0053		0.0020	0.00060	mg/L		09/07/16 17:02	09/08/16 13:40	1
Iron	ND		0.040	0.0058	mg/L		09/07/16 17:02	09/08/16 13:40	1
Lead	ND		0.00040	0.000034	mg/L		09/07/16 17:02	09/08/16 13:40	1
Manganese	0.0011	J	0.0020	0.00035	mg/L		09/07/16 17:02	09/08/16 13:40	1
Nickel	0.0011	J	0.0030	0.00040	mg/L		09/07/16 17:02	09/08/16 13:40	1
Selenium	ND		0.0010	0.00030	mg/L		09/07/16 17:02	09/08/16 13:40	1
Silver	ND		0.00040	0.000030	mg/L		09/07/16 17:02	09/08/16 13:40	1
Thallium	ND		0.0010	0.00014	mg/L		09/07/16 17:02	09/08/16 13:40	1
Vanadium	0.0049		0.0040	0.00098	mg/L		09/07/16 17:02	09/08/16 13:40	1
Zinc	0.0036	J	0.0070	0.0019	mg/L		09/07/16 17:02	09/08/16 13:40	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000066	J B	0.00020	0.000041	mg/L		09/13/16 09:23	09/13/16 12:54	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	J B	0.00020	0.000041	mg/L		09/13/16 09:45	09/13/16 12:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/12/16 07:30	09/12/16 08:30	1
Ammonia (as N)	0.10		0.10	0.060	mg/L		09/01/16 10:29	09/02/16 11:32	1
Chemical Oxygen Demand	21		20	4.0	mg/L			09/01/16 17:43	1
Total Organic Carbon	6.0		1.0	0.50	mg/L			09/06/16 15:53	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	29				MPN/100mL			08/30/16 11:30	1
Escherichia coli	0.00				MPN/100mL			08/30/16 11:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8354/5
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			09/01/16 11:25	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/01/16 11:25	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			09/01/16 11:25	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			09/01/16 11:25	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			09/01/16 11:25	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			09/01/16 11:25	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 11:25	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 11:25	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			09/01/16 11:25	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			09/01/16 11:25	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			09/01/16 11:25	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			09/01/16 11:25	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			09/01/16 11:25	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			09/01/16 11:25	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			09/01/16 11:25	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			09/01/16 11:25	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			09/01/16 11:25	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			09/01/16 11:25	1
2-Butanone (MEK)	ND		10	4.4	ug/L			09/01/16 11:25	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			09/01/16 11:25	1
2-Hexanone	ND		10	0.75	ug/L			09/01/16 11:25	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			09/01/16 11:25	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			09/01/16 11:25	1
Acetone	8.91	J	25	4.1	ug/L			09/01/16 11:25	1
Benzene	ND		0.20	0.093	ug/L			09/01/16 11:25	1
Bromobenzene	ND		1.0	0.28	ug/L			09/01/16 11:25	1
Bromochloromethane	ND		1.0	0.44	ug/L			09/01/16 11:25	1
Bromodichloromethane	ND		1.0	0.43	ug/L			09/01/16 11:25	1
Bromoform	ND		2.0	0.80	ug/L			09/01/16 11:25	1
Bromomethane	ND		5.0	0.22	ug/L			09/01/16 11:25	1
Carbon disulfide	ND		1.0	0.052	ug/L			09/01/16 11:25	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			09/01/16 11:25	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/01/16 11:25	1
Chloroethane	ND		2.0	1.1	ug/L			09/01/16 11:25	1
Chloroform	ND		1.0	0.41	ug/L			09/01/16 11:25	1
Chloromethane	ND		3.0	0.22	ug/L			09/01/16 11:25	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			09/01/16 11:25	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			09/01/16 11:25	1
Dibromochloromethane	ND		1.0	0.35	ug/L			09/01/16 11:25	1
Dibromomethane	ND		1.0	0.50	ug/L			09/01/16 11:25	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			09/01/16 11:25	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			09/01/16 11:25	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/01/16 11:25	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			09/01/16 11:25	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8354/5
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			09/01/16 11:25	1
Isopropylbenzene	ND		1.0	0.063	ug/L			09/01/16 11:25	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/01/16 11:25	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			09/01/16 11:25	1
Methylene Chloride	ND		5.0	3.4	ug/L			09/01/16 11:25	1
Naphthalene	ND		2.0	0.63	ug/L			09/01/16 11:25	1
n-Butylbenzene	ND		1.0	0.20	ug/L			09/01/16 11:25	1
N-Propylbenzene	ND		1.0	0.063	ug/L			09/01/16 11:25	1
o-Xylene	ND		1.0	0.16	ug/L			09/01/16 11:25	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			09/01/16 11:25	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			09/01/16 11:25	1
Styrene	ND		1.0	0.10	ug/L			09/01/16 11:25	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			09/01/16 11:25	1
Tetrachloroethene	ND		1.0	0.45	ug/L			09/01/16 11:25	1
Toluene	ND		1.0	0.31	ug/L			09/01/16 11:25	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			09/01/16 11:25	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			09/01/16 11:25	1
Trichloroethene	ND		1.0	0.44	ug/L			09/01/16 11:25	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			09/01/16 11:25	1
Vinyl chloride	ND		0.20	0.13	ug/L			09/01/16 11:25	1
Xylenes, Total	ND		3.0	0.16	ug/L			09/01/16 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*09/01/16 11:25*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*09/01/16 11:25*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*09/01/16 11:25*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*09/01/16 11:25*	*1*

Lab Sample ID: LCS 590-8354/1004
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.1		ug/L		101	75 - 124
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.5		ug/L		105	66 - 122
1,1,2-Trichloroethane	10.0	9.64		ug/L		96	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	12.1		ug/L		121	70 - 127
1,1-Dichloroethane	10.0	10.2		ug/L		102	79 - 121
1,1-Dichloroethene	10.0	10.3		ug/L		103	69 - 127
1,1-Dichloropropene	10.0	10.3		ug/L		103	76 - 125
1,2,3-Trichlorobenzene	10.0	10.9		ug/L		109	60 - 125
1,2,3-Trichloropropane	10.0	10.0		ug/L		100	60 - 124
1,2,4-Trichlorobenzene	10.0	10.3		ug/L		103	66 - 124
1,2,4-Trimethylbenzene	10.0	10.6		ug/L		106	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.36	J	ug/L		84	36 - 140
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8354/1004
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.7		ug/L		107	76 - 121
1,3,5-Trimethylbenzene	10.0	11.0		ug/L		110	75 - 122
1,3-Dichlorobenzene	10.0	10.1		ug/L		101	77 - 120
1,3-Dichloropropane	10.0	9.90		ug/L		99	75 - 120
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	77 - 121
2,2-Dichloropropane	10.0	11.3		ug/L		113	49 - 147
2-Butanone (MEK)	50.0	59.8		ug/L		120	40 - 150
2-Chlorotoluene	10.0	10.5		ug/L		105	75 - 121
2-Hexanone	50.0	56.2		ug/L		112	46 - 146
4-Chlorotoluene	10.0	10.4		ug/L		104	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	49.1		ug/L		98	60 - 127
Acetone	50.0	88.2	*	ug/L		176	20 - 150
Benzene	10.0	10.7		ug/L		107	80 - 120
Bromobenzene	10.0	10.4		ug/L		104	74 - 121
Bromochloromethane	10.0	10.2		ug/L		102	70 - 126
Bromodichloromethane	10.0	10.1		ug/L		101	67 - 125
Bromoform	10.0	9.17		ug/L		92	60 - 122
Bromomethane	10.0	11.1		ug/L		111	45 - 150
Carbon disulfide	10.0	11.2		ug/L		112	67 - 129
Carbon tetrachloride	10.0	10.9		ug/L		109	68 - 134
Chlorobenzene	10.0	10.4		ug/L		104	79 - 125
Chloroethane	10.0	11.0		ug/L		110	48 - 150
Chloroform	10.0	10.3		ug/L		103	73 - 126
Chloromethane	10.0	10.6		ug/L		106	51 - 150
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	76 - 121
cis-1,3-Dichloropropene	10.0	9.79		ug/L		98	72 - 120
Dibromochloromethane	10.0	9.15		ug/L		92	72 - 120
Dibromomethane	10.0	9.61		ug/L		96	71 - 120
Dichlorodifluoromethane	10.0	11.2		ug/L		112	32 - 150
Dichlorofluoromethane	10.0	10.8		ug/L		108	60 - 140
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120
Hexachlorobutadiene	10.0	10.1		ug/L		101	62 - 132
Hexane	10.0	11.1		ug/L		111	68 - 125
Isopropylbenzene	10.0	10.9		ug/L		109	77 - 123
m,p-Xylene	10.0	10.6		ug/L		106	80 - 120
Methyl tert-butyl ether	10.0	10.8		ug/L		108	71 - 128
Methylene Chloride	10.0	11.7		ug/L		117	20 - 150
Naphthalene	10.0	10.5		ug/L		105	63 - 124
n-Butylbenzene	10.0	10.4		ug/L		104	71 - 120
N-Propylbenzene	10.0	10.7		ug/L		107	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	11.1		ug/L		111	77 - 120
sec-Butylbenzene	10.0	10.7		ug/L		107	74 - 121
Styrene	10.0	9.65		ug/L		96	73 - 120
tert-Butylbenzene	10.0	10.7		ug/L		107	79 - 120
Tetrachloroethene	10.0	9.97		ug/L		100	71 - 132
Toluene	10.0	10.5		ug/L		105	80 - 123
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8354/1004
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.36		ug/L		94	70 - 121
Trichloroethene	10.0	9.99		ug/L		100	75 - 129
Trichlorofluoromethane	10.0	11.1		ug/L		111	60 - 140
Vinyl chloride	10.0	10.3		ug/L		103	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8355/5
Matrix: Water
Analysis Batch: 8355

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			09/01/16 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*09/01/16 11:25*	*1*

Lab Sample ID: LCS 590-8355/1003
Matrix: Water
Analysis Batch: 8355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	1080		ug/L		109	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226610/1-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226610/1-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Methylphenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		09/02/16 12:49	09/06/16 14:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		09/02/16 12:49	09/06/16 14:12	1
Acenaphthene	ND		0.10	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Anthracene	ND		0.040	0.010	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzoic acid	ND		3.0	0.60	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		09/02/16 12:49	09/06/16 14:12	1
Butyl benzyl phthalate	0.510	J	0.60	0.20	ug/L		09/02/16 12:49	09/06/16 14:12	1
Carbazole	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Chrysene	ND		0.040	0.013	ug/L		09/02/16 12:49	09/06/16 14:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Di-n-butyl phthalate	0.256	J	0.40	0.13	ug/L		09/02/16 12:49	09/06/16 14:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		09/02/16 12:49	09/06/16 14:12	1
Fluoranthene	ND		0.050	0.013	ug/L		09/02/16 12:49	09/06/16 14:12	1
Fluorene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226610/1-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Isophorone	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Naphthalene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Pentachlorophenol	ND		0.70	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Phenanthrene	ND		0.080	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Phenol	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Pyrene	ND		0.060	0.013	ug/L		09/02/16 12:49	09/06/16 14:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*73*		*57 - 132*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
2-Fluorobiphenyl	*66*		*50 - 120*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
2-Fluorophenol	*62*		*50 - 113*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
Phenol-d5	*69*		*52 - 120*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
Terphenyl-d14	*80*		*72 - 140*	*09/02/16 12:49*	*09/06/16 14:12*	*1*

Lab Sample ID: LCS 580-226610/2-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.59		ug/L		79	40 - 115
1,2-Dichlorobenzene	2.00	1.53		ug/L		76	44 - 119
1,3-Dichlorobenzene	2.00	1.41		ug/L		71	34 - 116
1,4-Dichlorobenzene	2.00	1.35		ug/L		68	40 - 118
1-Methylnaphthalene	2.00	1.65		ug/L		83	54 - 119
2,4,5-Trichlorophenol	2.00	1.66		ug/L		83	56 - 122
2,4,6-Trichlorophenol	2.00	1.53		ug/L		76	55 - 134
2,4-Dichlorophenol	2.00	1.67		ug/L		84	50 - 125
2,4-Dimethylphenol	2.00	1.41	J	ug/L		70	20 - 106
2,4-Dinitrophenol	4.00	2.40	J	ug/L		60	24 - 139
2,4-Dinitrotoluene	2.00	1.80		ug/L		90	40 - 143
2,6-Dinitrotoluene	2.00	1.75		ug/L		88	45 - 134
2-Chloronaphthalene	2.00	1.68		ug/L		84	55 - 125
2-Chlorophenol	2.00	1.73		ug/L		86	57 - 125
2-Methylnaphthalene	2.00	1.64		ug/L		82	56 - 117
2-Methylphenol	2.00	1.50		ug/L		75	53 - 118
2-Nitroaniline	2.00	1.96		ug/L		98	58 - 124
2-Nitrophenol	2.00	1.70		ug/L		85	20 - 150
3 & 4 Methylphenol	2.00	1.54		ug/L		77	54 - 112
3,3'-Dichlorobenzidine	4.00	1.17	J	ug/L		29	20 - 121
3-Nitroaniline	2.00	1.24		ug/L		62	22 - 124
4,6-Dinitro-2-methylphenol	4.00	2.80	J	ug/L		70	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226610/2-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	1.81		ug/L		90	62 - 132
4-Chloro-3-methylphenol	2.00	1.70		ug/L		85	56 - 133
4-Chloroaniline	2.00	0.332	J *	ug/L		17	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.53		ug/L		77	59 - 125
4-Nitroaniline	2.00	1.43		ug/L		72	40 - 118
4-Nitrophenol	4.00	1.77	J	ug/L		44	20 - 150
Acenaphthene	2.00	1.46		ug/L		73	55 - 113
Acenaphthylene	2.00	1.49		ug/L		74	24 - 135
Anthracene	2.00	1.10		ug/L		55	20 - 125
Benzo[a]anthracene	2.00	1.77		ug/L		89	49 - 115
Benzo[a]pyrene	2.00	1.04		ug/L		52	20 - 115
Benzo[b]fluoranthene	2.00	1.76		ug/L		88	63 - 129
Benzo[g,h,i]perylene	2.00	1.78		ug/L		89	58 - 127
Benzo[k]fluoranthene	2.00	1.72		ug/L		86	60 - 134
Benzoic acid	4.00	3.92		ug/L		98	20 - 150
Benzyl alcohol	2.00	1.63		ug/L		82	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.51		ug/L		76	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.67		ug/L		84	59 - 125
Bis(2-chloroethyl)ether	2.00	1.67		ug/L		84	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.27	J	ug/L		114	22 - 150
Butyl benzyl phthalate	2.00	2.64		ug/L		132	46 - 150
Carbazole	2.00	1.92		ug/L		96	68 - 142
Chrysene	2.00	1.83		ug/L		92	57 - 131
Dibenz(a,h)anthracene	2.00	1.59		ug/L		79	56 - 124
Dibenzofuran	2.00	1.64		ug/L		82	60 - 125
Diethyl phthalate	2.00	1.59		ug/L		79	60 - 134
Dimethyl phthalate	2.00	1.85		ug/L		92	65 - 134
Di-n-butyl phthalate	2.00	2.10		ug/L		105	67 - 140
Di-n-octyl phthalate	2.00	2.01		ug/L		100	55 - 150
Fluoranthene	2.00	1.87		ug/L		94	70 - 135
Fluorene	2.00	1.61		ug/L		80	57 - 125
Hexachlorobenzene	2.00	1.58		ug/L		79	55 - 135
Hexachlorobutadiene	2.00	1.40		ug/L		70	25 - 125
Hexachlorocyclopentadiene	2.00	0.661	J	ug/L		33	20 - 110
Hexachloroethane	2.00	1.33		ug/L		67	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.79		ug/L		90	54 - 124
Isophorone	2.00	1.68		ug/L		84	64 - 125
Naphthalene	2.00	1.59		ug/L		80	56 - 119
Nitrobenzene	2.00	1.68		ug/L		84	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.70		ug/L		85	54 - 120
N-Nitrosodiphenylamine	2.00	1.30		ug/L		65	40 - 124
Pentachlorophenol	4.00	2.24		ug/L		56	30 - 122
Phenanthrene	2.00	1.68		ug/L		84	57 - 125
Phenol	2.00	1.48		ug/L		74	53 - 113
Pyrene	2.00	1.64		ug/L		82	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*86*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226610/2-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226610

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*73*		*50 - 120*
2-Fluorophenol	*72*		*50 - 113*
Nitrobenzene-d5	*87*		*59 - 120*
Phenol-d5	*74*		*52 - 120*
Terphenyl-d14	*82*		*72 - 140*

Lab Sample ID: LCSD 580-226610/3-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.69		ug/L		85	40 - 115	6	20
1,2-Dichlorobenzene			2.00	1.65		ug/L		82	44 - 119	8	20
1,3-Dichlorobenzene			2.00	1.61		ug/L		80	34 - 116	13	29
1,4-Dichlorobenzene			2.00	1.54		ug/L		77	40 - 118	13	20
1-Methylnaphthalene			2.00	1.63		ug/L		82	54 - 119	1	20
2,4,5-Trichlorophenol			2.00	1.77		ug/L		89	56 - 122	6	20
2,4,6-Trichlorophenol			2.00	1.55		ug/L		77	55 - 134	1	20
2,4-Dichlorophenol			2.00	1.74		ug/L		87	50 - 125	4	26
2,4-Dimethylphenol			2.00	1.46	J	ug/L		73	20 - 106	3	35
2,4-Dinitrophenol			4.00	2.41	J	ug/L		60	24 - 139	0	35
2,4-Dinitrotoluene			2.00	1.78		ug/L		89	40 - 143	1	29
2,6-Dinitrotoluene			2.00	1.79		ug/L		90	45 - 134	2	31
2-Chloronaphthalene			2.00	1.68		ug/L		84	55 - 125	0	20
2-Chlorophenol			2.00	1.75		ug/L		87	57 - 125	1	20
2-Methylnaphthalene			2.00	1.65		ug/L		82	56 - 117	0	20
2-Methylphenol			2.00	1.50		ug/L		75	53 - 118	0	33
2-Nitroaniline			2.00	1.90		ug/L		95	58 - 124	3	20
2-Nitrophenol			2.00	1.69		ug/L		84	20 - 150	1	35
3 & 4 Methylphenol			2.00	1.59		ug/L		79	54 - 112	3	20
3,3'-Dichlorobenzidine			4.00	2.06	*	ug/L		52	20 - 121	56	35
3-Nitroaniline			2.00	1.31		ug/L		66	22 - 124	6	35
4,6-Dinitro-2-methylphenol			4.00	3.08	J	ug/L		77	20 - 150	10	30
4-Bromophenyl phenyl ether			2.00	1.80		ug/L		90	62 - 132	1	20
4-Chloro-3-methylphenol			2.00	1.65		ug/L		82	56 - 133	3	20
4-Chloroaniline			2.00	0.492	*	ug/L		25	20 - 110	39	35
4-Chlorophenyl phenyl ether			2.00	1.57		ug/L		79	59 - 125	3	20
4-Nitroaniline			2.00	1.38		ug/L		69	40 - 118	4	20
4-Nitrophenol			4.00	2.53	J *	ug/L		63	20 - 150	35	29
Acenaphthene			2.00	1.50		ug/L		75	55 - 113	3	20
Acenaphthylene			2.00	1.53		ug/L		77	24 - 135	3	20
Anthracene			2.00	1.24		ug/L		62	20 - 125	12	26
Benzo[a]anthracene			2.00	1.70		ug/L		85	49 - 115	4	20
Benzo[a]pyrene			2.00	1.17		ug/L		58	20 - 115	11	35
Benzo[b]fluoranthene			2.00	1.83		ug/L		91	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	1.75		ug/L		87	58 - 127	2	20
Benzo[k]fluoranthene			2.00	1.60		ug/L		80	60 - 134	7	20
Benzoic acid			4.00	3.85		ug/L		96	20 - 150	2	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226610/3-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	1.58		ug/L		79	52 - 124	3	20
bis (2-chloroisopropyl) ether	2.00	1.54		ug/L		77	44 - 123	2	20
Bis(2-chloroethoxy)methane	2.00	1.74		ug/L		87	59 - 125	4	20
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	55 - 125	1	20
Bis(2-ethylhexyl) phthalate	2.00	2.50	J	ug/L		125	22 - 150	9	20
Butyl benzyl phthalate	2.00	2.56		ug/L		128	46 - 150	3	20
Carbazole	2.00	1.98		ug/L		99	68 - 142	3	20
Chrysene	2.00	1.75		ug/L		87	57 - 131	5	20
Dibenz(a,h)anthracene	2.00	1.73		ug/L		87	56 - 124	9	20
Dibenzofuran	2.00	1.65		ug/L		82	60 - 125	0	20
Diethyl phthalate	2.00	1.57		ug/L		78	60 - 134	1	20
Dimethyl phthalate	2.00	1.84		ug/L		92	65 - 134	0	20
Di-n-butyl phthalate	2.00	2.13		ug/L		107	67 - 140	1	20
Di-n-octyl phthalate	2.00	1.98		ug/L		99	55 - 150	1	20
Fluoranthene	2.00	1.95		ug/L		97	70 - 135	4	20
Fluorene	2.00	1.62		ug/L		81	57 - 125	1	20
Hexachlorobenzene	2.00	1.63		ug/L		82	55 - 135	3	20
Hexachlorobutadiene	2.00	1.62		ug/L		81	25 - 125	14	31
Hexachlorocyclopentadiene	2.00	0.781	J	ug/L		39	20 - 110	17	35
Hexachloroethane	2.00	1.58		ug/L		79	24 - 125	17	35
Indeno[1,2,3-cd]pyrene	2.00	1.88		ug/L		94	54 - 124	5	20
Isophorone	2.00	1.69		ug/L		84	64 - 125	0	20
Naphthalene	2.00	1.64		ug/L		82	56 - 119	3	20
Nitrobenzene	2.00	1.73		ug/L		86	62 - 125	3	20
N-Nitrosodi-n-propylamine	2.00	1.72		ug/L		86	54 - 120	1	20
N-Nitrosodiphenylamine	2.00	1.41		ug/L		70	40 - 124	8	20
Pentachlorophenol	4.00	2.07		ug/L		52	30 - 122	8	35
Phenanthrene	2.00	1.73		ug/L		86	57 - 125	3	20
Phenol	2.00	1.52		ug/L		76	53 - 113	3	20
Pyrene	2.00	1.71		ug/L		85	64 - 128	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*86*		*57 - 132*
2-Fluorobiphenyl	*73*		*50 - 120*
2-Fluorophenol	*68*		*50 - 113*
Nitrobenzene-d5	*89*		*59 - 120*
Phenol-d5	*76*		*52 - 120*
Terphenyl-d14	*82*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-8317/3-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.135		ug/L		108	60 - 140

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226346/1-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/31/16 10:32	08/31/16 20:36	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
Aldrin	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 20:36	1
alpha-BHC	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 20:36	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
beta-BHC	ND		0.050	0.012	ug/L		08/31/16 10:32	08/31/16 20:36	1
delta-BHC	ND		0.050	0.010	ug/L		08/31/16 10:32	08/31/16 20:36	1
Dieldrin	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Heptachlor	ND		0.020	0.0040	ug/L		08/31/16 10:32	08/31/16 20:36	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Toxaphene	ND		1.0	0.22	ug/L		08/31/16 10:32	08/31/16 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*67*		*22 - 150*	*08/31/16 10:32*	*08/31/16 20:36*	*1*
Tetrachloro-m-xylene	*71*		*40 - 113*	*08/31/16 10:32*	*08/31/16 20:36*	*1*

Lab Sample ID: LCS 580-226346/2-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.148		ug/L		74	32 - 133
4,4'-DDE	0.200	0.146		ug/L		73	30 - 138
4,4'-DDT	0.200	0.162		ug/L		81	34 - 131
Aldrin	0.200	0.143		ug/L		71	35 - 124
alpha-BHC	0.200	0.145		ug/L		73	39 - 126
alpha-Chlordane	0.200	0.139		ug/L		69	37 - 133
beta-BHC	0.200	0.140		ug/L		70	38 - 114
delta-BHC	0.200	0.140		ug/L		70	20 - 138

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-226346/2-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226346

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dieldrin			0.200	0.145		ug/L		73	39 - 140		
Endosulfan I			0.200	0.146		ug/L		73	23 - 142		
Endosulfan II			0.200	0.147		ug/L		74	20 - 150		
Endosulfan sulfate			0.200	0.143		ug/L		71	36 - 130		
Endrin			0.200	0.180		ug/L		90	32 - 130		
Endrin aldehyde			0.200	0.201		ug/L		100	37 - 139		
Endrin ketone			0.200	0.141		ug/L		71	32 - 136		
gamma-BHC (Lindane)			0.200	0.137		ug/L		69	40 - 121		
gamma-Chlordane			0.200	0.141		ug/L		71	38 - 136		
Heptachlor			0.200	0.148		ug/L		74	39 - 129		
Heptachlor epoxide			0.200	0.139		ug/L		70	34 - 135		
Methoxychlor			0.200	0.172		ug/L		86	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*84*		*22 - 150*
Tetrachloro-m-xylene	*79*		*40 - 113*

Lab Sample ID: LCSD 580-226346/3-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226346

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.165		ug/L		83	32 - 133	11	35
4,4'-DDE			0.200	0.162		ug/L		81	30 - 138	10	35
4,4'-DDT			0.200	0.180		ug/L		90	34 - 131	11	35
Aldrin			0.200	0.158		ug/L		79	35 - 124	10	35
alpha-BHC			0.200	0.162		ug/L		81	39 - 126	11	35
alpha-Chlordane			0.200	0.155		ug/L		77	37 - 133	11	35
beta-BHC			0.200	0.158		ug/L		79	38 - 114	12	35
delta-BHC			0.200	0.156		ug/L		78	20 - 138	11	35
Dieldrin			0.200	0.160		ug/L		80	39 - 140	10	35
Endosulfan I			0.200	0.162		ug/L		81	23 - 142	10	35
Endosulfan II			0.200	0.164		ug/L		82	20 - 150	11	35
Endosulfan sulfate			0.200	0.161		ug/L		80	36 - 130	12	35
Endrin			0.200	0.199		ug/L		99	32 - 130	10	35
Endrin aldehyde			0.200	0.227		ug/L		114	37 - 139	12	35
Endrin ketone			0.200	0.158		ug/L		79	32 - 136	11	35
gamma-BHC (Lindane)			0.200	0.156		ug/L		78	40 - 121	13	35
gamma-Chlordane			0.200	0.158		ug/L		79	38 - 136	11	35
Heptachlor			0.200	0.167		ug/L		84	39 - 129	12	35
Heptachlor epoxide			0.200	0.155		ug/L		78	34 - 135	11	35
Methoxychlor			0.200	0.194		ug/L		97	33 - 139	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*90*		*22 - 150*
Tetrachloro-m-xylene	*86*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.56		ug/L		98	23 - 140		
PCB-1260			1.60	1.47		ug/L		92	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-340418/1-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		09/01/16 09:56	09/24/16 15:37	1
Azinphos-methyl	ND		2.5	0.17	ug/L		09/01/16 09:56	09/24/16 15:37	1
Bolstar	ND		1.0	0.31	ug/L		09/01/16 09:56	09/24/16 15:37	1
Chlorpyrifos	ND		1.5	0.36	ug/L		09/01/16 09:56	09/24/16 15:37	1
Coumaphos	ND		1.0	0.14	ug/L		09/01/16 09:56	09/24/16 15:37	1
Demeton, Total	ND		3.0	0.21	ug/L		09/01/16 09:56	09/24/16 15:37	1
Diazinon	ND		0.50	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Dichlorvos	ND		0.50	0.16	ug/L		09/01/16 09:56	09/24/16 15:37	1
Dimethoate	ND		1.5	0.45	ug/L		09/01/16 09:56	09/24/16 15:37	1
Disulfoton	ND		1.0	0.32	ug/L		09/01/16 09:56	09/24/16 15:37	1
EPN	ND		1.2	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Famphur	ND		1.0	0.18	ug/L		09/01/16 09:56	09/24/16 15:37	1
Fensulfothion	ND		2.5	0.54	ug/L		09/01/16 09:56	09/24/16 15:37	1
Fenthion	ND		2.5	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Malathion	ND		2.0	0.13	ug/L		09/01/16 09:56	09/24/16 15:37	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-340418/1-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Merphos	ND		5.0	0.17	ug/L		09/01/16 09:56	09/24/16 15:37	1
Methyl parathion	ND		4.0	0.14	ug/L		09/01/16 09:56	09/24/16 15:37	1
Mevinphos	ND		6.2	0.46	ug/L		09/01/16 09:56	09/24/16 15:37	1
Ethyl Parathion	ND		1.0	0.14	ug/L		09/01/16 09:56	09/24/16 15:37	1
Phorate	ND		1.2	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Ronnel	ND		10	0.12	ug/L		09/01/16 09:56	09/24/16 15:37	1
Simazine	ND		10	0.22	ug/L		09/01/16 09:56	09/24/16 15:37	1
Sulfotepp	ND		1.5	0.17	ug/L		09/01/16 09:56	09/24/16 15:37	1
Thionazin	ND		1.0	0.31	ug/L		09/01/16 09:56	09/24/16 15:37	1
Tokuthion	ND		1.6	0.12	ug/L		09/01/16 09:56	09/24/16 15:37	1
Trichloronate	ND		1.5	0.24	ug/L		09/01/16 09:56	09/24/16 15:37	1
Ethoprop	ND		1.5	0.18	ug/L		09/01/16 09:56	09/24/16 15:37	1
Propazine	ND		10	0.29	ug/L		09/01/16 09:56	09/24/16 15:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*86*		*49 - 171*	*09/01/16 09:56*	*09/24/16 15:37*	*1*
Triphenylphosphate	*119*		*60 - 154*	*09/01/16 09:56*	*09/24/16 15:37*	*1*

Lab Sample ID: LCS 280-340418/2-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	3.17	J	ug/L		79	52 - 115
Azinphos-methyl	4.00	3.95		ug/L		99	59 - 115
Chlorpyrifos	4.00	3.59		ug/L		90	54 - 115
Coumaphos	4.00	3.98		ug/L		99	63 - 118
Demeton, Total	4.00	2.91	J	ug/L		73	44 - 115
Diazinon	4.00	3.47		ug/L		87	47 - 115
Dichlorvos	4.00	4.57		ug/L		114	53 - 128
Dimethoate	4.00	3.29		ug/L		82	42 - 115
Disulfoton	4.00	3.19		ug/L		80	45 - 115
EPN	4.00	3.81		ug/L		95	56 - 115
Famphur	4.00	3.71		ug/L		93	62 - 115
Fensulfothion	4.00	4.11		ug/L		103	50 - 115
Fenthion	4.00	3.59		ug/L		90	55 - 115
Malathion	4.00	3.27		ug/L		82	52 - 115
Merphos	4.00	2.12	J	ug/L		53	31 - 115
Methyl parathion	4.00	3.87	J	ug/L		97	58 - 115
Mevinphos	4.00	3.06	J	ug/L		76	42 - 115
Ethyl Parathion	4.00	3.73		ug/L		93	55 - 115
Phorate	4.00	2.89		ug/L		72	40 - 115
Ronnel	4.00	3.75	J	ug/L		94	55 - 115
Simazine	4.00	2.89	J	ug/L		72	39 - 115
Sulfotepp	4.00	3.62		ug/L		90	53 - 115
Thionazin	4.00	3.57		ug/L		89	54 - 115
Trichloronate	4.00	3.21		ug/L		80	48 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-340418/2-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethoprop	4.00	3.53		ug/L		88	50 - 115
BolstarFamphur	4.00	7.60		ug/L		190	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*81*		*49 - 171*
Triphenylphosphate	*104*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-340643/1-A
Matrix: Water
Analysis Batch: 341826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		09/02/16 09:19	09/14/16 18:10	1
2,4-D	ND		4.0	0.21	ug/L		09/02/16 09:19	09/14/16 18:10	1
2,4-DB	ND		4.0	0.36	ug/L		09/02/16 09:19	09/14/16 18:10	1
Dalapon	ND		2.0	0.91	ug/L		09/02/16 09:19	09/14/16 18:10	1
Dicamba	ND		2.0	0.15	ug/L		09/02/16 09:19	09/14/16 18:10	1
Dichlorprop	ND		4.0	0.65	ug/L		09/02/16 09:19	09/14/16 18:10	1
MCPA	ND		400	17	ug/L		09/02/16 09:19	09/14/16 18:10	1
MCPP	ND		400	33	ug/L		09/02/16 09:19	09/14/16 18:10	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		09/02/16 09:19	09/14/16 18:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*73*		*39 - 135*	*09/02/16 09:19*	*09/14/16 18:10*	*1*

Lab Sample ID: LCS 280-340643/2-A
Matrix: Water
Analysis Batch: 341826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.85		ug/L		77	45 - 135
2,4-D	5.00	3.90	J	ug/L		78	46 - 126
2,4-DB	5.00	3.86	J	ug/L		77	18 - 135
Dalapon	5.00	3.75		ug/L		75	52 - 119
Dicamba	5.00	3.99		ug/L		80	50 - 128
Dichlorprop	5.00	3.94	J	ug/L		79	44 - 121
MCPA	500	389	J	ug/L		78	43 - 118
MCPP	500	444		ug/L		89	45 - 121
Silvex (2,4,5-TP)	5.00	4.25		ug/L		85	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-340643/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 341826 — **Prep Batch: 340643**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	4.22		ug/L		84	45 - 135	9	30
2,4-D	5.00	4.30		ug/L		86	46 - 126	10	30
2,4-DB	5.00	4.53		ug/L		91	18 - 135	16	30
Dalapon	5.00	3.48		ug/L		70	52 - 119	8	30
Dicamba	5.00	4.30		ug/L		86	50 - 128	8	30
Dichlorprop	5.00	4.30		ug/L		86	44 - 121	9	30
MCPA	500	427		ug/L		85	43 - 118	9	30
MCPP	500	494		ug/L		99	45 - 121	11	30
Silvex (2,4,5-TP)	5.00	4.62		ug/L		92	48 - 127	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8395/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Silica Gel Cleanup**
Analysis Batch: 8394 — **Prep Batch: 8395**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		09/06/16 09:00	09/06/16 12:03	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		09/06/16 09:00	09/06/16 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*09/06/16 09:00*	*09/06/16 12:03*	*1*
n-Triacontane-d62	*79*		*50 - 150*	*09/06/16 09:00*	*09/06/16 12:03*	*1*

Lab Sample ID: LCS 590-8395/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Silica Gel Cleanup**
Analysis Batch: 8394 — **Prep Batch: 8395**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.07		mg/L		66	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.29		mg/L		81	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*91*		*50 - 150*
n-Triacontane-d62	*82*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8318/1010
Matrix: Water
Analysis Batch: 8318

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/30/16 12:39	1
Sulfate	ND		0.50	0.13	mg/L			08/30/16 12:39	1

Lab Sample ID: LCS 590-8318/1009
Matrix: Water
Analysis Batch: 8318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.3		mg/L		107	90 - 110
Sulfate	12.5	13.4		mg/L		107	90 - 110

Lab Sample ID: 590-4346-1 MS
Matrix: Water
Analysis Batch: 8318

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	15		11.4	27.2		mg/L		103	80 - 120
Sulfate	10		11.4	23.8		mg/L		118	80 - 120

Lab Sample ID: 590-4346-1 MSD
Matrix: Water
Analysis Batch: 8318

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	15		11.4	27.2		mg/L		103	80 - 120	0	10
Sulfate	10		11.4	23.7		mg/L		117	80 - 120	0	10

Lab Sample ID: 590-4346-1 DU
Matrix: Water
Analysis Batch: 8318

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	15		16.1		mg/L		4	18.8
Sulfate	10		10.4		mg/L		0.3	15.7

Lab Sample ID: MB 590-8319/1010
Matrix: Water
Analysis Batch: 8319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/30/16 12:39	1
Nitrite as N	ND		0.20	0.069	mg/L			08/30/16 12:39	1

Lab Sample ID: LCS 590-8319/1009
Matrix: Water
Analysis Batch: 8319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.29		mg/L		106	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 590-8319/1009
Matrix: Water
Analysis Batch: 8319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N			5.00	5.17		mg/L		103	90 - 110		

Lab Sample ID: 590-4346-1 MS
Matrix: Water
Analysis Batch: 8319

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	1.0	F1	4.55	6.49	F1	mg/L		121	80 - 120		
Nitrite as N	ND		4.55	4.86		mg/L		107	80 - 120		

Lab Sample ID: 590-4346-1 MSD
Matrix: Water
Analysis Batch: 8319

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.0	F1	4.55	6.49	F1	mg/L		121	80 - 120	0	12.1
Nitrite as N	ND		4.55	4.89		mg/L		108	80 - 120	1	10

Lab Sample ID: 590-4346-1 DU
Matrix: Water
Analysis Batch: 8319

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.0	F1	0.924		mg/L		9	13.1
Nitrite as N	ND		ND		mg/L		NC	10

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-226510/10-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		09/01/16 15:12	09/02/16 13:29	1
Antimony	0.0000991	J	0.00040	0.000080	mg/L		09/01/16 15:12	09/02/16 13:29	1
Barium	0.0000930	J	0.0012	0.000054	mg/L		09/01/16 15:12	09/02/16 13:29	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 15:12	09/02/16 13:29	1
Cadmium	0.0000494	J	0.00040	0.000028	mg/L		09/01/16 15:12	09/02/16 13:29	1
Chromium	ND		0.00040	0.00014	mg/L		09/01/16 15:12	09/02/16 13:29	1
Copper	ND		0.0020	0.00060	mg/L		09/01/16 15:12	09/02/16 13:29	1
Iron	ND		0.040	0.0058	mg/L		09/01/16 15:12	09/02/16 13:29	1
Lead	0.0000573	J	0.00040	0.000034	mg/L		09/01/16 15:12	09/02/16 13:29	1
Manganese	ND		0.0020	0.00035	mg/L		09/01/16 15:12	09/02/16 13:29	1
Nickel	ND		0.0030	0.00040	mg/L		09/01/16 15:12	09/02/16 13:29	1
Selenium	ND		0.0010	0.00030	mg/L		09/01/16 15:12	09/02/16 13:29	1
Silver	0.0000546	J	0.00040	0.000030	mg/L		09/01/16 15:12	09/02/16 13:29	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 15:12	09/02/16 13:29	1
Vanadium	ND		0.0040	0.00098	mg/L		09/01/16 15:12	09/02/16 13:29	1
Zinc	ND		0.0070	0.0019	mg/L		09/01/16 15:12	09/02/16 13:29	1

Lab Sample ID: LCS 580-226510/11-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.101		mg/L		101	85 - 115
Antimony	0.100	0.104		mg/L		104	85 - 115
Barium	0.100	0.106		mg/L		106	85 - 115
Beryllium	0.100	0.0990		mg/L		99	85 - 115
Cadmium	0.100	0.102		mg/L		102	85 - 115
Chromium	0.100	0.0983		mg/L		98	85 - 115
Copper	0.100	0.113		mg/L		113	85 - 115
Iron	10.0	9.69		mg/L		97	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0989		mg/L		99	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.103		mg/L		103	85 - 115
Silver	0.100	0.101		mg/L		101	85 - 115
Thallium	0.100	0.0882		mg/L		88	85 - 115
Vanadium	0.100	0.0996		mg/L		100	85 - 115
Zinc	0.100	0.102		mg/L		102	85 - 115

Lab Sample ID: LCSD 580-226510/12-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226510

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.100		mg/L		100	85 - 115	1	20
Antimony	0.100	0.109		mg/L		109	85 - 115	5	20
Barium	0.100	0.112		mg/L		112	85 - 115	5	20
Beryllium	0.100	0.0982		mg/L		98	85 - 115	1	20
Cadmium	0.100	0.106		mg/L		106	85 - 115	3	20
Chromium	0.100	0.0972		mg/L		97	85 - 115	1	20
Copper	0.100	0.104		mg/L		104	85 - 115	8	20
Iron	10.0	9.68		mg/L		97	85 - 115	0	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0994		mg/L		99	85 - 115	1	20
Nickel	0.100	0.0979		mg/L		98	85 - 115	3	20
Selenium	0.100	0.104		mg/L		104	85 - 115	1	20
Silver	0.100	0.103		mg/L		103	85 - 115	2	20
Thallium	0.100	0.103		mg/L		103	85 - 115	15	20
Vanadium	0.100	0.0985		mg/L		99	85 - 115	1	20
Zinc	0.100	0.0973		mg/L		97	85 - 115	5	20

Lab Sample ID: LCS 580-226939/9-A
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0971		mg/L		97	85 - 115
Antimony	0.100	0.0991		mg/L		99	85 - 115
Barium	0.100	0.0999		mg/L		100	85 - 115
Beryllium	0.100	0.0975		mg/L		98	85 - 115
Cadmium	0.100	0.0957		mg/L		96	85 - 115
Chromium	0.100	0.0982		mg/L		98	85 - 115
Copper	0.100	0.0998		mg/L		100	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226939/9-A
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.77		mg/L		98	85 - 115
Lead	0.100	0.0988		mg/L		99	85 - 115
Manganese	0.100	0.0976		mg/L		98	85 - 115
Nickel	0.100	0.0970		mg/L		97	85 - 115
Selenium	0.100	0.0963		mg/L		96	85 - 115
Silver	0.100	0.0930		mg/L		93	85 - 115
Thallium	0.100	0.0903		mg/L		90	85 - 115
Vanadium	0.100	0.0982		mg/L		98	85 - 115
Zinc	0.100	0.0974		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-226939/10-A
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226939

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0988		mg/L		99	85 - 115	2	20
Antimony	0.100	0.0994		mg/L		99	85 - 115	0	20
Barium	0.100	0.100		mg/L		100	85 - 115	1	20
Beryllium	0.100	0.0991		mg/L		99	85 - 115	2	20
Cadmium	0.100	0.0969		mg/L		97	85 - 115	1	20
Chromium	0.100	0.0988		mg/L		99	85 - 115	1	20
Copper	0.100	0.101		mg/L		101	85 - 115	1	20
Iron	10.0	9.87		mg/L		99	85 - 115	1	20
Lead	0.100	0.0995		mg/L		99	85 - 115	1	20
Manganese	0.100	0.0985		mg/L		98	85 - 115	1	20
Nickel	0.100	0.0993		mg/L		99	85 - 115	2	20
Selenium	0.100	0.0977		mg/L		98	85 - 115	1	20
Silver	0.100	0.0941		mg/L		94	85 - 115	1	20
Thallium	0.100	0.0927		mg/L		93	85 - 115	3	20
Vanadium	0.100	0.0992		mg/L		99	85 - 115	1	20
Zinc	0.100	0.0986		mg/L		99	85 - 115	1	20

Lab Sample ID: MB 580-226414/5-B
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		09/07/16 17:02	09/08/16 12:41	1
Antimony	ND		0.00040	0.000080	mg/L		09/07/16 17:02	09/08/16 12:41	1
Barium	ND		0.0012	0.000054	mg/L		09/07/16 17:02	09/08/16 12:41	1
Beryllium	ND		0.00040	0.00010	mg/L		09/07/16 17:02	09/08/16 12:41	1
Cadmium	ND		0.00040	0.000028	mg/L		09/07/16 17:02	09/08/16 12:41	1
Chromium	ND		0.00040	0.00014	mg/L		09/07/16 17:02	09/08/16 12:41	1
Copper	ND		0.0020	0.00060	mg/L		09/07/16 17:02	09/08/16 12:41	1
Iron	ND		0.040	0.0058	mg/L		09/07/16 17:02	09/08/16 12:41	1
Lead	ND		0.00040	0.000034	mg/L		09/07/16 17:02	09/08/16 12:41	1
Manganese	ND		0.0020	0.00035	mg/L		09/07/16 17:02	09/08/16 12:41	1
Nickel	ND		0.0030	0.00040	mg/L		09/07/16 17:02	09/08/16 12:41	1
Selenium	ND		0.0010	0.00030	mg/L		09/07/16 17:02	09/08/16 12:41	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226414/5-B
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.00040	0.000030	mg/L		09/07/16 17:02	09/08/16 12:41	1
Thallium	ND		0.0010	0.00014	mg/L		09/07/16 17:02	09/08/16 12:41	1
Vanadium	ND		0.0040	0.00098	mg/L		09/07/16 17:02	09/08/16 12:41	1
Zinc	ND		0.0070	0.0019	mg/L		09/07/16 17:02	09/08/16 12:41	1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-227314/21-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227314

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000852	J	0.00020	0.000041	mg/L		09/13/16 09:23	09/13/16 12:47	1

Lab Sample ID: LCS 580-227314/22-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227314

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00214		mg/L		107	85 - 115		

Lab Sample ID: LCSD 580-227314/23-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 227314

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00214		mg/L		107	85 - 115	0	20

Lab Sample ID: 590-4346-1 MS
Matrix: Water
Analysis Batch: 227356

Client Sample ID: MW-16:082916
Prep Type: Total/NA
Prep Batch: 227314

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.000066	J B	0.00200	0.00222		mg/L		107	70 - 130		

Lab Sample ID: 590-4346-1 MSD
Matrix: Water
Analysis Batch: 227356

Client Sample ID: MW-16:082916
Prep Type: Total/NA
Prep Batch: 227314

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000066	J B	0.00200	0.00215		mg/L		104	70 - 130	3	20

Lab Sample ID: 590-4346-1 DU
Matrix: Water
Analysis Batch: 227356

Client Sample ID: MW-16:082916
Prep Type: Total/NA
Prep Batch: 227314

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.000066	J B	0.0000849	J F5	mg/L		25	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-227318/5-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227318

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00225		mg/L		113	85 - 115

Lab Sample ID: LCSD 580-227318/6-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 227318

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00218		mg/L		109	85 - 115	4	20

Lab Sample ID: MB 580-226414/5-C
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 227318

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000864	J	0.00020	0.000041	mg/L		09/13/16 09:45	09/13/16 11:58	1

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-369413/1-A
Matrix: Water
Analysis Batch: 369460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 369413

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/12/16 07:30	09/12/16 08:30	1

Lab Sample ID: LCS 490-369413/3-A
Matrix: Water
Analysis Batch: 369460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 369413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.106		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-367213/1-A
Matrix: Water
Analysis Batch: 367515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		09/01/16 10:29	09/02/16 11:21	1

Lab Sample ID: LCS 490-367213/2-A
Matrix: Water
Analysis Batch: 367515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.60		mg/L		92	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-367367/3
Matrix: Water
Analysis Batch: 367367

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			09/01/16 17:43	1

Lab Sample ID: LCS 490-367367/4
Matrix: Water
Analysis Batch: 367367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.9		mg/L		98	90 - 110

Lab Sample ID: LCSD 490-367367/5
Matrix: Water
Analysis Batch: 367367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	49.4		mg/L		99	90 - 110	1	20

Lab Sample ID: 590-4346-1 MS
Matrix: Water
Analysis Batch: 367367

Client Sample ID: MW-16:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	21		50.0	68.7		mg/L		95	90 - 110

Method: SM 5310C - TOC

Lab Sample ID: MB 490-368182/1
Matrix: Water
Analysis Batch: 368182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			09/06/16 15:53	1

Lab Sample ID: LCS 490-368182/4
Matrix: Water
Analysis Batch: 368182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.3		mg/L		103	90 - 110
TOC Result 1	10.0	10.3		mg/L		103	90 - 110
TOC Result 2	10.0	10.2		mg/L		102	90 - 110

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Client Sample ID: MW-16:082916

Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8354	09/01/16 13:13	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8355	09/01/16 13:13	MRS	TAL SPK
Total/NA	Prep	3520C			1054.5 mL	2 mL	226610	09/02/16 12:49	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226767	09/06/16 15:55	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 11:30	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 16:59	NMI	TAL SPK
Total/NA	Prep	3510C			228.7 mL	2.5 mL	226346	08/31/16 10:32	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226447	08/31/16 22:34	DCV	TAL SEA
Total/NA	Prep	3510C			249.4 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/31/16 01:30	NMI	TAL SPK
Total/NA	Prep	3510C			1030.5 mL	2 mL	340418	09/01/16 09:56	JRA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343604	09/25/16 00:30	TEM	TAL DEN
Total/NA	Prep	8151A			1054.2 mL	10 mL	340643	09/02/16 09:19	KI	TAL DEN
Total/NA	Analysis	8151A		1			341826	09/14/16 19:17	SAT	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			233.7 mL	2 mL	8395	09/06/16 09:00	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8394	09/06/16 12:39	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8318	08/30/16 11:27	CBW	TAL SPK
Total/NA	Analysis	300.0		1			8319	08/30/16 11:27	CBW	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226414	08/31/16 18:20	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226939	09/07/16 17:02	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	227068	09/08/16 13:40	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226510	09/01/16 15:12	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226722	09/02/16 14:18	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226414	08/31/16 18:20	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	227318	09/13/16 09:45	MKN	TAL SEA
Dissolved	Analysis	245.1		1			227356	09/13/16 12:09	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	227314	09/13/16 09:23	MKN	TAL SEA
Total/NA	Analysis	245.1		1			227356	09/13/16 12:54	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	369413	09/12/16 07:30	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	369460	09/12/16 08:30	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	367213	09/01/16 10:29	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	367515	09/02/16 11:32	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	367367	09/01/16 17:43	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	368182	09/06/16 15:53	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8333	08/30/16 11:30	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudolph	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Acidic)	8290A - Dioxins or Furans List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-16:082916	8/29/16	1225	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4346 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Received by Sheila Tracy	8/29/16 1645	TAS PDX			
Relinquished by: Josh Lee	Date/Time: 8/29/2016 1645	Company: GEI	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks: 3.3

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-16:082916	8/29/16	1225	G	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/29/2016 1645	GEI	Sheila Kraly	8/29/16 1645	TAS pdc

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3 IR003

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1976.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 590-4346-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/9/2016			Preservation Codes:
City: Arvada	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP Herbicide (Aqueous)	8141B/3510C Standard 8141 list	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-16:082916 (590-4346-1)	8/29/16	12:25 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Sheila Krady	8/30/16 1505	TA Spok		0910 31Aug16	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.7 IR-5 -0.0 31Aug16 Transfer

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-4346 Chain of Custody

Cooler Received/Opened On 8/31/2016 @ 0935

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 2283 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 097310166 pH Strip Lot HC564992 Chlorine Strip Lot 012516A

2. Temperature of rep. sample or temp blank when opened: 0.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 (side)

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) HG

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) HG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) HG

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) HG

I certify that I attached a label with the unique LIMS number to each container (intial) HG

21. Were there Non-Conformance issues at login? YES..(NO) Was a NCM generated? YES..(NO)..#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
4346

stAmerica
ADER IN ENVIRONMENTAL TESTING

9/29/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	80.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page 1 of 1
Company: TestAmerica Laboratories, Inc		**Analysis Requested**	Job #: 590-4346-1
Address: 2960 Foster Creighton Drive,	Due Date Requested: 9/9/2016		**Preservation Codes:**
City: Nashville	TAT Requested (days):		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		Other:
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-16:082916 (590-4346-1)	8/29/16	12:25 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Sheila Hall	Date/Time: 8/30/16 1550	Company TAL	Received by: Hoyt Sid 0.9	Date/Time: 8/31/16 0935	Company TAN	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1977.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4346-1
Address: 5755 8th Street East,	Due Date Requested: 9/9/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	200.8_CWA/FILTRATION (MOD) Template for building analyte list	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-16:082916 (590-4346-1)	8/29/16	12:25 Pacific		Water			X	X	X	X	X	X	6	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Kratz	8/30/16 1520	TAKpok	B. Bell	8.31.16 0945	SEATA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: J122 = 0.3/0.4 w/o

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4346-1

Login Number: 4346
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4346-1

Login Number: 4346
List Number: 4
Creator: Muniz, Ashley T

List Source: TestAmerica Denver
List Creation: 08/31/16 04:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4346-1

Login Number: 4346
List Number: 2
Creator: Gundi, Hozar K

List Source: TestAmerica Nashville
List Creation: 08/31/16 11:17 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4346-1

Login Number: 4346
List Number: 3
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 08/31/16 10:38 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4346-2
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
10/3/2016 10:18:23 AM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-2

Job ID: 590-4346-2

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 8/29/2016 4:45 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

Dioxin
Method 8290A: The Isotope Dilution Analyte (IDA 13C-OCDD) recovery associated with the ending Continuing Calibration Verification (CCV) is below the method recommended limit: CCV 320-129406/14. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for this IDA in this CCV and all associated samples. The 13C-OCDD IDA recovery for all associated samples is within recovery limits.

Method 8290A: The bracketing continuing calibration verification (CCV) associated with batch 320-129408 1,2,3,4,7,8-HxCDD with percent difference values that are between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4346-1	MW-16:082916	Water	08/29/16 12:25	08/29/16 16:45

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-2

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.37	pg/L		09/19/16 15:17	09/27/16 00:30	1
2,3,7,8-TCDF	ND		9.5	0.33	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,7,8-PeCDD	ND		47	0.57	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,7,8-PeCDF	ND		47	0.47	pg/L		09/19/16 15:17	09/27/16 00:30	1
2,3,4,7,8-PeCDF	ND		47	0.48	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,4,7,8-HxCDD	ND		47	0.35	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,6,7,8-HxCDD	ND		47	0.37	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,7,8,9-HxCDD	ND		47	0.30	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,4,7,8-HxCDF	ND		47	0.47	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,6,7,8-HxCDF	ND		47	0.45	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,7,8,9-HxCDF	ND		47	0.50	pg/L		09/19/16 15:17	09/27/16 00:30	1
2,3,4,6,7,8-HxCDF	ND		47	0.48	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,4,6,7,8-HpCDD	**1.1**	**J B**	47	0.31	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.20	pg/L		09/19/16 15:17	09/27/16 00:30	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.23	pg/L		09/19/16 15:17	09/27/16 00:30	1
OCDD	**5.0**	**J B**	95	0.44	pg/L		09/19/16 15:17	09/27/16 00:30	1
OCDF	ND		95	0.69	pg/L		09/19/16 15:17	09/27/16 00:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*82*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-2,3,7,8-TCDF	*79*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-1,2,3,6,7,8-HxCDD	*96*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*88*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*
13C-OCDD	*65*		*40 - 135*	*09/19/16 15:17*	*09/27/16 00:30*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-127940/1-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127940

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,7,8-TCDF	ND		10	0.27	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDD	ND		50	0.56	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDF	ND		50	0.47	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,7,8-PeCDF	ND		50	0.48	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDD	ND		50	0.41	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDD	ND		50	0.42	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDD	ND		50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDF	ND		50	0.32	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDF	ND		50	0.31	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDF	ND		50	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,6,7,8-HxCDF	ND		50	0.33	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDD	1.10	J	50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDF	0.430	J q	50	0.19	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.22	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDD	3.50	J	100	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDF	ND		100	0.40	pg/L		09/19/16 15:17	09/25/16 19:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-OCDD	*72*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	191		pg/L		95	64 - 142
2,3,7,8-TCDF	200	199		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135
2,3,4,7,8-PeCDF	1000	1030		pg/L		103	74 - 137
1,2,3,4,7,8-HxCDD	1000	853		pg/L		85	56 - 146
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	73 - 144
1,2,3,7,8,9-HxCDD	1000	949		pg/L		95	71 - 151
1,2,3,4,7,8-HxCDF	1000	1040		pg/L		104	75 - 131
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	77 - 142
2,3,4,6,7,8-HxCDF	1000	1080		pg/L		108	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	999		pg/L		100	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8,9-HpCDF			1000	942		pg/L		94	83 - 130		
OCDD			2000	2000		pg/L		100	80 - 132		
OCDF			2000	2170		pg/L		109	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*64*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*83*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*77*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-127940/3-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127940

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	213		pg/L		107	64 - 142	11	20
2,3,7,8-TCDF			200	212		pg/L		106	71 - 142	6	20
1,2,3,7,8-PeCDD			1000	1070		pg/L		107	71 - 140	6	20
1,2,3,7,8-PeCDF			1000	1070		pg/L		107	76 - 135	1	20
2,3,4,7,8-PeCDF			1000	1050		pg/L		105	74 - 137	2	20
1,2,3,4,7,8-HxCDD			1000	969		pg/L		97	56 - 146	13	20
1,2,3,6,7,8-HxCDD			1000	1080		pg/L		108	73 - 144	5	20
1,2,3,7,8,9-HxCDD			1000	1030		pg/L		103	71 - 151	9	20
1,2,3,4,7,8-HxCDF			1000	1100		pg/L		110	75 - 131	6	20
1,2,3,6,7,8-HxCDF			1000	1200		pg/L		120	76 - 133	5	20
1,2,3,7,8,9-HxCDF			1000	1120		pg/L		112	77 - 142	8	20
2,3,4,6,7,8-HxCDF			1000	1170		pg/L		117	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD			1000	1060		pg/L		106	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF			1000	1070		pg/L		107	79 - 133	5	20
1,2,3,4,7,8,9-HpCDF			1000	1010		pg/L		101	83 - 130	7	20
OCDD			2000	2170		pg/L		108	80 - 132	8	20
OCDF			2000	2380		pg/L		119	72 - 140	9	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*86*		*40 - 135*
13C-2,3,7,8-TCDF	*83*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*80*		*40 - 135*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-2

Client Sample ID: MW-16:082916
Date Collected: 08/29/16 12:25
Date Received: 08/29/16 16:45

Lab Sample ID: 590-4346-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1057.6 mL	20 uL	127940	09/19/16 15:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129408	09/27/16 00:30	SMA	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-2

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4346-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudolph	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			Other:
Email: jmlee@geoengineers.com	WO #			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9141A - OP Pesticides	9151A - Herbicide (Acidic)	9290A - Dioxins or Furans List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	3260C - Standard List Volatile Organics	3270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-16:082916	8/29/16	1225	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
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				Water																	

590-4346 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Received by Sheila Tracy	8/29/16 1645	TAS PDX			
Relinquished by: Josh Lee	Date/Time: 8/29/2016 1645	Company: GEI	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks: 3.3

10/3/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee F	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmiller@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GCMS	9223_ColiQT_WW - Quantitray TC E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
MW-16:082916	8/29/16	1225	G	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/29/2016 1645	GEI	Sheila Kraft	8/29/16 1645	TAL SPK
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.3 IR003

10/3/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1981.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4346-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/13/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-16:082916 (590-4346-1)	8/29/16	12:25 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Trad	8/30/16 1600	TAL SPK	Lore T. Est	8/31/16 0940	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.5 0.7

ONE 8/31/16 Temp Blank @ cooler

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4346-2

Login Number: 4346

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4346-2

Login Number: 4346
List Number: 5
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 08/31/16 05:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



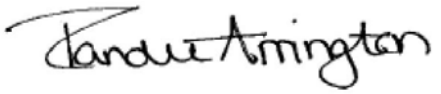
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4339-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders



Authorized for release by:
9/20/2016 12:00:41 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Job ID: 590-4339-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 8/26/2016 4:20 PM; the samples arrived in good condition.

Air - GC/MS VOA
Method TO-15: 1,2-Dichloroethane-d4 (Surrogate) recovery for the following samples was outside control limits: (CCV 320-125451/10), (LCS 320-125451/11) and (LCSD 320-125451/12). This analyte is not use as a monitoring analyte.

Method TO-15: 4-Bromofluorobenzene (Surrogate) recovery for the following samples was outside control limits: LFB-11-082616 (590-4339-4) and LFB-4-082616 (590-4339-5). Re-analysis was performed with concurring results.

Method TO-15: The method blank for preparation batch 125451 contained Ethanol above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4339-1	LFB-8-082616	Air	08/26/16 11:45	08/26/16 16:20
590-4339-2	LFB-9-082616	Air	08/26/16 12:24	08/26/16 16:20
590-4339-3	LFB-10-082616	Air	08/26/16 12:52	08/26/16 16:20
590-4339-4	LFB-11-082616	Air	08/26/16 13:09	08/26/16 16:20
590-4339-5	LFB-4-082616	Air	08/26/16 13:30	08/26/16 16:20
590-4339-6	LFB-3-082616	Air	08/26/16 13:52	08/26/16 16:20
590-4339-7	LFB-15-082616	Air	08/26/16 14:14	08/26/16 16:20
590-4339-8	LFB-16-082616	Air	08/26/16 14:35	08/26/16 16:20
590-4339-9	LFB-17-082616	Air	08/26/16 15:05	08/26/16 16:20
590-4339-10	LFB-5-082616	Air	08/26/16 15:30	08/26/16 16:20

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-8-082616
Date Collected: 08/26/16 11:45
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1.1**		0.30	0.065	ppb v/v			09/02/16 20:51	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/02/16 20:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			09/02/16 20:51	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/02/16 20:51	1
1,1-Dichloroethane	**0.33**		0.30	0.072	ppb v/v			09/02/16 20:51	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/02/16 20:51	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/02/16 20:51	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/02/16 20:51	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/02/16 20:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			09/02/16 20:51	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/02/16 20:51	1
1,2-Dichloroethane	**0.23**	**J**	0.80	0.088	ppb v/v			09/02/16 20:51	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/02/16 20:51	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/02/16 20:51	1
1,3-Dichlorobenzene	**0.12**	**J**	0.40	0.11	ppb v/v			09/02/16 20:51	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			09/02/16 20:51	1
2-Butanone (MEK)	**1.2**		0.80	0.20	ppb v/v			09/02/16 20:51	1
2-Hexanone	**0.12**	**J**	0.40	0.087	ppb v/v			09/02/16 20:51	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/02/16 20:51	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/02/16 20:51	1
Acetone	**8.3**		5.0	0.18	ppb v/v			09/02/16 20:51	1
Benzene	**0.26**	**J**	0.40	0.079	ppb v/v			09/02/16 20:51	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/02/16 20:51	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/02/16 20:51	1
Bromoform	ND		0.40	0.070	ppb v/v			09/02/16 20:51	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/02/16 20:51	1
Carbon disulfide	**8.4**		0.80	0.078	ppb v/v			09/02/16 20:51	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/02/16 20:51	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/02/16 20:51	1
Chloroethane	**0.41**	**J**	0.80	0.31	ppb v/v			09/02/16 20:51	1
Chloroform	**0.51**		0.30	0.095	ppb v/v			09/02/16 20:51	1
Chloromethane	**8.4**		0.80	0.20	ppb v/v			09/02/16 20:51	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/02/16 20:51	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/02/16 20:51	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/02/16 20:51	1
Dichlorodifluoromethane	**2.2**		0.40	0.15	ppb v/v			09/02/16 20:51	1
Ethylbenzene	**0.14**	**J**	0.40	0.063	ppb v/v			09/02/16 20:51	1
Gasoline Range Organics (C6-C12)	**420**		100	40	ppb v/v			09/02/16 20:51	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/02/16 20:51	1
m,p-Xylene	**0.47**	**J**	0.80	0.10	ppb v/v			09/02/16 20:51	1
Methylene Chloride	**0.081**	**J**	0.40	0.072	ppb v/v			09/02/16 20:51	1
o-Xylene	**0.19**	**J**	0.40	0.054	ppb v/v			09/02/16 20:51	1
Styrene	**0.16**	**J**	0.40	0.059	ppb v/v			09/02/16 20:51	1
Tetrachloroethene	**5.5**		0.40	0.051	ppb v/v			09/02/16 20:51	1
Toluene	**0.62**	**B**	0.40	0.051	ppb v/v			09/02/16 20:51	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/02/16 20:51	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/02/16 20:51	1
Trichloroethene	ND		0.40	0.11	ppb v/v			09/02/16 20:51	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-8-082616
Date Collected: 08/26/16 11:45
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**18**		0.40	0.20	ppb v/v			09/02/16 20:51	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/02/16 20:51	1
Vinyl chloride	**0.12**	**J**	0.40	0.12	ppb v/v			09/02/16 20:51	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/02/16 20:51	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/02/16 20:51	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/02/16 20:51	1
Cyclohexane	**0.11**	**J**	0.40	0.084	ppb v/v			09/02/16 20:51	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			09/02/16 20:51	1
n-Heptane	**0.65**	**J**	0.80	0.063	ppb v/v			09/02/16 20:51	1
Hexane	**1.5**		0.80	0.075	ppb v/v			09/02/16 20:51	1
Isopropylbenzene	**0.16**	**J**	0.80	0.10	ppb v/v			09/02/16 20:51	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			09/02/16 20:51	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/02/16 20:51	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/02/16 20:51	1
2-Propanol	**1.8**	**J**	2.0	0.23	ppb v/v			09/02/16 20:51	1
Propylene	**1.7**		0.40	0.099	ppb v/v			09/02/16 20:51	1
Tetrahydrofuran	ND		0.80	0.079	ppb v/v			09/02/16 20:51	1
2,2,4-Trimethylpentane	**0.22**	**J**	0.40	0.071	ppb v/v			09/02/16 20:51	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/02/16 20:51	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0061**		0.0016	0.00035	mg/m3			09/02/16 20:51	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/02/16 20:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/02/16 20:51	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/02/16 20:51	1
1,1-Dichloroethane	**0.0013**		0.0012	0.00029	mg/m3			09/02/16 20:51	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/02/16 20:51	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/02/16 20:51	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/02/16 20:51	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/02/16 20:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			09/02/16 20:51	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/02/16 20:51	1
1,2-Dichloroethane	**0.00092**	**J**	0.0032	0.00036	mg/m3			09/02/16 20:51	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/02/16 20:51	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/02/16 20:51	1
1,3-Dichlorobenzene	**0.00073**	**J**	0.0024	0.00066	mg/m3			09/02/16 20:51	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/02/16 20:51	1
2-Butanone (MEK)	**0.0035**		0.0024	0.00059	mg/m3			09/02/16 20:51	1
2-Hexanone	**0.00048**	**J**	0.0016	0.00036	mg/m3			09/02/16 20:51	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/02/16 20:51	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/02/16 20:51	1
Acetone	**0.020**		0.012	0.00042	mg/m3			09/02/16 20:51	1
Benzene	**0.00082**	**J**	0.0013	0.00025	mg/m3			09/02/16 20:51	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/02/16 20:51	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/02/16 20:51	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/02/16 20:51	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/02/16 20:51	1
Carbon disulfide	**0.026**		0.0025	0.00024	mg/m3			09/02/16 20:51	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/02/16 20:51	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/02/16 20:51	1

Client Sample ID: LFB-8-082616
Date Collected: 08/26/16 11:45
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	0.0011	J	0.0021	0.00081	mg/m3			09/02/16 20:51	1
Chloroform	0.0025		0.0015	0.00046	mg/m3			09/02/16 20:51	1
Chloromethane	0.017		0.0017	0.00041	mg/m3			09/02/16 20:51	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/02/16 20:51	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/02/16 20:51	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/02/16 20:51	1
Dichlorodifluoromethane	0.011		0.0020	0.00072	mg/m3			09/02/16 20:51	1
Ethylbenzene	0.00063	J	0.0017	0.00027	mg/m3			09/02/16 20:51	1
Gasoline Range Organics (C6-C12)	1.7		0.41	0.16	mg/m3			09/02/16 20:51	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/02/16 20:51	1
m,p-Xylene	0.0021	J	0.0035	0.00043	mg/m3			09/02/16 20:51	1
Methylene Chloride	0.00028	J	0.0014	0.00025	mg/m3			09/02/16 20:51	1
o-Xylene	0.00083	J	0.0017	0.00023	mg/m3			09/02/16 20:51	1
Styrene	0.00066	J	0.0017	0.00025	mg/m3			09/02/16 20:51	1
Tetrachloroethene	0.038		0.0027	0.00035	mg/m3			09/02/16 20:51	1
Toluene	0.0023	B	0.0015	0.00019	mg/m3			09/02/16 20:51	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/02/16 20:51	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/02/16 20:51	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/02/16 20:51	1
Trichlorofluoromethane	0.10		0.0022	0.0011	mg/m3			09/02/16 20:51	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/02/16 20:51	1
Vinyl chloride	0.00030	J	0.0010	0.00031	mg/m3			09/02/16 20:51	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/02/16 20:51	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/02/16 20:51	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/02/16 20:51	1
Cyclohexane	0.00038	J	0.0014	0.00029	mg/m3			09/02/16 20:51	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			09/02/16 20:51	1
n-Heptane	0.0027	J	0.0033	0.00026	mg/m3			09/02/16 20:51	1
Hexane	0.0053		0.0028	0.00026	mg/m3			09/02/16 20:51	1
Isopropylbenzene	0.00079	J	0.0039	0.00049	mg/m3			09/02/16 20:51	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			09/02/16 20:51	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/02/16 20:51	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/02/16 20:51	1
2-Propanol	0.0045	J	0.0049	0.00058	mg/m3			09/02/16 20:51	1
Propylene	0.0030		0.00069	0.00017	mg/m3			09/02/16 20:51	1
Tetrahydrofuran	ND		0.0024	0.00023	mg/m3			09/02/16 20:51	1
2,2,4-Trimethylpentane	0.0010	J	0.0019	0.00033	mg/m3			09/02/16 20:51	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/02/16 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*09/02/16 20:51*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/02/16 20:51*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/02/16 20:51*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	1.8		1.0	0.18	ppb v/v			09/06/16 16:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	0.0034		0.0019	0.00034	mg/m3			09/06/16 16:37	1

Client Sample ID: LFB-8-082616

Lab Sample ID: 590-4339-1

Date Collected: 08/26/16 11:45

Matrix: Air

Date Received: 08/26/16 16:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/06/16 16:37*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*09/06/16 16:37*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/06/16 16:37*	*1*

Client Sample ID: LFB-9-082616

Lab Sample ID: 590-4339-2

Date Collected: 08/26/16 12:24

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.075**	**J**	0.30	0.065	ppb v/v			09/02/16 21:37	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/02/16 21:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.18**	**J**	0.40	0.16	ppb v/v			09/02/16 21:37	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/02/16 21:37	1
1,1-Dichloroethane	ND		0.30	0.072	ppb v/v			09/02/16 21:37	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/02/16 21:37	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/02/16 21:37	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/02/16 21:37	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/02/16 21:37	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			09/02/16 21:37	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/02/16 21:37	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			09/02/16 21:37	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/02/16 21:37	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/02/16 21:37	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			09/02/16 21:37	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			09/02/16 21:37	1
2-Butanone (MEK)	**0.68**	**J**	0.80	0.20	ppb v/v			09/02/16 21:37	1
2-Hexanone	**0.13**	**J**	0.40	0.087	ppb v/v			09/02/16 21:37	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/02/16 21:37	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/02/16 21:37	1
Acetone	**5.1**		5.0	0.18	ppb v/v			09/02/16 21:37	1
Benzene	ND		0.40	0.079	ppb v/v			09/02/16 21:37	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/02/16 21:37	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/02/16 21:37	1
Bromoform	ND		0.40	0.070	ppb v/v			09/02/16 21:37	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/02/16 21:37	1
Carbon disulfide	**0.28**	**J**	0.80	0.078	ppb v/v			09/02/16 21:37	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/02/16 21:37	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/02/16 21:37	1
Chloroethane	ND		0.80	0.31	ppb v/v			09/02/16 21:37	1
Chloroform	**0.16**	**J**	0.30	0.095	ppb v/v			09/02/16 21:37	1
Chloromethane	**0.22**	**J**	0.80	0.20	ppb v/v			09/02/16 21:37	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/02/16 21:37	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/02/16 21:37	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/02/16 21:37	1
Dichlorodifluoromethane	**2.6**		0.40	0.15	ppb v/v			09/02/16 21:37	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			09/02/16 21:37	1
Gasoline Range Organics (C6-C12)	**140**		100	40	ppb v/v			09/02/16 21:37	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/02/16 21:37	1

Client Sample ID: LFB-9-082616
Date Collected: 08/26/16 12:24
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	**0.13**	**J**	0.80	0.10	ppb v/v			09/02/16 21:37	1
Methylene Chloride	**0.081**	**J**	0.40	0.072	ppb v/v			09/02/16 21:37	1
o-Xylene	**0.058**	**J**	0.40	0.054	ppb v/v			09/02/16 21:37	1
Styrene	ND		0.40	0.059	ppb v/v			09/02/16 21:37	1
Tetrachloroethene	**5.1**		0.40	0.051	ppb v/v			09/02/16 21:37	1
Toluene	**0.21**	**J B**	0.40	0.051	ppb v/v			09/02/16 21:37	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/02/16 21:37	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/02/16 21:37	1
Trichloroethene	ND		0.40	0.11	ppb v/v			09/02/16 21:37	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/02/16 21:37	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			09/02/16 21:37	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/02/16 21:37	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/02/16 21:37	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/02/16 21:37	1
Cyclohexane	ND		0.40	0.084	ppb v/v			09/02/16 21:37	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			09/02/16 21:37	1
n-Heptane	ND		0.80	0.063	ppb v/v			09/02/16 21:37	1
Hexane	**0.12**	**J**	0.80	0.075	ppb v/v			09/02/16 21:37	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			09/02/16 21:37	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			09/02/16 21:37	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/02/16 21:37	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/02/16 21:37	1
2-Propanol	**1.1**	**J**	2.0	0.23	ppb v/v			09/02/16 21:37	1
Propylene	**0.67**		0.40	0.099	ppb v/v			09/02/16 21:37	1
Tetrahydrofuran	ND		0.80	0.079	ppb v/v			09/02/16 21:37	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			09/02/16 21:37	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/02/16 21:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.00041**	**J**	0.0016	0.00035	mg/m3			09/02/16 21:37	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/02/16 21:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0014**	**J**	0.0031	0.0012	mg/m3			09/02/16 21:37	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/02/16 21:37	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			09/02/16 21:37	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/02/16 21:37	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/02/16 21:37	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/02/16 21:37	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/02/16 21:37	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			09/02/16 21:37	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/02/16 21:37	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/02/16 21:37	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/02/16 21:37	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/02/16 21:37	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/02/16 21:37	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/02/16 21:37	1
2-Butanone (MEK)	**0.0020**	**J**	0.0024	0.00059	mg/m3			09/02/16 21:37	1
2-Hexanone	**0.00052**	**J**	0.0016	0.00036	mg/m3			09/02/16 21:37	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/02/16 21:37	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/02/16 21:37	1

Client Sample ID: LFB-9-082616
Date Collected: 08/26/16 12:24
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.012**		0.012	0.00042	mg/m3			09/02/16 21:37	1
Benzene	ND		0.0013	0.00025	mg/m3			09/02/16 21:37	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/02/16 21:37	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/02/16 21:37	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/02/16 21:37	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/02/16 21:37	1
Carbon disulfide	**0.00087**	**J**	0.0025	0.00024	mg/m3			09/02/16 21:37	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/02/16 21:37	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/02/16 21:37	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/02/16 21:37	1
Chloroform	**0.00077**	**J**	0.0015	0.00046	mg/m3			09/02/16 21:37	1
Chloromethane	**0.00045**	**J**	0.0017	0.00041	mg/m3			09/02/16 21:37	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/02/16 21:37	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/02/16 21:37	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/02/16 21:37	1
Dichlorodifluoromethane	**0.013**		0.0020	0.00072	mg/m3			09/02/16 21:37	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			09/02/16 21:37	1
Gasoline Range Organics (C6-C12)	**0.57**		0.41	0.16	mg/m3			09/02/16 21:37	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/02/16 21:37	1
m,p-Xylene	**0.00056**	**J**	0.0035	0.00043	mg/m3			09/02/16 21:37	1
Methylene Chloride	**0.00028**	**J**	0.0014	0.00025	mg/m3			09/02/16 21:37	1
o-Xylene	**0.00025**	**J**	0.0017	0.00023	mg/m3			09/02/16 21:37	1
Styrene	ND		0.0017	0.00025	mg/m3			09/02/16 21:37	1
Tetrachloroethene	**0.035**		0.0027	0.00035	mg/m3			09/02/16 21:37	1
Toluene	**0.00080**	**J B**	0.0015	0.00019	mg/m3			09/02/16 21:37	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/02/16 21:37	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/02/16 21:37	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/02/16 21:37	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/02/16 21:37	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/02/16 21:37	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/02/16 21:37	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/02/16 21:37	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/02/16 21:37	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			09/02/16 21:37	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			09/02/16 21:37	1
n-Heptane	ND		0.0033	0.00026	mg/m3			09/02/16 21:37	1
Hexane	**0.00041**	**J**	0.0028	0.00026	mg/m3			09/02/16 21:37	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			09/02/16 21:37	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			09/02/16 21:37	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/02/16 21:37	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/02/16 21:37	1
2-Propanol	**0.0026**	**J**	0.0049	0.00058	mg/m3			09/02/16 21:37	1
Propylene	**0.0012**		0.00069	0.00017	mg/m3			09/02/16 21:37	1
Tetrahydrofuran	ND		0.0024	0.00023	mg/m3			09/02/16 21:37	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			09/02/16 21:37	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/02/16 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*09/02/16 21:37*	*1*

Client Sample ID: LFB-9-082616

Lab Sample ID: 590-4339-2

Date Collected: 08/26/16 12:24

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/02/16 21:37*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/02/16 21:37*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**99**		2.5	1.2	ppb v/v			09/07/16 09:01	6.28
Ethanol	**9.9**		6.3	1.1	ppb v/v			09/07/16 09:01	6.28

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**0.56**		0.014	0.0069	mg/m3			09/07/16 09:01	6.28
Ethanol	**0.019**		0.012	0.0021	mg/m3			09/07/16 09:01	6.28

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*09/07/16 09:01*	*6.28*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*09/07/16 09:01*	*6.28*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/07/16 09:01*	*6.28*

Client Sample ID: LFB-10-082616

Lab Sample ID: 590-4339-3

Date Collected: 08/26/16 12:52

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.43**		0.30	0.065	ppb v/v			09/02/16 22:31	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/02/16 22:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.29**	**J**	0.40	0.16	ppb v/v			09/02/16 22:31	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/02/16 22:31	1
1,1-Dichloroethane	**0.25**	**J**	0.30	0.072	ppb v/v			09/02/16 22:31	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/02/16 22:31	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/02/16 22:31	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/02/16 22:31	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/02/16 22:31	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**1.6**		0.40	0.16	ppb v/v			09/02/16 22:31	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/02/16 22:31	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			09/02/16 22:31	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/02/16 22:31	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/02/16 22:31	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			09/02/16 22:31	1
1,4-Dichlorobenzene	**0.25**	**J**	0.40	0.15	ppb v/v			09/02/16 22:31	1
2-Butanone (MEK)	**0.54**	**J**	0.80	0.20	ppb v/v			09/02/16 22:31	1
2-Hexanone	ND		0.40	0.087	ppb v/v			09/02/16 22:31	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/02/16 22:31	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/02/16 22:31	1
Acetone	**5.5**		5.0	0.18	ppb v/v			09/02/16 22:31	1
Benzene	**0.38**	**J**	0.40	0.079	ppb v/v			09/02/16 22:31	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/02/16 22:31	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/02/16 22:31	1
Bromoform	ND		0.40	0.070	ppb v/v			09/02/16 22:31	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/02/16 22:31	1

Client Sample ID: LFB-10-082616
Date Collected: 08/26/16 12:52
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	**4.9**		0.80	0.078	ppb v/v			09/02/16 22:31	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/02/16 22:31	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/02/16 22:31	1
Chloroethane	ND		0.80	0.31	ppb v/v			09/02/16 22:31	1
Chloroform	**0.50**		0.30	0.095	ppb v/v			09/02/16 22:31	1
Chloromethane	ND		0.80	0.20	ppb v/v			09/02/16 22:31	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/02/16 22:31	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/02/16 22:31	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/02/16 22:31	1
Dichlorodifluoromethane	**14**		0.40	0.15	ppb v/v			09/02/16 22:31	1
Ethylbenzene	**0.063**	**J**	0.40	0.063	ppb v/v			09/02/16 22:31	1
Gasoline Range Organics (C6-C12)	**170**		100	40	ppb v/v			09/02/16 22:31	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/02/16 22:31	1
m,p-Xylene	**0.26**	**J**	0.80	0.10	ppb v/v			09/02/16 22:31	1
Methylene Chloride	**0.075**	**J**	0.40	0.072	ppb v/v			09/02/16 22:31	1
o-Xylene	**0.082**	**J**	0.40	0.054	ppb v/v			09/02/16 22:31	1
Styrene	ND		0.40	0.059	ppb v/v			09/02/16 22:31	1
Tetrachloroethene	**9.1**		0.40	0.051	ppb v/v			09/02/16 22:31	1
Toluene	**0.18**	**J B**	0.40	0.051	ppb v/v			09/02/16 22:31	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/02/16 22:31	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/02/16 22:31	1
Trichloroethene	**0.55**		0.40	0.11	ppb v/v			09/02/16 22:31	1
Trichlorofluoromethane	**7.0**		0.40	0.20	ppb v/v			09/02/16 22:31	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/02/16 22:31	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			09/02/16 22:31	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/02/16 22:31	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/02/16 22:31	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/02/16 22:31	1
Cyclohexane	ND		0.40	0.084	ppb v/v			09/02/16 22:31	1
1,4-Dioxane	**0.15**	**J**	0.80	0.10	ppb v/v			09/02/16 22:31	1
n-Heptane	**0.10**	**J**	0.80	0.063	ppb v/v			09/02/16 22:31	1
Hexane	**0.42**	**J**	0.80	0.075	ppb v/v			09/02/16 22:31	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			09/02/16 22:31	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			09/02/16 22:31	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/02/16 22:31	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/02/16 22:31	1
2-Propanol	**1.2**	**J**	2.0	0.23	ppb v/v			09/02/16 22:31	1
Propylene	**2.1**		0.40	0.099	ppb v/v			09/02/16 22:31	1
Tetrahydrofuran	**0.14**	**J**	0.80	0.079	ppb v/v			09/02/16 22:31	1
2,2,4-Trimethylpentane	**0.10**	**J**	0.40	0.071	ppb v/v			09/02/16 22:31	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/02/16 22:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0024**		0.0016	0.00035	mg/m3			09/02/16 22:31	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/02/16 22:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0022**	**J**	0.0031	0.0012	mg/m3			09/02/16 22:31	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/02/16 22:31	1
1,1-Dichloroethane	**0.0010**	**J**	0.0012	0.00029	mg/m3			09/02/16 22:31	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/02/16 22:31	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-10-082616
Date Collected: 08/26/16 12:52
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/02/16 22:31	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/02/16 22:31	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/02/16 22:31	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.011**		0.0028	0.0011	mg/m3			09/02/16 22:31	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/02/16 22:31	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/02/16 22:31	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/02/16 22:31	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/02/16 22:31	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/02/16 22:31	1
1,4-Dichlorobenzene	**0.0015**	**J**	0.0024	0.00090	mg/m3			09/02/16 22:31	1
2-Butanone (MEK)	**0.0016**	**J**	0.0024	0.00059	mg/m3			09/02/16 22:31	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/02/16 22:31	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/02/16 22:31	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/02/16 22:31	1
Acetone	**0.013**		0.012	0.00042	mg/m3			09/02/16 22:31	1
Benzene	**0.0012**	**J**	0.0013	0.00025	mg/m3			09/02/16 22:31	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/02/16 22:31	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/02/16 22:31	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/02/16 22:31	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/02/16 22:31	1
Carbon disulfide	**0.015**		0.0025	0.00024	mg/m3			09/02/16 22:31	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/02/16 22:31	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/02/16 22:31	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/02/16 22:31	1
Chloroform	**0.0024**		0.0015	0.00046	mg/m3			09/02/16 22:31	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/02/16 22:31	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/02/16 22:31	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/02/16 22:31	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/02/16 22:31	1
Dichlorodifluoromethane	**0.071**		0.0020	0.00072	mg/m3			09/02/16 22:31	1
Ethylbenzene	**0.00027**	**J**	0.0017	0.00027	mg/m3			09/02/16 22:31	1
Gasoline Range Organics (C6-C12)	**0.69**		0.41	0.16	mg/m3			09/02/16 22:31	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/02/16 22:31	1
m,p-Xylene	**0.0011**	**J**	0.0035	0.00043	mg/m3			09/02/16 22:31	1
Methylene Chloride	**0.00026**	**J**	0.0014	0.00025	mg/m3			09/02/16 22:31	1
o-Xylene	**0.00036**	**J**	0.0017	0.00023	mg/m3			09/02/16 22:31	1
Styrene	ND		0.0017	0.00025	mg/m3			09/02/16 22:31	1
Tetrachloroethene	**0.061**		0.0027	0.00035	mg/m3			09/02/16 22:31	1
Toluene	**0.00067**	**J B**	0.0015	0.00019	mg/m3			09/02/16 22:31	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/02/16 22:31	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/02/16 22:31	1
Trichloroethene	**0.0029**		0.0021	0.00056	mg/m3			09/02/16 22:31	1
Trichlorofluoromethane	**0.040**		0.0022	0.0011	mg/m3			09/02/16 22:31	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/02/16 22:31	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/02/16 22:31	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/02/16 22:31	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/02/16 22:31	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/02/16 22:31	1

Client Sample ID: LFB-10-082616

Lab Sample ID: 590-4339-3

Date Collected: 08/26/16 12:52

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	ND		0.0014	0.00029	mg/m3			09/02/16 22:31	1
1,4-Dioxane	**0.00055**	**J**	0.0029	0.00036	mg/m3			09/02/16 22:31	1
n-Heptane	**0.00043**	**J**	0.0033	0.00026	mg/m3			09/02/16 22:31	1
Hexane	**0.0015**	**J**	0.0028	0.00026	mg/m3			09/02/16 22:31	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			09/02/16 22:31	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			09/02/16 22:31	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/02/16 22:31	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/02/16 22:31	1
2-Propanol	**0.0029**	**J**	0.0049	0.00058	mg/m3			09/02/16 22:31	1
Propylene	**0.0037**		0.00069	0.00017	mg/m3			09/02/16 22:31	1
Tetrahydrofuran	**0.00042**	**J**	0.0024	0.00023	mg/m3			09/02/16 22:31	1
2,2,4-Trimethylpentane	**0.00049**	**J**	0.0019	0.00033	mg/m3			09/02/16 22:31	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/02/16 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*09/02/16 22:31*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*09/02/16 22:31*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/02/16 22:31*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**1.2**		1.0	0.18	ppb v/v			09/06/16 18:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.0023**		0.0019	0.00034	mg/m3			09/06/16 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/06/16 18:20*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/06/16 18:20*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*09/06/16 18:20*	*1*

Client Sample ID: LFB-11-082616

Lab Sample ID: 590-4339-4

Date Collected: 08/26/16 13:09

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.1	0.89	ppb v/v			09/02/16 23:15	13.63
1,1,2,2-Tetrachloroethane	ND		5.5	0.94	ppb v/v			09/02/16 23:15	13.63
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.5	2.2	ppb v/v			09/02/16 23:15	13.63
1,1,2-Trichloroethane	ND		5.5	0.91	ppb v/v			09/02/16 23:15	13.63
1,1-Dichloroethane	**11**		4.1	0.98	ppb v/v			09/02/16 23:15	13.63
1,1-Dichloroethene	**7.5**	**J**	11	1.8	ppb v/v			09/02/16 23:15	13.63
1,2,4-Trichlorobenzene	ND		27	5.9	ppb v/v			09/02/16 23:15	13.63
1,2,4-Trimethylbenzene	**380**		11	2.2	ppb v/v			09/02/16 23:15	13.63
1,2-Dibromoethane (EDB)	ND		11	1.0	ppb v/v			09/02/16 23:15	13.63
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**22**		5.5	2.1	ppb v/v			09/02/16 23:15	13.63
1,2-Dichlorobenzene	**4.3**	**J**	5.5	1.8	ppb v/v			09/02/16 23:15	13.63
1,2-Dichloroethane	ND		11	1.2	ppb v/v			09/02/16 23:15	13.63
1,2-Dichloropropane	ND		5.5	3.3	ppb v/v			09/02/16 23:15	13.63

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-11-082616
Date Collected: 08/26/16 13:09
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**80**		5.5	1.7	ppb v/v			09/02/16 23:15	13.63
1,3-Dichlorobenzene	ND		5.5	1.5	ppb v/v			09/02/16 23:15	13.63
1,4-Dichlorobenzene	**80**		5.5	2.0	ppb v/v			09/02/16 23:15	13.63
2-Butanone (MEK)	ND		11	2.7	ppb v/v			09/02/16 23:15	13.63
2-Hexanone	ND		5.5	1.2	ppb v/v			09/02/16 23:15	13.63
4-Ethyltoluene	**48**		5.5	2.5	ppb v/v			09/02/16 23:15	13.63
4-Methyl-2-pentanone (MIBK)	ND		5.5	1.8	ppb v/v			09/02/16 23:15	13.63
Acetone	**17**	**J**	68	2.4	ppb v/v			09/02/16 23:15	13.63
Benzene	**130**		5.5	1.1	ppb v/v			09/02/16 23:15	13.63
Benzyl chloride	**5.7**	**J**	11	2.2	ppb v/v			09/02/16 23:15	13.63
Bromodichloromethane	ND		4.1	0.90	ppb v/v			09/02/16 23:15	13.63
Bromoform	ND		5.5	0.95	ppb v/v			09/02/16 23:15	13.63
Bromomethane	ND		11	4.6	ppb v/v			09/02/16 23:15	13.63
Carbon disulfide	**1.3**	**J**	11	1.1	ppb v/v			09/02/16 23:15	13.63
Carbon tetrachloride	ND		11	0.87	ppb v/v			09/02/16 23:15	13.63
Chlorobenzene	**24**		4.1	0.87	ppb v/v			09/02/16 23:15	13.63
Chloroform	ND		4.1	1.3	ppb v/v			09/02/16 23:15	13.63
Chloromethane	ND		11	2.7	ppb v/v			09/02/16 23:15	13.63
cis-1,2-Dichloroethene	**95**		5.5	1.2	ppb v/v			09/02/16 23:15	13.63
cis-1,3-Dichloropropene	ND		5.5	1.4	ppb v/v			09/02/16 23:15	13.63
Dibromochloromethane	ND		5.5	1.1	ppb v/v			09/02/16 23:15	13.63
Dichlorodifluoromethane	**45**		5.5	2.0	ppb v/v			09/02/16 23:15	13.63
Gasoline Range Organics (C6-C12)	**160000**		1400	550	ppb v/v			09/02/16 23:15	13.63
Hexachlorobutadiene	ND		27	5.9	ppb v/v			09/02/16 23:15	13.63
m,p-Xylene	**380**		11	1.4	ppb v/v			09/02/16 23:15	13.63
Methylene Chloride	**3.9**	**J**	5.5	0.98	ppb v/v			09/02/16 23:15	13.63
o-Xylene	**170**		5.5	0.74	ppb v/v			09/02/16 23:15	13.63
Styrene	**13**		5.5	0.80	ppb v/v			09/02/16 23:15	13.63
Tetrachloroethene	**5.1**	**J**	5.5	0.70	ppb v/v			09/02/16 23:15	13.63
Toluene	**77**	**B**	5.5	0.70	ppb v/v			09/02/16 23:15	13.63
trans-1,2-Dichloroethene	ND		5.5	1.4	ppb v/v			09/02/16 23:15	13.63
trans-1,3-Dichloropropene	ND		5.5	1.2	ppb v/v			09/02/16 23:15	13.63
Trichloroethene	**7.6**		5.5	1.4	ppb v/v			09/02/16 23:15	13.63
Trichlorofluoromethane	**68**		5.5	2.7	ppb v/v			09/02/16 23:15	13.63
Vinyl acetate	ND		11	2.0	ppb v/v			09/02/16 23:15	13.63
Vinyl chloride	**26**		5.5	1.6	ppb v/v			09/02/16 23:15	13.63
Allyl chloride	ND		11	1.5	ppb v/v			09/02/16 23:15	13.63
1,3-Butadiene	ND		11	2.1	ppb v/v			09/02/16 23:15	13.63
2-Chlorotoluene	ND		5.5	1.1	ppb v/v			09/02/16 23:15	13.63
Cyclohexane	**47**		5.5	1.1	ppb v/v			09/02/16 23:15	13.63
1,4-Dioxane	**3.5**	**J**	11	1.4	ppb v/v			09/02/16 23:15	13.63
Ethanol	ND		14	2.5	ppb v/v			09/02/16 23:15	13.63
n-Heptane	**310**		11	0.86	ppb v/v			09/02/16 23:15	13.63
Hexane	**400**		11	1.0	ppb v/v			09/02/16 23:15	13.63
Isopropylbenzene	**200**		11	1.4	ppb v/v			09/02/16 23:15	13.63
Methyl methacrylate	ND		11	2.1	ppb v/v			09/02/16 23:15	13.63
Methyl-t-Butyl Ether (MTBE)	ND		11	0.68	ppb v/v			09/02/16 23:15	13.63
Naphthalene	**13**		11	7.7	ppb v/v			09/02/16 23:15	13.63
2-Propanol	**35**		27	3.2	ppb v/v			09/02/16 23:15	13.63

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-11-082616
Date Collected: 08/26/16 13:09
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	**170**		11	1.1	ppb v/v			09/02/16 23:15	13.63
2,2,4-Trimethylpentane	**16**		5.5	0.97	ppb v/v			09/02/16 23:15	13.63
Vinyl bromide	ND		11	3.5	ppb v/v			09/02/16 23:15	13.63

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.022	0.0048	mg/m3			09/02/16 23:15	13.63
1,1,2,2-Tetrachloroethane	ND		0.037	0.0065	mg/m3			09/02/16 23:15	13.63
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.042	0.017	mg/m3			09/02/16 23:15	13.63
1,1,2-Trichloroethane	ND		0.030	0.0050	mg/m3			09/02/16 23:15	13.63
1,1-Dichloroethane	**0.046**		0.017	0.0040	mg/m3			09/02/16 23:15	13.63
1,1-Dichloroethene	**0.030**	**J**	0.043	0.0070	mg/m3			09/02/16 23:15	13.63
1,2,4-Trichlorobenzene	ND		0.20	0.044	mg/m3			09/02/16 23:15	13.63
1,2,4-Trimethylbenzene	**1.8**		0.054	0.011	mg/m3			09/02/16 23:15	13.63
1,2-Dibromoethane (EDB)	ND		0.084	0.0079	mg/m3			09/02/16 23:15	13.63
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.15**		0.038	0.015	mg/m3			09/02/16 23:15	13.63
1,2-Dichlorobenzene	**0.026**	**J**	0.033	0.011	mg/m3			09/02/16 23:15	13.63
1,2-Dichloroethane	ND		0.044	0.0049	mg/m3			09/02/16 23:15	13.63
1,2-Dichloropropane	ND		0.025	0.015	mg/m3			09/02/16 23:15	13.63
1,3,5-Trimethylbenzene	**0.39**		0.027	0.0084	mg/m3			09/02/16 23:15	13.63
1,3-Dichlorobenzene	ND		0.033	0.0090	mg/m3			09/02/16 23:15	13.63
1,4-Dichlorobenzene	**0.48**		0.033	0.012	mg/m3			09/02/16 23:15	13.63
2-Butanone (MEK)	ND		0.032	0.0080	mg/m3			09/02/16 23:15	13.63
2-Hexanone	ND		0.022	0.0049	mg/m3			09/02/16 23:15	13.63
4-Ethyltoluene	**0.24**		0.027	0.013	mg/m3			09/02/16 23:15	13.63
4-Methyl-2-pentanone (MIBK)	ND		0.022	0.0075	mg/m3			09/02/16 23:15	13.63
Acetone	**0.041**	**J**	0.16	0.0058	mg/m3			09/02/16 23:15	13.63
Benzene	**0.43**		0.017	0.0034	mg/m3			09/02/16 23:15	13.63
Benzyl chloride	**0.029**	**J**	0.056	0.012	mg/m3			09/02/16 23:15	13.63
Bromodichloromethane	ND		0.027	0.0060	mg/m3			09/02/16 23:15	13.63
Bromoform	ND		0.056	0.0099	mg/m3			09/02/16 23:15	13.63
Bromomethane	ND		0.042	0.018	mg/m3			09/02/16 23:15	13.63
Carbon disulfide	**0.0041**	**J**	0.034	0.0033	mg/m3			09/02/16 23:15	13.63
Carbon tetrachloride	ND		0.069	0.0055	mg/m3			09/02/16 23:15	13.63
Chlorobenzene	**0.11**		0.019	0.0040	mg/m3			09/02/16 23:15	13.63
Chloroform	ND		0.020	0.0063	mg/m3			09/02/16 23:15	13.63
Chloromethane	ND		0.023	0.0055	mg/m3			09/02/16 23:15	13.63
cis-1,2-Dichloroethene	**0.38**		0.022	0.0048	mg/m3			09/02/16 23:15	13.63
cis-1,3-Dichloropropene	ND		0.025	0.0064	mg/m3			09/02/16 23:15	13.63
Dibromochloromethane	ND		0.046	0.0092	mg/m3			09/02/16 23:15	13.63
Dichlorodifluoromethane	**0.22**		0.027	0.0098	mg/m3			09/02/16 23:15	13.63
Gasoline Range Organics (C6-C12)	**640**		5.6	2.2	mg/m3			09/02/16 23:15	13.63
Hexachlorobutadiene	ND		0.29	0.063	mg/m3			09/02/16 23:15	13.63
m,p-Xylene	**1.6**		0.047	0.0059	mg/m3			09/02/16 23:15	13.63
Methylene Chloride	**0.014**	**J**	0.019	0.0034	mg/m3			09/02/16 23:15	13.63
o-Xylene	**0.76**		0.024	0.0032	mg/m3			09/02/16 23:15	13.63
Styrene	**0.054**		0.023	0.0034	mg/m3			09/02/16 23:15	13.63
Tetrachloroethene	**0.035**	**J**	0.037	0.0047	mg/m3			09/02/16 23:15	13.63
Toluene	**0.29**	**B**	0.021	0.0026	mg/m3			09/02/16 23:15	13.63
trans-1,2-Dichloroethene	ND		0.022	0.0054	mg/m3			09/02/16 23:15	13.63

Client Sample ID: LFB-11-082616

Lab Sample ID: 590-4339-4

Date Collected: 08/26/16 13:09

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.025	0.0054	mg/m3			09/02/16 23:15	13.63
Trichloroethene	**0.041**		0.029	0.0077	mg/m3			09/02/16 23:15	13.63
Trichlorofluoromethane	**0.38**		0.031	0.015	mg/m3			09/02/16 23:15	13.63
Vinyl acetate	ND		0.038	0.0070	mg/m3			09/02/16 23:15	13.63
Vinyl chloride	**0.066**		0.014	0.0042	mg/m3			09/02/16 23:15	13.63
Allyl chloride	ND		0.034	0.0047	mg/m3			09/02/16 23:15	13.63
1,3-Butadiene	ND		0.024	0.0046	mg/m3			09/02/16 23:15	13.63
2-Chlorotoluene	ND		0.028	0.0056	mg/m3			09/02/16 23:15	13.63
Cyclohexane	**0.16**		0.019	0.0039	mg/m3			09/02/16 23:15	13.63
1,4-Dioxane	**0.013**	**J**	0.039	0.0050	mg/m3			09/02/16 23:15	13.63
Ethanol	ND		0.026	0.0046	mg/m3			09/02/16 23:15	13.63
n-Heptane	**1.3**		0.045	0.0035	mg/m3			09/02/16 23:15	13.63
Hexane	**1.4**		0.038	0.0036	mg/m3			09/02/16 23:15	13.63
Isopropylbenzene	**0.98**		0.054	0.0067	mg/m3			09/02/16 23:15	13.63
Methyl methacrylate	ND		0.045	0.0088	mg/m3			09/02/16 23:15	13.63
Methyl-t-Butyl Ether (MTBE)	ND		0.039	0.0025	mg/m3			09/02/16 23:15	13.63
Naphthalene	**0.066**		0.057	0.040	mg/m3			09/02/16 23:15	13.63
2-Propanol	**0.086**		0.067	0.0078	mg/m3			09/02/16 23:15	13.63
Tetrahydrofuran	**0.50**		0.032	0.0032	mg/m3			09/02/16 23:15	13.63
2,2,4-Trimethylpentane	**0.074**		0.025	0.0045	mg/m3			09/02/16 23:15	13.63
Vinyl bromide	ND		0.048	0.015	mg/m3			09/02/16 23:15	13.63

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*09/02/16 23:15*	*13.63*
4-Bromofluorobenzene (Surr)	*169*	*X*	*70 - 130*		*09/02/16 23:15*	*13.63*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/02/16 23:15*	*13.63*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	**1700**		35	13	ppb v/v			09/06/16 19:06	43.35
Ethylbenzene	**1800**		17	2.7	ppb v/v			09/06/16 19:06	43.35
Propylene	**1900**		17	4.3	ppb v/v			09/06/16 19:06	43.35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	**4.6**		0.092	0.035	mg/m3			09/06/16 19:06	43.35
Ethylbenzene	**8.0**		0.075	0.012	mg/m3			09/06/16 19:06	43.35
Propylene	**3.2**		0.030	0.0074	mg/m3			09/06/16 19:06	43.35

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*09/06/16 19:06*	*43.35*
4-Bromofluorobenzene (Surr)	*133*	*X*	*70 - 130*		*09/06/16 19:06*	*43.35*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/06/16 19:06*	*43.35*

Client Sample ID: LFB-4-082616

Lab Sample ID: 590-4339-5

Date Collected: 08/26/16 13:30

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0	0.87	ppb v/v			09/02/16 23:58	13.46
1,1,2,2-Tetrachloroethane	ND		5.4	0.93	ppb v/v			09/02/16 23:58	13.46

Client Sample ID: LFB-4-082616
Date Collected: 08/26/16 13:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.4	2.2	ppb v/v			09/02/16 23:58	13.46
1,1,2-Trichloroethane	ND		5.4	0.90	ppb v/v			09/02/16 23:58	13.46
1,1-Dichloroethane	**2.4**	**J**	4.0	0.97	ppb v/v			09/02/16 23:58	13.46
1,1-Dichloroethene	ND		11	1.7	ppb v/v			09/02/16 23:58	13.46
1,2,4-Trichlorobenzene	ND		27	5.8	ppb v/v			09/02/16 23:58	13.46
1,2,4-Trimethylbenzene	**52**		11	2.2	ppb v/v			09/02/16 23:58	13.46
1,2-Dibromoethane (EDB)	ND		11	1.0	ppb v/v			09/02/16 23:58	13.46
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**48**		5.4	2.1	ppb v/v			09/02/16 23:58	13.46
1,2-Dichlorobenzene	**4.0**	**J**	5.4	1.7	ppb v/v			09/02/16 23:58	13.46
1,2-Dichloroethane	**4.2**	**J**	11	1.2	ppb v/v			09/02/16 23:58	13.46
1,2-Dichloropropane	ND		5.4	3.2	ppb v/v			09/02/16 23:58	13.46
1,3,5-Trimethylbenzene	**26**		5.4	1.7	ppb v/v			09/02/16 23:58	13.46
1,3-Dichlorobenzene	ND		5.4	1.5	ppb v/v			09/02/16 23:58	13.46
1,4-Dichlorobenzene	**110**		5.4	2.0	ppb v/v			09/02/16 23:58	13.46
2-Butanone (MEK)	ND		11	2.7	ppb v/v			09/02/16 23:58	13.46
2-Hexanone	ND		5.4	1.2	ppb v/v			09/02/16 23:58	13.46
4-Ethyltoluene	**7.1**		5.4	2.5	ppb v/v			09/02/16 23:58	13.46
4-Methyl-2-pentanone (MIBK)	ND		5.4	1.8	ppb v/v			09/02/16 23:58	13.46
Acetone	**19**	**J**	67	2.4	ppb v/v			09/02/16 23:58	13.46
Benzene	**33**		5.4	1.1	ppb v/v			09/02/16 23:58	13.46
Benzyl chloride	**6.4**	**J**	11	2.2	ppb v/v			09/02/16 23:58	13.46
Bromodichloromethane	ND		4.0	0.89	ppb v/v			09/02/16 23:58	13.46
Bromoform	ND		5.4	0.94	ppb v/v			09/02/16 23:58	13.46
Bromomethane	ND		11	4.5	ppb v/v			09/02/16 23:58	13.46
Carbon disulfide	**13**		11	1.0	ppb v/v			09/02/16 23:58	13.46
Carbon tetrachloride	ND		11	0.86	ppb v/v			09/02/16 23:58	13.46
Chlorobenzene	**54**		4.0	0.86	ppb v/v			09/02/16 23:58	13.46
Chloroethane	**17**		11	4.1	ppb v/v			09/02/16 23:58	13.46
Chloroform	ND		4.0	1.3	ppb v/v			09/02/16 23:58	13.46
Chloromethane	**67**		11	2.7	ppb v/v			09/02/16 23:58	13.46
cis-1,2-Dichloroethene	**30**		5.4	1.2	ppb v/v			09/02/16 23:58	13.46
cis-1,3-Dichloropropene	ND		5.4	1.4	ppb v/v			09/02/16 23:58	13.46
Dibromochloromethane	ND		5.4	1.1	ppb v/v			09/02/16 23:58	13.46
Dichlorodifluoromethane	**68**		5.4	2.0	ppb v/v			09/02/16 23:58	13.46
Ethylbenzene	**640**		5.4	0.85	ppb v/v			09/02/16 23:58	13.46
Gasoline Range Organics (C6-C12)	**140000**		1300	540	ppb v/v			09/02/16 23:58	13.46
Hexachlorobutadiene	ND		27	5.8	ppb v/v			09/02/16 23:58	13.46
m,p-Xylene	**280**		11	1.3	ppb v/v			09/02/16 23:58	13.46
Methylene Chloride	ND		5.4	0.97	ppb v/v			09/02/16 23:58	13.46
o-Xylene	**80**		5.4	0.73	ppb v/v			09/02/16 23:58	13.46
Styrene	**10**		5.4	0.79	ppb v/v			09/02/16 23:58	13.46
Tetrachloroethene	**1.0**	**J**	5.4	0.69	ppb v/v			09/02/16 23:58	13.46
Toluene	**26**	**B**	5.4	0.69	ppb v/v			09/02/16 23:58	13.46
trans-1,2-Dichloroethene	**1.6**	**J**	5.4	1.3	ppb v/v			09/02/16 23:58	13.46
trans-1,3-Dichloropropene	ND		5.4	1.2	ppb v/v			09/02/16 23:58	13.46
Trichloroethene	**14**		5.4	1.4	ppb v/v			09/02/16 23:58	13.46
Trichlorofluoromethane	ND		5.4	2.6	ppb v/v			09/02/16 23:58	13.46
Vinyl acetate	ND		11	2.0	ppb v/v			09/02/16 23:58	13.46

Client Sample ID: LFB-4-082616
Date Collected: 08/26/16 13:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**270**		5.4	1.6	ppb v/v			09/02/16 23:58	13.46
Allyl chloride	ND		11	1.5	ppb v/v			09/02/16 23:58	13.46
1,3-Butadiene	ND		11	2.0	ppb v/v			09/02/16 23:58	13.46
2-Chlorotoluene	ND		5.4	1.1	ppb v/v			09/02/16 23:58	13.46
Cyclohexane	**48**		5.4	1.1	ppb v/v			09/02/16 23:58	13.46
1,4-Dioxane	**3.1**	**J**	11	1.4	ppb v/v			09/02/16 23:58	13.46
n-Heptane	**71**		11	0.85	ppb v/v			09/02/16 23:58	13.46
Hexane	**110**		11	1.0	ppb v/v			09/02/16 23:58	13.46
Isopropylbenzene	**40**		11	1.3	ppb v/v			09/02/16 23:58	13.46
Methyl methacrylate	ND		11	2.1	ppb v/v			09/02/16 23:58	13.46
Methyl-t-Butyl Ether (MTBE)	ND		11	0.67	ppb v/v			09/02/16 23:58	13.46
Naphthalene	**28**		11	7.6	ppb v/v			09/02/16 23:58	13.46
2-Propanol	**25**	**J**	27	3.1	ppb v/v			09/02/16 23:58	13.46
Propylene	**590**		5.4	1.3	ppb v/v			09/02/16 23:58	13.46
Tetrahydrofuran	**110**		11	1.1	ppb v/v			09/02/16 23:58	13.46
2,2,4-Trimethylpentane	**6.7**		5.4	0.96	ppb v/v			09/02/16 23:58	13.46
Vinyl bromide	ND		11	3.4	ppb v/v			09/02/16 23:58	13.46

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.022	0.0048	mg/m3			09/02/16 23:58	13.46
1,1,2,2-Tetrachloroethane	ND		0.037	0.0064	mg/m3			09/02/16 23:58	13.46
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.041	0.017	mg/m3			09/02/16 23:58	13.46
1,1,2-Trichloroethane	ND		0.029	0.0049	mg/m3			09/02/16 23:58	13.46
1,1-Dichloroethane	**0.0097**	**J**	0.016	0.0039	mg/m3			09/02/16 23:58	13.46
1,1-Dichloroethene	ND		0.043	0.0069	mg/m3			09/02/16 23:58	13.46
1,2,4-Trichlorobenzene	ND		0.20	0.043	mg/m3			09/02/16 23:58	13.46
1,2,4-Trimethylbenzene	**0.26**		0.053	0.011	mg/m3			09/02/16 23:58	13.46
1,2-Dibromoethane (EDB)	ND		0.083	0.0078	mg/m3			09/02/16 23:58	13.46
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.33**		0.038	0.015	mg/m3			09/02/16 23:58	13.46
1,2-Dichlorobenzene	**0.024**	**J**	0.032	0.011	mg/m3			09/02/16 23:58	13.46
1,2-Dichloroethane	**0.017**	**J**	0.044	0.0048	mg/m3			09/02/16 23:58	13.46
1,2-Dichloropropane	ND		0.025	0.015	mg/m3			09/02/16 23:58	13.46
1,3,5-Trimethylbenzene	**0.13**		0.026	0.0083	mg/m3			09/02/16 23:58	13.46
1,3-Dichlorobenzene	ND		0.032	0.0089	mg/m3			09/02/16 23:58	13.46
1,4-Dichlorobenzene	**0.64**		0.032	0.012	mg/m3			09/02/16 23:58	13.46
2-Butanone (MEK)	ND		0.032	0.0079	mg/m3			09/02/16 23:58	13.46
2-Hexanone	ND		0.022	0.0048	mg/m3			09/02/16 23:58	13.46
4-Ethyltoluene	**0.035**		0.026	0.012	mg/m3			09/02/16 23:58	13.46
4-Methyl-2-pentanone (MIBK)	ND		0.022	0.0074	mg/m3			09/02/16 23:58	13.46
Acetone	**0.046**	**J**	0.16	0.0057	mg/m3			09/02/16 23:58	13.46
Benzene	**0.11**		0.017	0.0034	mg/m3			09/02/16 23:58	13.46
Benzyl chloride	**0.033**	**J**	0.056	0.011	mg/m3			09/02/16 23:58	13.46
Bromodichloromethane	ND		0.027	0.0060	mg/m3			09/02/16 23:58	13.46
Bromoform	ND		0.056	0.0097	mg/m3			09/02/16 23:58	13.46
Bromomethane	ND		0.042	0.018	mg/m3			09/02/16 23:58	13.46
Carbon disulfide	**0.040**		0.034	0.0033	mg/m3			09/02/16 23:58	13.46
Carbon tetrachloride	ND		0.068	0.0054	mg/m3			09/02/16 23:58	13.46
Chlorobenzene	**0.25**		0.019	0.0040	mg/m3			09/02/16 23:58	13.46
Chloroethane	**0.044**		0.028	0.011	mg/m3			09/02/16 23:58	13.46

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-4-082616
Date Collected: 08/26/16 13:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.020	0.0062	mg/m3			09/02/16 23:58	13.46
Chloromethane	**0.14**		0.022	0.0055	mg/m3			09/02/16 23:58	13.46
cis-1,2-Dichloroethene	**0.12**		0.021	0.0047	mg/m3			09/02/16 23:58	13.46
cis-1,3-Dichloropropene	ND		0.024	0.0064	mg/m3			09/02/16 23:58	13.46
Dibromochloromethane	ND		0.046	0.0091	mg/m3			09/02/16 23:58	13.46
Dichlorodifluoromethane	**0.34**		0.027	0.0097	mg/m3			09/02/16 23:58	13.46
Ethylbenzene	**2.8**		0.023	0.0037	mg/m3			09/02/16 23:58	13.46
Gasoline Range Organics (C6-C12)	**580**		5.5	2.2	mg/m3			09/02/16 23:58	13.46
Hexachlorobutadiene	ND		0.29	0.062	mg/m3			09/02/16 23:58	13.46
m,p-Xylene	**1.2**		0.047	0.0058	mg/m3			09/02/16 23:58	13.46
Methylene Chloride	ND		0.019	0.0034	mg/m3			09/02/16 23:58	13.46
o-Xylene	**0.35**		0.023	0.0032	mg/m3			09/02/16 23:58	13.46
Styrene	**0.043**		0.023	0.0034	mg/m3			09/02/16 23:58	13.46
Tetrachloroethene	**0.0069**	**J**	0.037	0.0047	mg/m3			09/02/16 23:58	13.46
Toluene	**0.098**	**B**	0.020	0.0026	mg/m3			09/02/16 23:58	13.46
trans-1,2-Dichloroethene	**0.0062**	**J**	0.021	0.0053	mg/m3			09/02/16 23:58	13.46
trans-1,3-Dichloropropene	ND		0.024	0.0054	mg/m3			09/02/16 23:58	13.46
Trichloroethene	**0.075**		0.029	0.0076	mg/m3			09/02/16 23:58	13.46
Trichlorofluoromethane	ND		0.030	0.015	mg/m3			09/02/16 23:58	13.46
Vinyl acetate	ND		0.038	0.0069	mg/m3			09/02/16 23:58	13.46
Vinyl chloride	**0.68**		0.014	0.0041	mg/m3			09/02/16 23:58	13.46
Allyl chloride	ND		0.034	0.0047	mg/m3			09/02/16 23:58	13.46
1,3-Butadiene	ND		0.024	0.0045	mg/m3			09/02/16 23:58	13.46
2-Chlorotoluene	ND		0.028	0.0056	mg/m3			09/02/16 23:58	13.46
Cyclohexane	**0.17**		0.019	0.0039	mg/m3			09/02/16 23:58	13.46
1,4-Dioxane	**0.011**	**J**	0.039	0.0049	mg/m3			09/02/16 23:58	13.46
n-Heptane	**0.29**		0.044	0.0035	mg/m3			09/02/16 23:58	13.46
Hexane	**0.40**		0.038	0.0036	mg/m3			09/02/16 23:58	13.46
Isopropylbenzene	**0.19**		0.053	0.0066	mg/m3			09/02/16 23:58	13.46
Methyl methacrylate	ND		0.044	0.0087	mg/m3			09/02/16 23:58	13.46
Methyl-t-Butyl Ether (MTBE)	ND		0.039	0.0024	mg/m3			09/02/16 23:58	13.46
Naphthalene	**0.15**		0.056	0.040	mg/m3			09/02/16 23:58	13.46
2-Propanol	**0.062**	**J**	0.066	0.0077	mg/m3			09/02/16 23:58	13.46
Propylene	**1.0**		0.0093	0.0023	mg/m3			09/02/16 23:58	13.46
Tetrahydrofuran	**0.33**		0.032	0.0031	mg/m3			09/02/16 23:58	13.46
2,2,4-Trimethylpentane	**0.031**		0.025	0.0045	mg/m3			09/02/16 23:58	13.46
Vinyl bromide	ND		0.047	0.015	mg/m3			09/02/16 23:58	13.46

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/02/16 23:58*	*13.46*
4-Bromofluorobenzene (Surr)	*181*	*X*	*70 - 130*		*09/02/16 23:58*	*13.46*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/02/16 23:58*	*13.46*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		13	2.4	ppb v/v			09/06/16 19:51	13.46

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		0.025	0.0046	mg/m3			09/06/16 19:51	13.46

Client Sample ID: LFB-4-082616

Lab Sample ID: 590-4339-5

Date Collected: 08/26/16 13:30

Matrix: Air

Date Received: 08/26/16 16:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/06/16 19:51*	*13.46*
4-Bromofluorobenzene (Surr)	*180*	*X*	*70 - 130*		*09/06/16 19:51*	*13.46*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/06/16 19:51*	*13.46*

Client Sample ID: LFB-3-082616

Lab Sample ID: 590-4339-6

Date Collected: 08/26/16 13:52

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		7.3	1.6	ppb v/v			09/03/16 00:42	24.25
1,1,2,2-Tetrachloroethane	ND		9.7	1.7	ppb v/v			09/03/16 00:42	24.25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		9.7	4.0	ppb v/v			09/03/16 00:42	24.25
1,1,2-Trichloroethane	ND		9.7	1.6	ppb v/v			09/03/16 00:42	24.25
1,1-Dichloroethane	**2.6**	**J**	7.3	1.7	ppb v/v			09/03/16 00:42	24.25
1,1-Dichloroethene	ND		19	3.1	ppb v/v			09/03/16 00:42	24.25
1,2,4-Trichlorobenzene	ND		49	11	ppb v/v			09/03/16 00:42	24.25
1,2,4-Trimethylbenzene	**39**		19	3.9	ppb v/v			09/03/16 00:42	24.25
1,2-Dibromoethane (EDB)	ND		19	1.8	ppb v/v			09/03/16 00:42	24.25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**19**		9.7	3.8	ppb v/v			09/03/16 00:42	24.25
1,2-Dichlorobenzene	ND		9.7	3.2	ppb v/v			09/03/16 00:42	24.25
1,2-Dichloroethane	ND		19	2.1	ppb v/v			09/03/16 00:42	24.25
1,2-Dichloropropane	ND		9.7	5.8	ppb v/v			09/03/16 00:42	24.25
1,3,5-Trimethylbenzene	**22**		9.7	3.0	ppb v/v			09/03/16 00:42	24.25
1,3-Dichlorobenzene	ND		9.7	2.7	ppb v/v			09/03/16 00:42	24.25
1,4-Dichlorobenzene	**7.4**	**J**	9.7	3.6	ppb v/v			09/03/16 00:42	24.25
2-Butanone (MEK)	ND		19	4.8	ppb v/v			09/03/16 00:42	24.25
2-Hexanone	ND		9.7	2.1	ppb v/v			09/03/16 00:42	24.25
4-Ethyltoluene	**9.7**		9.7	4.5	ppb v/v			09/03/16 00:42	24.25
4-Methyl-2-pentanone (MIBK)	**7.0**	**J**	9.7	3.3	ppb v/v			09/03/16 00:42	24.25
Acetone	**48**	**J**	120	4.3	ppb v/v			09/03/16 00:42	24.25
Benzene	**58**		9.7	1.9	ppb v/v			09/03/16 00:42	24.25
Benzyl chloride	ND		19	4.0	ppb v/v			09/03/16 00:42	24.25
Bromodichloromethane	ND		7.3	1.6	ppb v/v			09/03/16 00:42	24.25
Bromoform	ND		9.7	1.7	ppb v/v			09/03/16 00:42	24.25
Bromomethane	ND		19	8.1	ppb v/v			09/03/16 00:42	24.25
Carbon tetrachloride	ND		19	1.6	ppb v/v			09/03/16 00:42	24.25
Chlorobenzene	**66**		7.3	1.6	ppb v/v			09/03/16 00:42	24.25
Chloroethane	**14**	**J**	19	7.5	ppb v/v			09/03/16 00:42	24.25
Chloroform	ND		7.3	2.3	ppb v/v			09/03/16 00:42	24.25
Chloromethane	**98**		19	4.8	ppb v/v			09/03/16 00:42	24.25
cis-1,2-Dichloroethene	**18**		9.7	2.2	ppb v/v			09/03/16 00:42	24.25
cis-1,3-Dichloropropene	ND		9.7	2.5	ppb v/v			09/03/16 00:42	24.25
Dibromochloromethane	ND		9.7	1.9	ppb v/v			09/03/16 00:42	24.25
Dichlorodifluoromethane	**27**		9.7	3.5	ppb v/v			09/03/16 00:42	24.25
Ethylbenzene	**110**		9.7	1.5	ppb v/v			09/03/16 00:42	24.25
Gasoline Range Organics (C6-C12)	**56000**		2400	970	ppb v/v			09/03/16 00:42	24.25
Hexachlorobutadiene	ND		49	10	ppb v/v			09/03/16 00:42	24.25
m,p-Xylene	**68**		19	2.4	ppb v/v			09/03/16 00:42	24.25

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-3-082616
Date Collected: 08/26/16 13:52
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		9.7	1.7	ppb v/v			09/03/16 00:42	24.25
o-Xylene	**41**		9.7	1.3	ppb v/v			09/03/16 00:42	24.25
Styrene	**3.8**	**J**	9.7	1.4	ppb v/v			09/03/16 00:42	24.25
Tetrachloroethene	**1.8**	**J**	9.7	1.2	ppb v/v			09/03/16 00:42	24.25
Toluene	**36**	**B**	9.7	1.2	ppb v/v			09/03/16 00:42	24.25
trans-1,2-Dichloroethene	**2.4**	**J**	9.7	2.4	ppb v/v			09/03/16 00:42	24.25
trans-1,3-Dichloropropene	ND		9.7	2.1	ppb v/v			09/03/16 00:42	24.25
Trichloroethene	**2.5**	**J**	9.7	2.5	ppb v/v			09/03/16 00:42	24.25
Trichlorofluoromethane	ND		9.7	4.8	ppb v/v			09/03/16 00:42	24.25
Vinyl acetate	ND		19	3.5	ppb v/v			09/03/16 00:42	24.25
Vinyl chloride	**360**		9.7	2.9	ppb v/v			09/03/16 00:42	24.25
Allyl chloride	ND		19	2.7	ppb v/v			09/03/16 00:42	24.25
1,3-Butadiene	ND		19	3.7	ppb v/v			09/03/16 00:42	24.25
2-Chlorotoluene	**28**		9.7	1.9	ppb v/v			09/03/16 00:42	24.25
Cyclohexane	**10**		9.7	2.0	ppb v/v			09/03/16 00:42	24.25
1,4-Dioxane	**7.8**	**J**	19	2.4	ppb v/v			09/03/16 00:42	24.25
Ethanol	ND		24	4.4	ppb v/v			09/03/16 00:42	24.25
n-Heptane	**62**		19	1.5	ppb v/v			09/03/16 00:42	24.25
Hexane	**100**		19	1.8	ppb v/v			09/03/16 00:42	24.25
Isopropylbenzene	**43**		19	2.4	ppb v/v			09/03/16 00:42	24.25
Methyl methacrylate	ND		19	3.8	ppb v/v			09/03/16 00:42	24.25
Methyl-t-Butyl Ether (MTBE)	ND		19	1.2	ppb v/v			09/03/16 00:42	24.25
Naphthalene	ND		19	14	ppb v/v			09/03/16 00:42	24.25
2-Propanol	**14**	**J**	49	5.7	ppb v/v			09/03/16 00:42	24.25
Propylene	**1000**		9.7	2.4	ppb v/v			09/03/16 00:42	24.25
Tetrahydrofuran	**90**		19	1.9	ppb v/v			09/03/16 00:42	24.25
2,2,4-Trimethylpentane	**9.9**		9.7	1.7	ppb v/v			09/03/16 00:42	24.25
Vinyl bromide	ND		19	6.2	ppb v/v			09/03/16 00:42	24.25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.040	0.0086	mg/m3			09/03/16 00:42	24.25
1,1,2,2-Tetrachloroethane	ND		0.067	0.011	mg/m3			09/03/16 00:42	24.25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.074	0.030	mg/m3			09/03/16 00:42	24.25
1,1,2-Trichloroethane	ND		0.053	0.0089	mg/m3			09/03/16 00:42	24.25
1,1-Dichloroethane	**0.011**	**J**	0.029	0.0071	mg/m3			09/03/16 00:42	24.25
1,1-Dichloroethene	ND		0.077	0.012	mg/m3			09/03/16 00:42	24.25
1,2,4-Trichlorobenzene	ND		0.36	0.078	mg/m3			09/03/16 00:42	24.25
1,2,4-Trimethylbenzene	**0.19**		0.095	0.019	mg/m3			09/03/16 00:42	24.25
1,2-Dibromoethane (EDB)	ND		0.15	0.014	mg/m3			09/03/16 00:42	24.25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.13**		0.068	0.026	mg/m3			09/03/16 00:42	24.25
1,2-Dichlorobenzene	ND		0.058	0.019	mg/m3			09/03/16 00:42	24.25
1,2-Dichloroethane	ND		0.079	0.0086	mg/m3			09/03/16 00:42	24.25
1,2-Dichloropropane	ND		0.045	0.027	mg/m3			09/03/16 00:42	24.25
1,3,5-Trimethylbenzene	**0.11**		0.048	0.015	mg/m3			09/03/16 00:42	24.25
1,3-Dichlorobenzene	ND		0.058	0.016	mg/m3			09/03/16 00:42	24.25
1,4-Dichlorobenzene	**0.045**	**J**	0.058	0.022	mg/m3			09/03/16 00:42	24.25
2-Butanone (MEK)	ND		0.057	0.014	mg/m3			09/03/16 00:42	24.25
2-Hexanone	ND		0.040	0.0086	mg/m3			09/03/16 00:42	24.25
4-Ethyltoluene	**0.047**		0.048	0.022	mg/m3			09/03/16 00:42	24.25

Client Sample ID: LFB-3-082616
Date Collected: 08/26/16 13:52
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	0.029	J	0.040	0.013	mg/m3			09/03/16 00:42	24.25
Acetone	0.11	J	0.29	0.010	mg/m3			09/03/16 00:42	24.25
Benzene	0.19		0.031	0.0061	mg/m3			09/03/16 00:42	24.25
Benzyl chloride	ND		0.10	0.020	mg/m3			09/03/16 00:42	24.25
Bromodichloromethane	ND		0.049	0.011	mg/m3			09/03/16 00:42	24.25
Bromoform	ND		0.10	0.018	mg/m3			09/03/16 00:42	24.25
Bromomethane	ND		0.075	0.032	mg/m3			09/03/16 00:42	24.25
Carbon tetrachloride	ND		0.12	0.0098	mg/m3			09/03/16 00:42	24.25
Chlorobenzene	0.30		0.033	0.0071	mg/m3			09/03/16 00:42	24.25
Chloroethane	0.036	J	0.051	0.020	mg/m3			09/03/16 00:42	24.25
Chloroform	ND		0.036	0.011	mg/m3			09/03/16 00:42	24.25
Chloromethane	0.20		0.040	0.0099	mg/m3			09/03/16 00:42	24.25
cis-1,2-Dichloroethene	0.071		0.038	0.0086	mg/m3			09/03/16 00:42	24.25
cis-1,3-Dichloropropene	ND		0.044	0.011	mg/m3			09/03/16 00:42	24.25
Dibromochloromethane	ND		0.083	0.016	mg/m3			09/03/16 00:42	24.25
Dichlorodifluoromethane	0.13		0.048	0.017	mg/m3			09/03/16 00:42	24.25
Ethylbenzene	0.50		0.042	0.0066	mg/m3			09/03/16 00:42	24.25
Gasoline Range Organics (C6-C12)	230		9.9	4.0	mg/m3			09/03/16 00:42	24.25
Hexachlorobutadiene	ND		0.52	0.11	mg/m3			09/03/16 00:42	24.25
m,p-Xylene	0.30		0.084	0.011	mg/m3			09/03/16 00:42	24.25
Methylene Chloride	ND		0.034	0.0061	mg/m3			09/03/16 00:42	24.25
o-Xylene	0.18		0.042	0.0057	mg/m3			09/03/16 00:42	24.25
Styrene	0.016	J	0.041	0.0061	mg/m3			09/03/16 00:42	24.25
Tetrachloroethene	0.012	J	0.066	0.0084	mg/m3			09/03/16 00:42	24.25
Toluene	0.13	B	0.037	0.0047	mg/m3			09/03/16 00:42	24.25
trans-1,2-Dichloroethene	0.0096	J	0.038	0.0096	mg/m3			09/03/16 00:42	24.25
trans-1,3-Dichloropropene	ND		0.044	0.0097	mg/m3			09/03/16 00:42	24.25
Trichloroethene	0.013	J	0.052	0.014	mg/m3			09/03/16 00:42	24.25
Trichlorofluoromethane	ND		0.054	0.027	mg/m3			09/03/16 00:42	24.25
Vinyl acetate	ND		0.068	0.012	mg/m3			09/03/16 00:42	24.25
Vinyl chloride	0.93		0.025	0.0074	mg/m3			09/03/16 00:42	24.25
Allyl chloride	ND		0.061	0.0084	mg/m3			09/03/16 00:42	24.25
1,3-Butadiene	ND		0.043	0.0082	mg/m3			09/03/16 00:42	24.25
2-Chlorotoluene	0.14		0.050	0.010	mg/m3			09/03/16 00:42	24.25
Cyclohexane	0.034		0.033	0.0070	mg/m3			09/03/16 00:42	24.25
1,4-Dioxane	0.028	J	0.070	0.0088	mg/m3			09/03/16 00:42	24.25
Ethanol	ND		0.046	0.0082	mg/m3			09/03/16 00:42	24.25
n-Heptane	0.25		0.080	0.0063	mg/m3			09/03/16 00:42	24.25
Hexane	0.36		0.068	0.0064	mg/m3			09/03/16 00:42	24.25
Isopropylbenzene	0.21		0.095	0.012	mg/m3			09/03/16 00:42	24.25
Methyl methacrylate	ND		0.079	0.016	mg/m3			09/03/16 00:42	24.25
Methyl-t-Butyl Ether (MTBE)	ND		0.070	0.0044	mg/m3			09/03/16 00:42	24.25
Naphthalene	ND		0.10	0.071	mg/m3			09/03/16 00:42	24.25
2-Propanol	0.034	J	0.12	0.014	mg/m3			09/03/16 00:42	24.25
Propylene	1.8		0.017	0.0041	mg/m3			09/03/16 00:42	24.25
Tetrahydrofuran	0.27		0.057	0.0057	mg/m3			09/03/16 00:42	24.25
2,2,4-Trimethylpentane	0.046		0.045	0.0080	mg/m3			09/03/16 00:42	24.25
Vinyl bromide	ND		0.085	0.027	mg/m3			09/03/16 00:42	24.25

Client Sample ID: LFB-3-082616

Lab Sample ID: 590-4339-6

Date Collected: 08/26/16 13:52

Matrix: Air

Date Received: 08/26/16 16:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*09/03/16 00:42*	*24.25*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*		*09/03/16 00:42*	*24.25*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/03/16 00:42*	*24.25*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	**1800**		39	3.8	ppb v/v			09/06/16 20:35	48.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	**5.7**		0.12	0.012	mg/m3			09/06/16 20:35	48.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/06/16 20:35*	*48.5*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*		*09/06/16 20:35*	*48.5*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/06/16 20:35*	*48.5*

Client Sample ID: LFB-15-082616

Lab Sample ID: 590-4339-7

Date Collected: 08/26/16 14:14

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.30**		0.30	0.065	ppb v/v			09/03/16 01:28	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/03/16 01:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			09/03/16 01:28	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/03/16 01:28	1
1,1-Dichloroethane	**0.62**		0.30	0.072	ppb v/v			09/03/16 01:28	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/03/16 01:28	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/03/16 01:28	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/03/16 01:28	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/03/16 01:28	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**5.5**		0.40	0.16	ppb v/v			09/03/16 01:28	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/03/16 01:28	1
1,2-Dichloroethane	**0.54**	**J**	0.80	0.088	ppb v/v			09/03/16 01:28	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/03/16 01:28	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/03/16 01:28	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			09/03/16 01:28	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			09/03/16 01:28	1
2-Butanone (MEK)	**2.1**		0.80	0.20	ppb v/v			09/03/16 01:28	1
2-Hexanone	ND		0.40	0.087	ppb v/v			09/03/16 01:28	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/03/16 01:28	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/03/16 01:28	1
Acetone	**13**		5.0	0.18	ppb v/v			09/03/16 01:28	1
Benzene	**0.24**	**J**	0.40	0.079	ppb v/v			09/03/16 01:28	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/03/16 01:28	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/03/16 01:28	1
Bromoform	ND		0.40	0.070	ppb v/v			09/03/16 01:28	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/03/16 01:28	1
Carbon disulfide	**5.2**		0.80	0.078	ppb v/v			09/03/16 01:28	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/03/16 01:28	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/03/16 01:28	1

Client Sample ID: LFB-15-082616
Date Collected: 08/26/16 14:14
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	**1.4**		0.80	0.31	ppb v/v			09/03/16 01:28	1
Chloroform	**0.11**	**J**	0.30	0.095	ppb v/v			09/03/16 01:28	1
Chloromethane	**16**		0.80	0.20	ppb v/v			09/03/16 01:28	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/03/16 01:28	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/03/16 01:28	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/03/16 01:28	1
Dichlorodifluoromethane	**11**		0.40	0.15	ppb v/v			09/03/16 01:28	1
Ethylbenzene	**0.11**	**J**	0.40	0.063	ppb v/v			09/03/16 01:28	1
Gasoline Range Organics (C6-C12)	**800**		100	40	ppb v/v			09/03/16 01:28	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/03/16 01:28	1
m,p-Xylene	**0.24**	**J**	0.80	0.10	ppb v/v			09/03/16 01:28	1
Methylene Chloride	**0.14**	**J**	0.40	0.072	ppb v/v			09/03/16 01:28	1
o-Xylene	**0.10**	**J**	0.40	0.054	ppb v/v			09/03/16 01:28	1
Styrene	ND		0.40	0.059	ppb v/v			09/03/16 01:28	1
Tetrachloroethene	**30**		0.40	0.051	ppb v/v			09/03/16 01:28	1
Toluene	**0.28**	**J B**	0.40	0.051	ppb v/v			09/03/16 01:28	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/03/16 01:28	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/03/16 01:28	1
Trichloroethene	**0.64**		0.40	0.11	ppb v/v			09/03/16 01:28	1
Trichlorofluoromethane	**3.2**		0.40	0.20	ppb v/v			09/03/16 01:28	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/03/16 01:28	1
Vinyl chloride	**0.68**		0.40	0.12	ppb v/v			09/03/16 01:28	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/03/16 01:28	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/03/16 01:28	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/03/16 01:28	1
Cyclohexane	ND		0.40	0.084	ppb v/v			09/03/16 01:28	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			09/03/16 01:28	1
n-Heptane	**0.29**	**J**	0.80	0.063	ppb v/v			09/03/16 01:28	1
Hexane	**1.1**		0.80	0.075	ppb v/v			09/03/16 01:28	1
Isopropylbenzene	**0.60**	**J**	0.80	0.10	ppb v/v			09/03/16 01:28	1
Methyl methacrylate	**0.55**	**J**	0.80	0.16	ppb v/v			09/03/16 01:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/03/16 01:28	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/03/16 01:28	1
2-Propanol	**1.6**	**J**	2.0	0.23	ppb v/v			09/03/16 01:28	1
Propylene	**2.0**		0.40	0.099	ppb v/v			09/03/16 01:28	1
Tetrahydrofuran	**0.35**	**J**	0.80	0.079	ppb v/v			09/03/16 01:28	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			09/03/16 01:28	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/03/16 01:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0017**		0.0016	0.00035	mg/m3			09/03/16 01:28	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/03/16 01:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/03/16 01:28	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/03/16 01:28	1
1,1-Dichloroethane	**0.0025**		0.0012	0.00029	mg/m3			09/03/16 01:28	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/03/16 01:28	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/03/16 01:28	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/03/16 01:28	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/03/16 01:28	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-15-082616
Date Collected: 08/26/16 14:14
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.039		0.0028	0.0011	mg/m3			09/03/16 01:28	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/03/16 01:28	1
1,2-Dichloroethane	0.0022	J	0.0032	0.00036	mg/m3			09/03/16 01:28	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/03/16 01:28	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/03/16 01:28	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/03/16 01:28	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/03/16 01:28	1
2-Butanone (MEK)	0.0061		0.0024	0.00059	mg/m3			09/03/16 01:28	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/03/16 01:28	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/03/16 01:28	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/03/16 01:28	1
Acetone	0.030		0.012	0.00042	mg/m3			09/03/16 01:28	1
Benzene	0.00076	J	0.0013	0.00025	mg/m3			09/03/16 01:28	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/03/16 01:28	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/03/16 01:28	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/03/16 01:28	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/03/16 01:28	1
Carbon disulfide	0.016		0.0025	0.00024	mg/m3			09/03/16 01:28	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/03/16 01:28	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/03/16 01:28	1
Chloroethane	0.0037		0.0021	0.00081	mg/m3			09/03/16 01:28	1
Chloroform	0.00055	J	0.0015	0.00046	mg/m3			09/03/16 01:28	1
Chloromethane	0.033		0.0017	0.00041	mg/m3			09/03/16 01:28	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/03/16 01:28	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/03/16 01:28	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/03/16 01:28	1
Dichlorodifluoromethane	0.053		0.0020	0.00072	mg/m3			09/03/16 01:28	1
Ethylbenzene	0.00046	J	0.0017	0.00027	mg/m3			09/03/16 01:28	1
Gasoline Range Organics (C6-C12)	3.3		0.41	0.16	mg/m3			09/03/16 01:28	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/03/16 01:28	1
m,p-Xylene	0.0011	J	0.0035	0.00043	mg/m3			09/03/16 01:28	1
Methylene Chloride	0.00048	J	0.0014	0.00025	mg/m3			09/03/16 01:28	1
o-Xylene	0.00045	J	0.0017	0.00023	mg/m3			09/03/16 01:28	1
Styrene	ND		0.0017	0.00025	mg/m3			09/03/16 01:28	1
Tetrachloroethene	0.20		0.0027	0.00035	mg/m3			09/03/16 01:28	1
Toluene	0.0010	J B	0.0015	0.00019	mg/m3			09/03/16 01:28	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/03/16 01:28	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/03/16 01:28	1
Trichloroethene	0.0034		0.0021	0.00056	mg/m3			09/03/16 01:28	1
Trichlorofluoromethane	0.018		0.0022	0.0011	mg/m3			09/03/16 01:28	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/03/16 01:28	1
Vinyl chloride	0.0017		0.0010	0.00031	mg/m3			09/03/16 01:28	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/03/16 01:28	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/03/16 01:28	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/03/16 01:28	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			09/03/16 01:28	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			09/03/16 01:28	1
n-Heptane	0.0012	J	0.0033	0.00026	mg/m3			09/03/16 01:28	1

Client Sample ID: LFB-15-082616

Lab Sample ID: 590-4339-7

Date Collected: 08/26/16 14:14

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	**0.0039**		0.0028	0.00026	mg/m3			09/03/16 01:28	1
Isopropylbenzene	**0.0030**	**J**	0.0039	0.00049	mg/m3			09/03/16 01:28	1
Methyl methacrylate	**0.0023**	**J**	0.0033	0.00064	mg/m3			09/03/16 01:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/03/16 01:28	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/03/16 01:28	1
2-Propanol	**0.0039**	**J**	0.0049	0.00058	mg/m3			09/03/16 01:28	1
Propylene	**0.0034**		0.00069	0.00017	mg/m3			09/03/16 01:28	1
Tetrahydrofuran	**0.0010**	**J**	0.0024	0.00023	mg/m3			09/03/16 01:28	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			09/03/16 01:28	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/03/16 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*09/03/16 01:28*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/03/16 01:28*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/03/16 01:28*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.86**	**J**	1.0	0.18	ppb v/v			09/06/16 21:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.0016**	**J**	0.0019	0.00034	mg/m3			09/06/16 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*09/06/16 21:22*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*09/06/16 21:22*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/06/16 21:22*	*1*

Client Sample ID: LFB-16-082616

Lab Sample ID: 590-4339-8

Date Collected: 08/26/16 14:35

Matrix: Air

Date Received: 08/26/16 16:20

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.42**		0.30	0.065	ppb v/v			09/03/16 02:23	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/03/16 02:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			09/03/16 02:23	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/03/16 02:23	1
1,1-Dichloroethane	**0.64**		0.30	0.072	ppb v/v			09/03/16 02:23	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/03/16 02:23	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/03/16 02:23	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/03/16 02:23	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/03/16 02:23	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**2.7**		0.40	0.16	ppb v/v			09/03/16 02:23	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/03/16 02:23	1
1,2-Dichloroethane	**0.41**	**J**	0.80	0.088	ppb v/v			09/03/16 02:23	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/03/16 02:23	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/03/16 02:23	1
1,3-Dichlorobenzene	**0.15**	**J**	0.40	0.11	ppb v/v			09/03/16 02:23	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			09/03/16 02:23	1

Client Sample ID: LFB-16-082616
Date Collected: 08/26/16 14:35
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	**0.83**		0.80	0.20	ppb v/v			09/03/16 02:23	1
2-Hexanone	ND		0.40	0.087	ppb v/v			09/03/16 02:23	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/03/16 02:23	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/03/16 02:23	1
Acetone	**5.5**		5.0	0.18	ppb v/v			09/03/16 02:23	1
Benzene	**0.24**	**J**	0.40	0.079	ppb v/v			09/03/16 02:23	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/03/16 02:23	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/03/16 02:23	1
Bromoform	ND		0.40	0.070	ppb v/v			09/03/16 02:23	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/03/16 02:23	1
Carbon disulfide	**2.6**		0.80	0.078	ppb v/v			09/03/16 02:23	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/03/16 02:23	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/03/16 02:23	1
Chloroethane	**1.2**		0.80	0.31	ppb v/v			09/03/16 02:23	1
Chloroform	**0.18**	**J**	0.30	0.095	ppb v/v			09/03/16 02:23	1
Chloromethane	**11**		0.80	0.20	ppb v/v			09/03/16 02:23	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/03/16 02:23	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/03/16 02:23	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/03/16 02:23	1
Dichlorodifluoromethane	**3.5**		0.40	0.15	ppb v/v			09/03/16 02:23	1
Ethylbenzene	**0.13**	**J**	0.40	0.063	ppb v/v			09/03/16 02:23	1
Gasoline Range Organics (C6-C12)	**840**		100	40	ppb v/v			09/03/16 02:23	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/03/16 02:23	1
m,p-Xylene	**0.35**	**J**	0.80	0.10	ppb v/v			09/03/16 02:23	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			09/03/16 02:23	1
o-Xylene	**0.13**	**J**	0.40	0.054	ppb v/v			09/03/16 02:23	1
Styrene	**0.25**	**J**	0.40	0.059	ppb v/v			09/03/16 02:23	1
Tetrachloroethene	**14**		0.40	0.051	ppb v/v			09/03/16 02:23	1
Toluene	**0.30**	**J B**	0.40	0.051	ppb v/v			09/03/16 02:23	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/03/16 02:23	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/03/16 02:23	1
Trichloroethene	ND		0.40	0.11	ppb v/v			09/03/16 02:23	1
Trichlorofluoromethane	**13**		0.40	0.20	ppb v/v			09/03/16 02:23	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/03/16 02:23	1
Vinyl chloride	**0.62**		0.40	0.12	ppb v/v			09/03/16 02:23	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/03/16 02:23	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/03/16 02:23	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/03/16 02:23	1
Cyclohexane	ND		0.40	0.084	ppb v/v			09/03/16 02:23	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			09/03/16 02:23	1
n-Heptane	**0.23**	**J**	0.80	0.063	ppb v/v			09/03/16 02:23	1
Hexane	**1.2**		0.80	0.075	ppb v/v			09/03/16 02:23	1
Isopropylbenzene	**0.58**	**J**	0.80	0.10	ppb v/v			09/03/16 02:23	1
Methyl methacrylate	**0.48**	**J**	0.80	0.16	ppb v/v			09/03/16 02:23	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/03/16 02:23	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/03/16 02:23	1
2-Propanol	**1.2**	**J**	2.0	0.23	ppb v/v			09/03/16 02:23	1
Propylene	**0.51**		0.40	0.099	ppb v/v			09/03/16 02:23	1
Tetrahydrofuran	**0.25**	**J**	0.80	0.079	ppb v/v			09/03/16 02:23	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-16-082616
Date Collected: 08/26/16 14:35
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			09/03/16 02:23	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/03/16 02:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0023**		0.0016	0.00035	mg/m3			09/03/16 02:23	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/03/16 02:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/03/16 02:23	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/03/16 02:23	1
1,1-Dichloroethane	**0.0026**		0.0012	0.00029	mg/m3			09/03/16 02:23	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/03/16 02:23	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/03/16 02:23	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/03/16 02:23	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/03/16 02:23	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.019**		0.0028	0.0011	mg/m3			09/03/16 02:23	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/03/16 02:23	1
1,2-Dichloroethane	**0.0017**	**J**	0.0032	0.00036	mg/m3			09/03/16 02:23	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/03/16 02:23	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/03/16 02:23	1
1,3-Dichlorobenzene	**0.00088**	**J**	0.0024	0.00066	mg/m3			09/03/16 02:23	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/03/16 02:23	1
2-Butanone (MEK)	**0.0024**		0.0024	0.00059	mg/m3			09/03/16 02:23	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/03/16 02:23	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/03/16 02:23	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/03/16 02:23	1
Acetone	**0.013**		0.012	0.00042	mg/m3			09/03/16 02:23	1
Benzene	**0.00076**	**J**	0.0013	0.00025	mg/m3			09/03/16 02:23	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/03/16 02:23	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/03/16 02:23	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/03/16 02:23	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/03/16 02:23	1
Carbon disulfide	**0.0082**		0.0025	0.00024	mg/m3			09/03/16 02:23	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/03/16 02:23	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/03/16 02:23	1
Chloroethane	**0.0032**		0.0021	0.00081	mg/m3			09/03/16 02:23	1
Chloroform	**0.00087**	**J**	0.0015	0.00046	mg/m3			09/03/16 02:23	1
Chloromethane	**0.023**		0.0017	0.00041	mg/m3			09/03/16 02:23	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/03/16 02:23	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/03/16 02:23	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/03/16 02:23	1
Dichlorodifluoromethane	**0.017**		0.0020	0.00072	mg/m3			09/03/16 02:23	1
Ethylbenzene	**0.00056**	**J**	0.0017	0.00027	mg/m3			09/03/16 02:23	1
Gasoline Range Organics (C6-C12)	**3.4**		0.41	0.16	mg/m3			09/03/16 02:23	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/03/16 02:23	1
m,p-Xylene	**0.0015**	**J**	0.0035	0.00043	mg/m3			09/03/16 02:23	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			09/03/16 02:23	1
o-Xylene	**0.00056**	**J**	0.0017	0.00023	mg/m3			09/03/16 02:23	1
Styrene	**0.0011**	**J**	0.0017	0.00025	mg/m3			09/03/16 02:23	1
Tetrachloroethene	**0.098**		0.0027	0.00035	mg/m3			09/03/16 02:23	1
Toluene	**0.0011**	**J B**	0.0015	0.00019	mg/m3			09/03/16 02:23	1

Client Sample ID: LFB-16-082616

Date Collected: 08/26/16 14:35
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/03/16 02:23	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/03/16 02:23	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/03/16 02:23	1
Trichlorofluoromethane	**0.073**		0.0022	0.0011	mg/m3			09/03/16 02:23	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/03/16 02:23	1
Vinyl chloride	**0.0016**		0.0010	0.00031	mg/m3			09/03/16 02:23	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/03/16 02:23	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/03/16 02:23	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/03/16 02:23	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			09/03/16 02:23	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			09/03/16 02:23	1
n-Heptane	**0.00093**	**J**	0.0033	0.00026	mg/m3			09/03/16 02:23	1
Hexane	**0.0043**		0.0028	0.00026	mg/m3			09/03/16 02:23	1
Isopropylbenzene	**0.0029**	**J**	0.0039	0.00049	mg/m3			09/03/16 02:23	1
Methyl methacrylate	**0.0020**	**J**	0.0033	0.00064	mg/m3			09/03/16 02:23	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/03/16 02:23	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/03/16 02:23	1
2-Propanol	**0.0031**	**J**	0.0049	0.00058	mg/m3			09/03/16 02:23	1
Propylene	**0.00088**		0.00069	0.00017	mg/m3			09/03/16 02:23	1
Tetrahydrofuran	**0.00073**	**J**	0.0024	0.00023	mg/m3			09/03/16 02:23	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			09/03/16 02:23	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/03/16 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*09/03/16 02:23*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/03/16 02:23*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/03/16 02:23*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.75**	**J**	1.0	0.18	ppb v/v			09/06/16 22:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.0014**	**J**	0.0019	0.00034	mg/m3			09/06/16 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/06/16 22:09*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/06/16 22:09*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/06/16 22:09*	*1*

Client Sample ID: LFB-17-082616

Date Collected: 08/26/16 15:05
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.1	0.88	ppb v/v			09/03/16 03:06	13.51
1,1,2,2-Tetrachloroethane	ND		5.4	0.93	ppb v/v			09/03/16 03:06	13.51
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.4	2.2	ppb v/v			09/03/16 03:06	13.51
1,1,2-Trichloroethane	ND		5.4	0.91	ppb v/v			09/03/16 03:06	13.51
1,1-Dichloroethane	**2.4**	**J**	4.1	0.97	ppb v/v			09/03/16 03:06	13.51

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-17-082616
Date Collected: 08/26/16 15:05
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		11	1.7	ppb v/v			09/03/16 03:06	13.51
1,2,4-Trichlorobenzene	ND		27	5.8	ppb v/v			09/03/16 03:06	13.51
1,2,4-Trimethylbenzene	ND		11	2.2	ppb v/v			09/03/16 03:06	13.51
1,2-Dibromoethane (EDB)	ND		11	1.0	ppb v/v			09/03/16 03:06	13.51
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**10**		5.4	2.1	ppb v/v			09/03/16 03:06	13.51
1,2-Dichlorobenzene	ND		5.4	1.8	ppb v/v			09/03/16 03:06	13.51
1,2-Dichloroethane	ND		11	1.2	ppb v/v			09/03/16 03:06	13.51
1,2-Dichloropropane	ND		5.4	3.2	ppb v/v			09/03/16 03:06	13.51
1,3,5-Trimethylbenzene	ND		5.4	1.7	ppb v/v			09/03/16 03:06	13.51
1,3-Dichlorobenzene	ND		5.4	1.5	ppb v/v			09/03/16 03:06	13.51
1,4-Dichlorobenzene	**15**		5.4	2.0	ppb v/v			09/03/16 03:06	13.51
2-Butanone (MEK)	ND		11	2.7	ppb v/v			09/03/16 03:06	13.51
2-Hexanone	ND		5.4	1.2	ppb v/v			09/03/16 03:06	13.51
4-Ethyltoluene	ND		5.4	2.5	ppb v/v			09/03/16 03:06	13.51
4-Methyl-2-pentanone (MIBK)	ND		5.4	1.8	ppb v/v			09/03/16 03:06	13.51
Acetone	**17**	**J**	68	2.4	ppb v/v			09/03/16 03:06	13.51
Benzene	**11**		5.4	1.1	ppb v/v			09/03/16 03:06	13.51
Benzyl chloride	ND		11	2.2	ppb v/v			09/03/16 03:06	13.51
Bromodichloromethane	ND		4.1	0.89	ppb v/v			09/03/16 03:06	13.51
Bromoform	ND		5.4	0.95	ppb v/v			09/03/16 03:06	13.51
Bromomethane	ND		11	4.5	ppb v/v			09/03/16 03:06	13.51
Carbon disulfide	**7.7**	**J**	11	1.1	ppb v/v			09/03/16 03:06	13.51
Carbon tetrachloride	ND		11	0.86	ppb v/v			09/03/16 03:06	13.51
Chlorobenzene	**2.0**	**J**	4.1	0.86	ppb v/v			09/03/16 03:06	13.51
Chloroethane	**4.6**	**J**	11	4.2	ppb v/v			09/03/16 03:06	13.51
Chloroform	ND		4.1	1.3	ppb v/v			09/03/16 03:06	13.51
Chloromethane	**46**		11	2.7	ppb v/v			09/03/16 03:06	13.51
cis-1,2-Dichloroethene	**14**		5.4	1.2	ppb v/v			09/03/16 03:06	13.51
cis-1,3-Dichloropropene	ND		5.4	1.4	ppb v/v			09/03/16 03:06	13.51
Dibromochloromethane	ND		5.4	1.1	ppb v/v			09/03/16 03:06	13.51
Dichlorodifluoromethane	**32**		5.4	2.0	ppb v/v			09/03/16 03:06	13.51
Ethylbenzene	**13**		5.4	0.85	ppb v/v			09/03/16 03:06	13.51
Gasoline Range Organics (C6-C12)	**8600**		1400	540	ppb v/v			09/03/16 03:06	13.51
Hexachlorobutadiene	ND		27	5.8	ppb v/v			09/03/16 03:06	13.51
m,p-Xylene	**7.3**	**J**	11	1.4	ppb v/v			09/03/16 03:06	13.51
Methylene Chloride	ND		5.4	0.97	ppb v/v			09/03/16 03:06	13.51
o-Xylene	**3.2**	**J**	5.4	0.73	ppb v/v			09/03/16 03:06	13.51
Styrene	**2.1**	**J**	5.4	0.80	ppb v/v			09/03/16 03:06	13.51
Tetrachloroethene	**35**		5.4	0.69	ppb v/v			09/03/16 03:06	13.51
Toluene	**11**	**B**	5.4	0.69	ppb v/v			09/03/16 03:06	13.51
trans-1,2-Dichloroethene	ND		5.4	1.4	ppb v/v			09/03/16 03:06	13.51
trans-1,3-Dichloropropene	ND		5.4	1.2	ppb v/v			09/03/16 03:06	13.51
Trichloroethene	**6.1**		5.4	1.4	ppb v/v			09/03/16 03:06	13.51
Trichlorofluoromethane	**89**		5.4	2.6	ppb v/v			09/03/16 03:06	13.51
Vinyl acetate	ND		11	2.0	ppb v/v			09/03/16 03:06	13.51
Vinyl chloride	**15**		5.4	1.6	ppb v/v			09/03/16 03:06	13.51
Allyl chloride	ND		11	1.5	ppb v/v			09/03/16 03:06	13.51
1,3-Butadiene	ND		11	2.1	ppb v/v			09/03/16 03:06	13.51

Client Sample ID: LFB-17-082616
Date Collected: 08/26/16 15:05
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		5.4	1.1	ppb v/v			09/03/16 03:06	13.51
Cyclohexane	**1.6**	**J**	5.4	1.1	ppb v/v			09/03/16 03:06	13.51
1,4-Dioxane	**6.8**	**J**	11	1.4	ppb v/v			09/03/16 03:06	13.51
Ethanol	ND		14	2.4	ppb v/v			09/03/16 03:06	13.51
n-Heptane	**11**		11	0.85	ppb v/v			09/03/16 03:06	13.51
Hexane	**16**		11	1.0	ppb v/v			09/03/16 03:06	13.51
Isopropylbenzene	**16**		11	1.4	ppb v/v			09/03/16 03:06	13.51
Methyl methacrylate	ND		11	2.1	ppb v/v			09/03/16 03:06	13.51
Methyl-t-Butyl Ether (MTBE)	ND		11	0.68	ppb v/v			09/03/16 03:06	13.51
Naphthalene	ND		11	7.6	ppb v/v			09/03/16 03:06	13.51
2-Propanol	**3.8**	**J**	27	3.2	ppb v/v			09/03/16 03:06	13.51
Propylene	**470**		5.4	1.3	ppb v/v			09/03/16 03:06	13.51
Tetrahydrofuran	**6.0**	**J**	11	1.1	ppb v/v			09/03/16 03:06	13.51
2,2,4-Trimethylpentane	**1.3**	**J**	5.4	0.96	ppb v/v			09/03/16 03:06	13.51
Vinyl bromide	ND		11	3.4	ppb v/v			09/03/16 03:06	13.51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.022	0.0048	mg/m3			09/03/16 03:06	13.51
1,1,2,2-Tetrachloroethane	ND		0.037	0.0064	mg/m3			09/03/16 03:06	13.51
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.041	0.017	mg/m3			09/03/16 03:06	13.51
1,1,2-Trichloroethane	ND		0.029	0.0049	mg/m3			09/03/16 03:06	13.51
1,1-Dichloroethane	**0.0096**	**J**	0.016	0.0039	mg/m3			09/03/16 03:06	13.51
1,1-Dichloroethene	ND		0.043	0.0069	mg/m3			09/03/16 03:06	13.51
1,2,4-Trichlorobenzene	ND		0.20	0.043	mg/m3			09/03/16 03:06	13.51
1,2,4-Trimethylbenzene	ND		0.053	0.011	mg/m3			09/03/16 03:06	13.51
1,2-Dibromoethane (EDB)	ND		0.083	0.0078	mg/m3			09/03/16 03:06	13.51
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.072**		0.038	0.015	mg/m3			09/03/16 03:06	13.51
1,2-Dichlorobenzene	ND		0.032	0.011	mg/m3			09/03/16 03:06	13.51
1,2-Dichloroethane	ND		0.044	0.0048	mg/m3			09/03/16 03:06	13.51
1,2-Dichloropropane	ND		0.025	0.015	mg/m3			09/03/16 03:06	13.51
1,3,5-Trimethylbenzene	ND		0.027	0.0083	mg/m3			09/03/16 03:06	13.51
1,3-Dichlorobenzene	ND		0.032	0.0089	mg/m3			09/03/16 03:06	13.51
1,4-Dichlorobenzene	**0.093**		0.032	0.012	mg/m3			09/03/16 03:06	13.51
2-Butanone (MEK)	ND		0.032	0.0079	mg/m3			09/03/16 03:06	13.51
2-Hexanone	ND		0.022	0.0048	mg/m3			09/03/16 03:06	13.51
4-Ethyltoluene	ND		0.027	0.012	mg/m3			09/03/16 03:06	13.51
4-Methyl-2-pentanone (MIBK)	ND		0.022	0.0075	mg/m3			09/03/16 03:06	13.51
Acetone	**0.041**	**J**	0.16	0.0057	mg/m3			09/03/16 03:06	13.51
Benzene	**0.034**		0.017	0.0034	mg/m3			09/03/16 03:06	13.51
Benzyl chloride	ND		0.056	0.011	mg/m3			09/03/16 03:06	13.51
Bromodichloromethane	ND		0.027	0.0060	mg/m3			09/03/16 03:06	13.51
Bromoform	ND		0.056	0.0098	mg/m3			09/03/16 03:06	13.51
Bromomethane	ND		0.042	0.018	mg/m3			09/03/16 03:06	13.51
Carbon disulfide	**0.024**	**J**	0.034	0.0033	mg/m3			09/03/16 03:06	13.51
Carbon tetrachloride	ND		0.068	0.0054	mg/m3			09/03/16 03:06	13.51
Chlorobenzene	**0.0092**	**J**	0.019	0.0040	mg/m3			09/03/16 03:06	13.51
Chloroethane	**0.012**	**J**	0.029	0.011	mg/m3			09/03/16 03:06	13.51
Chloroform	ND		0.020	0.0063	mg/m3			09/03/16 03:06	13.51
Chloromethane	**0.095**		0.022	0.0055	mg/m3			09/03/16 03:06	13.51

Client Sample ID: LFB-17-082616

Date Collected: 08/26/16 15:05
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.055**		0.021	0.0048	mg/m3			09/03/16 03:06	13.51
cis-1,3-Dichloropropene	ND		0.025	0.0064	mg/m3			09/03/16 03:06	13.51
Dibromochloromethane	ND		0.046	0.0091	mg/m3			09/03/16 03:06	13.51
Dichlorodifluoromethane	**0.16**		0.027	0.0097	mg/m3			09/03/16 03:06	13.51
Ethylbenzene	**0.057**		0.023	0.0037	mg/m3			09/03/16 03:06	13.51
Gasoline Range Organics (C6-C12)	**35**		5.5	2.2	mg/m3			09/03/16 03:06	13.51
Hexachlorobutadiene	ND		0.29	0.062	mg/m3			09/03/16 03:06	13.51
m,p-Xylene	**0.031**	**J**	0.047	0.0059	mg/m3			09/03/16 03:06	13.51
Methylene Chloride	ND		0.019	0.0034	mg/m3			09/03/16 03:06	13.51
o-Xylene	**0.014**	**J**	0.023	0.0032	mg/m3			09/03/16 03:06	13.51
Styrene	**0.0091**	**J**	0.023	0.0034	mg/m3			09/03/16 03:06	13.51
Tetrachloroethene	**0.24**		0.037	0.0047	mg/m3			09/03/16 03:06	13.51
Toluene	**0.041**	**B**	0.020	0.0026	mg/m3			09/03/16 03:06	13.51
trans-1,2-Dichloroethene	ND		0.021	0.0054	mg/m3			09/03/16 03:06	13.51
trans-1,3-Dichloropropene	ND		0.025	0.0054	mg/m3			09/03/16 03:06	13.51
Trichloroethene	**0.033**		0.029	0.0076	mg/m3			09/03/16 03:06	13.51
Trichlorofluoromethane	**0.50**		0.030	0.015	mg/m3			09/03/16 03:06	13.51
Vinyl acetate	ND		0.038	0.0069	mg/m3			09/03/16 03:06	13.51
Vinyl chloride	**0.038**		0.014	0.0041	mg/m3			09/03/16 03:06	13.51
Allyl chloride	ND		0.034	0.0047	mg/m3			09/03/16 03:06	13.51
1,3-Butadiene	ND		0.024	0.0045	mg/m3			09/03/16 03:06	13.51
2-Chlorotoluene	ND		0.028	0.0056	mg/m3			09/03/16 03:06	13.51
Cyclohexane	**0.0056**	**J**	0.019	0.0039	mg/m3			09/03/16 03:06	13.51
1,4-Dioxane	**0.024**	**J**	0.039	0.0049	mg/m3			09/03/16 03:06	13.51
Ethanol	ND		0.025	0.0046	mg/m3			09/03/16 03:06	13.51
n-Heptane	**0.044**		0.044	0.0035	mg/m3			09/03/16 03:06	13.51
Hexane	**0.056**		0.038	0.0036	mg/m3			09/03/16 03:06	13.51
Isopropylbenzene	**0.077**		0.053	0.0066	mg/m3			09/03/16 03:06	13.51
Methyl methacrylate	ND		0.044	0.0087	mg/m3			09/03/16 03:06	13.51
Methyl-t-Butyl Ether (MTBE)	ND		0.039	0.0024	mg/m3			09/03/16 03:06	13.51
Naphthalene	ND		0.057	0.040	mg/m3			09/03/16 03:06	13.51
2-Propanol	**0.0093**	**J**	0.066	0.0078	mg/m3			09/03/16 03:06	13.51
Propylene	**0.81**		0.0093	0.0023	mg/m3			09/03/16 03:06	13.51
Tetrahydrofuran	**0.018**	**J**	0.032	0.0031	mg/m3			09/03/16 03:06	13.51
2,2,4-Trimethylpentane	**0.0060**	**J**	0.025	0.0045	mg/m3			09/03/16 03:06	13.51
Vinyl bromide	ND		0.047	0.015	mg/m3			09/03/16 03:06	13.51

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/03/16 03:06*	*13.51*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*09/03/16 03:06*	*13.51*
Toluene-d8 (Surr)	*97*		*70 - 130*		*09/03/16 03:06*	*13.51*

Client Sample ID: LFB-5-082616

Date Collected: 08/26/16 15:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.8	1.0	ppb v/v			09/03/16 03:49	16.11

Client Sample ID: LFB-5-082616
Date Collected: 08/26/16 15:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		6.4	1.1	ppb v/v			09/03/16 03:49	16.11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.4	2.6	ppb v/v			09/03/16 03:49	16.11
1,1,2-Trichloroethane	ND		6.4	1.1	ppb v/v			09/03/16 03:49	16.11
1,1-Dichloroethane	ND		4.8	1.2	ppb v/v			09/03/16 03:49	16.11
1,1-Dichloroethene	ND		13	2.1	ppb v/v			09/03/16 03:49	16.11
1,2,4-Trichlorobenzene	ND		32	7.0	ppb v/v			09/03/16 03:49	16.11
1,2,4-Trimethylbenzene	ND		13	2.6	ppb v/v			09/03/16 03:49	16.11
1,2-Dibromoethane (EDB)	ND		13	1.2	ppb v/v			09/03/16 03:49	16.11
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**9.2**		6.4	2.5	ppb v/v			09/03/16 03:49	16.11
1,2-Dichlorobenzene	ND		6.4	2.1	ppb v/v			09/03/16 03:49	16.11
1,2-Dichloroethane	**1.8**	**J**	13	1.4	ppb v/v			09/03/16 03:49	16.11
1,2-Dichloropropane	ND		6.4	3.9	ppb v/v			09/03/16 03:49	16.11
1,3,5-Trimethylbenzene	ND		6.4	2.0	ppb v/v			09/03/16 03:49	16.11
1,3-Dichlorobenzene	ND		6.4	1.8	ppb v/v			09/03/16 03:49	16.11
1,4-Dichlorobenzene	**11**		6.4	2.4	ppb v/v			09/03/16 03:49	16.11
2-Butanone (MEK)	**3.8**	**J**	13	3.2	ppb v/v			09/03/16 03:49	16.11
2-Hexanone	ND		6.4	1.4	ppb v/v			09/03/16 03:49	16.11
4-Ethyltoluene	ND		6.4	3.0	ppb v/v			09/03/16 03:49	16.11
4-Methyl-2-pentanone (MIBK)	ND		6.4	2.2	ppb v/v			09/03/16 03:49	16.11
Acetone	**41**	**J**	81	2.9	ppb v/v			09/03/16 03:49	16.11
Benzene	**6.8**		6.4	1.3	ppb v/v			09/03/16 03:49	16.11
Benzyl chloride	ND		13	2.6	ppb v/v			09/03/16 03:49	16.11
Bromodichloromethane	ND		4.8	1.1	ppb v/v			09/03/16 03:49	16.11
Bromoform	ND		6.4	1.1	ppb v/v			09/03/16 03:49	16.11
Bromomethane	ND		13	5.4	ppb v/v			09/03/16 03:49	16.11
Carbon disulfide	**290**		13	1.3	ppb v/v			09/03/16 03:49	16.11
Carbon tetrachloride	ND		13	1.0	ppb v/v			09/03/16 03:49	16.11
Chlorobenzene	**4.7**	**J**	4.8	1.0	ppb v/v			09/03/16 03:49	16.11
Chloroethane	ND		13	5.0	ppb v/v			09/03/16 03:49	16.11
Chloroform	ND		4.8	1.5	ppb v/v			09/03/16 03:49	16.11
Chloromethane	**33**		13	3.2	ppb v/v			09/03/16 03:49	16.11
cis-1,2-Dichloroethene	**24**		6.4	1.4	ppb v/v			09/03/16 03:49	16.11
cis-1,3-Dichloropropene	ND		6.4	1.7	ppb v/v			09/03/16 03:49	16.11
Dibromochloromethane	ND		6.4	1.3	ppb v/v			09/03/16 03:49	16.11
Dichlorodifluoromethane	**14**		6.4	2.3	ppb v/v			09/03/16 03:49	16.11
Ethylbenzene	**36**		6.4	1.0	ppb v/v			09/03/16 03:49	16.11
Gasoline Range Organics (C6-C12)	**11000**		1600	640	ppb v/v			09/03/16 03:49	16.11
Hexachlorobutadiene	ND		32	7.0	ppb v/v			09/03/16 03:49	16.11
m,p-Xylene	**5.2**	**J**	13	1.6	ppb v/v			09/03/16 03:49	16.11
Methylene Chloride	ND		6.4	1.2	ppb v/v			09/03/16 03:49	16.11
o-Xylene	**2.1**	**J**	6.4	0.87	ppb v/v			09/03/16 03:49	16.11
Styrene	ND		6.4	0.95	ppb v/v			09/03/16 03:49	16.11
Tetrachloroethene	ND		6.4	0.82	ppb v/v			09/03/16 03:49	16.11
Toluene	**3.0**	**J B**	6.4	0.82	ppb v/v			09/03/16 03:49	16.11
trans-1,2-Dichloroethene	ND		6.4	1.6	ppb v/v			09/03/16 03:49	16.11
trans-1,3-Dichloropropene	ND		6.4	1.4	ppb v/v			09/03/16 03:49	16.11
Trichloroethene	ND		6.4	1.7	ppb v/v			09/03/16 03:49	16.11
Trichlorofluoromethane	ND		6.4	3.2	ppb v/v			09/03/16 03:49	16.11

Client Sample ID: LFB-5-082616
Date Collected: 08/26/16 15:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		13	2.3	ppb v/v			09/03/16 03:49	16.11
Vinyl chloride	**95**		6.4	1.9	ppb v/v			09/03/16 03:49	16.11
Allyl chloride	ND		13	1.8	ppb v/v			09/03/16 03:49	16.11
1,3-Butadiene	ND		13	2.4	ppb v/v			09/03/16 03:49	16.11
2-Chlorotoluene	**1.3**	**J**	6.4	1.3	ppb v/v			09/03/16 03:49	16.11
Cyclohexane	**12**		6.4	1.4	ppb v/v			09/03/16 03:49	16.11
1,4-Dioxane	ND		13	1.6	ppb v/v			09/03/16 03:49	16.11
n-Heptane	**6.4**	**J**	13	1.0	ppb v/v			09/03/16 03:49	16.11
Hexane	**77**		13	1.2	ppb v/v			09/03/16 03:49	16.11
Isopropylbenzene	**23**		13	1.6	ppb v/v			09/03/16 03:49	16.11
Methyl methacrylate	ND		13	2.5	ppb v/v			09/03/16 03:49	16.11
Methyl-t-Butyl Ether (MTBE)	ND		13	0.81	ppb v/v			09/03/16 03:49	16.11
Naphthalene	ND		13	9.1	ppb v/v			09/03/16 03:49	16.11
2-Propanol	**27**	**J**	32	3.8	ppb v/v			09/03/16 03:49	16.11
Propylene	**940**		6.4	1.6	ppb v/v			09/03/16 03:49	16.11
Tetrahydrofuran	**23**		13	1.3	ppb v/v			09/03/16 03:49	16.11
2,2,4-Trimethylpentane	**5.1**	**J**	6.4	1.1	ppb v/v			09/03/16 03:49	16.11
Vinyl bromide	ND		13	4.1	ppb v/v			09/03/16 03:49	16.11

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.026	0.0057	mg/m3			09/03/16 03:49	16.11
1,1,2,2-Tetrachloroethane	ND		0.044	0.0076	mg/m3			09/03/16 03:49	16.11
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.049	0.020	mg/m3			09/03/16 03:49	16.11
1,1,2-Trichloroethane	ND		0.035	0.0059	mg/m3			09/03/16 03:49	16.11
1,1-Dichloroethane	ND		0.020	0.0047	mg/m3			09/03/16 03:49	16.11
1,1-Dichloroethene	ND		0.051	0.0082	mg/m3			09/03/16 03:49	16.11
1,2,4-Trichlorobenzene	ND		0.24	0.052	mg/m3			09/03/16 03:49	16.11
1,2,4-Trimethylbenzene	ND		0.063	0.013	mg/m3			09/03/16 03:49	16.11
1,2-Dibromoethane (EDB)	ND		0.099	0.0093	mg/m3			09/03/16 03:49	16.11
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.064**		0.045	0.017	mg/m3			09/03/16 03:49	16.11
1,2-Dichlorobenzene	ND		0.039	0.013	mg/m3			09/03/16 03:49	16.11
1,2-Dichloroethane	**0.0074**	**J**	0.052	0.0057	mg/m3			09/03/16 03:49	16.11
1,2-Dichloropropane	ND		0.030	0.018	mg/m3			09/03/16 03:49	16.11
1,3,5-Trimethylbenzene	ND		0.032	0.0099	mg/m3			09/03/16 03:49	16.11
1,3-Dichlorobenzene	ND		0.039	0.011	mg/m3			09/03/16 03:49	16.11
1,4-Dichlorobenzene	**0.065**		0.039	0.014	mg/m3			09/03/16 03:49	16.11
2-Butanone (MEK)	**0.011**	**J**	0.038	0.0095	mg/m3			09/03/16 03:49	16.11
2-Hexanone	ND		0.026	0.0057	mg/m3			09/03/16 03:49	16.11
4-Ethyltoluene	ND		0.032	0.015	mg/m3			09/03/16 03:49	16.11
4-Methyl-2-pentanone (MIBK)	ND		0.026	0.0089	mg/m3			09/03/16 03:49	16.11
Acetone	**0.098**	**J**	0.19	0.0068	mg/m3			09/03/16 03:49	16.11
Benzene	**0.022**		0.021	0.0041	mg/m3			09/03/16 03:49	16.11
Benzyl chloride	ND		0.067	0.014	mg/m3			09/03/16 03:49	16.11
Bromodichloromethane	ND		0.032	0.0071	mg/m3			09/03/16 03:49	16.11
Bromoform	ND		0.067	0.012	mg/m3			09/03/16 03:49	16.11
Bromomethane	ND		0.050	0.021	mg/m3			09/03/16 03:49	16.11
Carbon disulfide	**0.89**		0.040	0.0039	mg/m3			09/03/16 03:49	16.11
Carbon tetrachloride	ND		0.081	0.0065	mg/m3			09/03/16 03:49	16.11
Chlorobenzene	**0.022**	**J**	0.022	0.0047	mg/m3			09/03/16 03:49	16.11

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-5-082616
Date Collected: 08/26/16 15:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.034	0.013	mg/m3			09/03/16 03:49	16.11
Chloroform	ND		0.024	0.0075	mg/m3			09/03/16 03:49	16.11
Chloromethane	**0.069**		0.027	0.0066	mg/m3			09/03/16 03:49	16.11
cis-1,2-Dichloroethene	**0.094**		0.026	0.0057	mg/m3			09/03/16 03:49	16.11
cis-1,3-Dichloropropene	ND		0.029	0.0076	mg/m3			09/03/16 03:49	16.11
Dibromochloromethane	ND		0.055	0.011	mg/m3			09/03/16 03:49	16.11
Dichlorodifluoromethane	**0.069**		0.032	0.012	mg/m3			09/03/16 03:49	16.11
Ethylbenzene	**0.15**		0.028	0.0044	mg/m3			09/03/16 03:49	16.11
Gasoline Range Organics (C6-C12)	**43**		6.6	2.6	mg/m3			09/03/16 03:49	16.11
Hexachlorobutadiene	ND		0.34	0.074	mg/m3			09/03/16 03:49	16.11
m,p-Xylene	**0.022**	**J**	0.056	0.0070	mg/m3			09/03/16 03:49	16.11
Methylene Chloride	ND		0.022	0.0040	mg/m3			09/03/16 03:49	16.11
o-Xylene	**0.0091**	**J**	0.028	0.0038	mg/m3			09/03/16 03:49	16.11
Styrene	ND		0.027	0.0040	mg/m3			09/03/16 03:49	16.11
Tetrachloroethene	ND		0.044	0.0056	mg/m3			09/03/16 03:49	16.11
Toluene	**0.011**	**J B**	0.024	0.0031	mg/m3			09/03/16 03:49	16.11
trans-1,2-Dichloroethene	ND		0.026	0.0064	mg/m3			09/03/16 03:49	16.11
trans-1,3-Dichloropropene	ND		0.029	0.0064	mg/m3			09/03/16 03:49	16.11
Trichloroethene	ND		0.035	0.0091	mg/m3			09/03/16 03:49	16.11
Trichlorofluoromethane	ND		0.036	0.018	mg/m3			09/03/16 03:49	16.11
Vinyl acetate	ND		0.045	0.0082	mg/m3			09/03/16 03:49	16.11
Vinyl chloride	**0.24**		0.016	0.0049	mg/m3			09/03/16 03:49	16.11
Allyl chloride	ND		0.040	0.0056	mg/m3			09/03/16 03:49	16.11
1,3-Butadiene	ND		0.029	0.0054	mg/m3			09/03/16 03:49	16.11
2-Chlorotoluene	**0.0068**	**J**	0.033	0.0067	mg/m3			09/03/16 03:49	16.11
Cyclohexane	**0.041**		0.022	0.0047	mg/m3			09/03/16 03:49	16.11
1,4-Dioxane	ND		0.046	0.0059	mg/m3			09/03/16 03:49	16.11
n-Heptane	**0.026**	**J**	0.053	0.0042	mg/m3			09/03/16 03:49	16.11
Hexane	**0.27**		0.045	0.0043	mg/m3			09/03/16 03:49	16.11
Isopropylbenzene	**0.12**		0.063	0.0079	mg/m3			09/03/16 03:49	16.11
Methyl methacrylate	ND		0.053	0.010	mg/m3			09/03/16 03:49	16.11
Methyl-t-Butyl Ether (MTBE)	ND		0.046	0.0029	mg/m3			09/03/16 03:49	16.11
Naphthalene	ND		0.068	0.047	mg/m3			09/03/16 03:49	16.11
2-Propanol	**0.066**	**J**	0.079	0.0093	mg/m3			09/03/16 03:49	16.11
Propylene	**1.6**		0.011	0.0027	mg/m3			09/03/16 03:49	16.11
Tetrahydrofuran	**0.067**		0.038	0.0038	mg/m3			09/03/16 03:49	16.11
2,2,4-Trimethylpentane	**0.024**	**J**	0.030	0.0053	mg/m3			09/03/16 03:49	16.11
Vinyl bromide	ND		0.056	0.018	mg/m3			09/03/16 03:49	16.11

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*09/03/16 03:49*	*16.11*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*09/03/16 03:49*	*16.11*
Toluene-d8 (Surr)	*97*		*70 - 130*		*09/03/16 03:49*	*16.11*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**4.4**	**J**	16	2.9	ppb v/v			09/06/16 22:53	16.11

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.0083**	**J**	0.030	0.0055	mg/m3			09/06/16 22:53	16.11

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-5-082616
Date Collected: 08/26/16 15:30
Date Received: 08/26/16 16:20

Lab Sample ID: 590-4339-10
Matrix: Air

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		09/06/16 22:53	16.11
4-Bromofluorobenzene (Surr)	107		70 - 130		09/06/16 22:53	16.11
Toluene-d8 (Surr)	97		70 - 130		09/06/16 22:53	16.11

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-125451/14
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	0.065	ppb v/v			09/02/16 20:04	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/02/16 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			09/02/16 20:04	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/02/16 20:04	1
1,1-Dichloroethane	ND		0.30	0.072	ppb v/v			09/02/16 20:04	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/02/16 20:04	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/02/16 20:04	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/02/16 20:04	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/02/16 20:04	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			09/02/16 20:04	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/02/16 20:04	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			09/02/16 20:04	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/02/16 20:04	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/02/16 20:04	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			09/02/16 20:04	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			09/02/16 20:04	1
2-Butanone (MEK)	ND		0.80	0.20	ppb v/v			09/02/16 20:04	1
2-Hexanone	ND		0.40	0.087	ppb v/v			09/02/16 20:04	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/02/16 20:04	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/02/16 20:04	1
Acetone	ND		5.0	0.18	ppb v/v			09/02/16 20:04	1
Benzene	ND		0.40	0.079	ppb v/v			09/02/16 20:04	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/02/16 20:04	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/02/16 20:04	1
Bromoform	ND		0.40	0.070	ppb v/v			09/02/16 20:04	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/02/16 20:04	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			09/02/16 20:04	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/02/16 20:04	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/02/16 20:04	1
Chloroethane	ND		0.80	0.31	ppb v/v			09/02/16 20:04	1
Chloroform	ND		0.30	0.095	ppb v/v			09/02/16 20:04	1
Chloromethane	ND		0.80	0.20	ppb v/v			09/02/16 20:04	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/02/16 20:04	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/02/16 20:04	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/02/16 20:04	1
Dichlorodifluoromethane	ND		0.40	0.15	ppb v/v			09/02/16 20:04	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			09/02/16 20:04	1
Gasoline Range Organics (C6-C12)	ND		100	40	ppb v/v			09/02/16 20:04	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/02/16 20:04	1
m,p-Xylene	ND		0.80	0.10	ppb v/v			09/02/16 20:04	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			09/02/16 20:04	1
o-Xylene	ND		0.40	0.054	ppb v/v			09/02/16 20:04	1
Styrene	ND		0.40	0.059	ppb v/v			09/02/16 20:04	1
Tetrachloroethene	ND		0.40	0.051	ppb v/v			09/02/16 20:04	1
Toluene	0.0769	J	0.40	0.051	ppb v/v			09/02/16 20:04	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/02/16 20:04	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/02/16 20:04	1
Trichloroethene	ND		0.40	0.11	ppb v/v			09/02/16 20:04	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-125451/14
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.40	0.20	ppb v/v			09/02/16 20:04	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/02/16 20:04	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			09/02/16 20:04	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/02/16 20:04	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/02/16 20:04	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/02/16 20:04	1
Cyclohexane	ND		0.40	0.084	ppb v/v			09/02/16 20:04	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			09/02/16 20:04	1
Ethanol	1.37		1.0	0.18	ppb v/v			09/02/16 20:04	1
n-Heptane	ND		0.80	0.063	ppb v/v			09/02/16 20:04	1
Hexane	ND		0.80	0.075	ppb v/v			09/02/16 20:04	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			09/02/16 20:04	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			09/02/16 20:04	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/02/16 20:04	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/02/16 20:04	1
2-Propanol	ND		2.0	0.23	ppb v/v			09/02/16 20:04	1
Propylene	ND		0.40	0.099	ppb v/v			09/02/16 20:04	1
Tetrahydrofuran	ND		0.80	0.079	ppb v/v			09/02/16 20:04	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			09/02/16 20:04	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/02/16 20:04	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			09/02/16 20:04	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/02/16 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/02/16 20:04	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/02/16 20:04	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			09/02/16 20:04	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/02/16 20:04	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/02/16 20:04	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/02/16 20:04	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/02/16 20:04	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			09/02/16 20:04	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/02/16 20:04	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/02/16 20:04	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/02/16 20:04	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/02/16 20:04	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/02/16 20:04	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/02/16 20:04	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			09/02/16 20:04	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/02/16 20:04	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/02/16 20:04	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/02/16 20:04	1
Acetone	ND		0.012	0.00042	mg/m3			09/02/16 20:04	1
Benzene	ND		0.0013	0.00025	mg/m3			09/02/16 20:04	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/02/16 20:04	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/02/16 20:04	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/02/16 20:04	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/02/16 20:04	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-125451/14
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		0.0025	0.00024	mg/m3			09/02/16 20:04	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/02/16 20:04	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/02/16 20:04	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/02/16 20:04	1
Chloroform	ND		0.0015	0.00046	mg/m3			09/02/16 20:04	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/02/16 20:04	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/02/16 20:04	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/02/16 20:04	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/02/16 20:04	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			09/02/16 20:04	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			09/02/16 20:04	1
Gasoline Range Organics (C6-C12)	ND		0.41	0.16	mg/m3			09/02/16 20:04	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/02/16 20:04	1
m,p-Xylene	ND		0.0035	0.00043	mg/m3			09/02/16 20:04	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			09/02/16 20:04	1
o-Xylene	ND		0.0017	0.00023	mg/m3			09/02/16 20:04	1
Styrene	ND		0.0017	0.00025	mg/m3			09/02/16 20:04	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			09/02/16 20:04	1
Toluene	0.000290	J	0.0015	0.00019	mg/m3			09/02/16 20:04	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/02/16 20:04	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/02/16 20:04	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/02/16 20:04	1
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			09/02/16 20:04	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/02/16 20:04	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/02/16 20:04	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/02/16 20:04	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/02/16 20:04	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/02/16 20:04	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			09/02/16 20:04	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			09/02/16 20:04	1
Ethanol	0.00257		0.0019	0.00034	mg/m3			09/02/16 20:04	1
n-Heptane	ND		0.0033	0.00026	mg/m3			09/02/16 20:04	1
Hexane	ND		0.0028	0.00026	mg/m3			09/02/16 20:04	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			09/02/16 20:04	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			09/02/16 20:04	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/02/16 20:04	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/02/16 20:04	1
2-Propanol	ND		0.0049	0.00058	mg/m3			09/02/16 20:04	1
Propylene	ND		0.00069	0.00017	mg/m3			09/02/16 20:04	1
Tetrahydrofuran	ND		0.0024	0.00023	mg/m3			09/02/16 20:04	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			09/02/16 20:04	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/02/16 20:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*09/02/16 20:04*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/02/16 20:04*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/02/16 20:04*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125451/11
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (C6-C12)	5000	4550		ppb v/v		91	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (C6-C12)	20	18.6		mg/m3		91	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*143*	*X*	*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCS 320-125451/5
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.1		ppb v/v		91	65 - 124
1,1,2,2-Tetrachloroethane	20.0	18.4		ppb v/v		92	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.8		ppb v/v		84	50 - 132
1,1,2-Trichloroethane	20.0	19.1		ppb v/v		95	71 - 131
1,1-Dichloroethane	20.0	18.4		ppb v/v		92	65 - 125
1,1-Dichloroethene	20.0	17.3		ppb v/v		86	53 - 128
1,2,4-Trichlorobenzene	20.0	19.9		ppb v/v		100	59 - 150
1,2,4-Trimethylbenzene	20.0	16.5		ppb v/v		83	61 - 145
1,2-Dibromoethane (EDB)	20.0	18.4		ppb v/v		92	68 - 131
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	17.5		ppb v/v		88	64 - 124
1,2-Dichlorobenzene	20.0	17.7		ppb v/v		89	73 - 143
1,2-Dichloroethane	20.0	19.0		ppb v/v		95	71 - 131
1,2-Dichloropropane	20.0	19.5		ppb v/v		98	74 - 128
1,3,5-Trimethylbenzene	20.0	16.9		ppb v/v		84	65 - 136
1,3-Dichlorobenzene	20.0	17.9		ppb v/v		90	77 - 136
1,4-Dichlorobenzene	20.0	18.1		ppb v/v		90	73 - 143
2-Butanone (MEK)	20.0	18.6		ppb v/v		93	71 - 131
2-Hexanone	20.0	23.7		ppb v/v		119	70 - 128
4-Ethyltoluene	20.0	15.6		ppb v/v		78	62 - 136
4-Methyl-2-pentanone (MIBK)	20.0	22.7		ppb v/v		114	73 - 133
Acetone	20.0	16.7		ppb v/v		84	71 - 131
Benzene	20.0	18.2		ppb v/v		91	68 - 128
Benzyl chloride	20.0	15.6		ppb v/v		78	58 - 120
Bromodichloromethane	20.0	18.9		ppb v/v		94	65 - 130
Bromoform	20.0	18.6		ppb v/v		93	64 - 144
Bromomethane	20.0	19.1		ppb v/v		96	70 - 131
Carbon disulfide	20.0	17.0		ppb v/v		85	63 - 123
Carbon tetrachloride	20.0	18.2		ppb v/v		91	67 - 127
Chlorobenzene	20.0	17.4		ppb v/v		87	70 - 132
Chloroethane	20.0	19.8		ppb v/v		99	70 - 131

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125451/5
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	20.0	18.3		ppb v/v		91	69 - 129
Chloromethane	20.0	19.3		ppb v/v		97	67 - 127
cis-1,2-Dichloroethene	20.0	18.1		ppb v/v		90	68 - 128
cis-1,3-Dichloropropene	20.0	21.0		ppb v/v		105	78 - 132
Dibromochloromethane	20.0	18.4		ppb v/v		92	68 - 128
Dichlorodifluoromethane	20.0	19.2		ppb v/v		96	69 - 129
Ethylbenzene	20.0	17.3		ppb v/v		87	76 - 136
Hexachlorobutadiene	20.0	16.1		ppb v/v		80	42 - 150
m,p-Xylene	40.0	34.3		ppb v/v		86	75 - 138
Methylene Chloride	20.0	17.4		ppb v/v		87	65 - 125
o-Xylene	20.0	17.3		ppb v/v		86	77 - 132
Styrene	20.0	18.9		ppb v/v		95	76 - 144
Tetrachloroethene	20.0	17.1		ppb v/v		86	56 - 138
Toluene	20.0	17.8		ppb v/v		89	71 - 132
trans-1,2-Dichloroethene	20.0	18.7		ppb v/v		94	70 - 130
trans-1,3-Dichloropropene	20.0	17.4		ppb v/v		87	56 - 136
Trichloroethene	20.0	17.7		ppb v/v		89	64 - 127
Trichlorofluoromethane	20.0	18.9		ppb v/v		95	68 - 128
Vinyl acetate	20.0	20.1		ppb v/v		101	77 - 134
Vinyl chloride	20.0	19.3		ppb v/v		97	69 - 129
Allyl chloride	20.0	20.1		ppb v/v		101	77 - 137
1,3-Butadiene	20.0	18.9		ppb v/v		94	58 - 126
2-Chlorotoluene	20.0	16.7		ppb v/v		84	73 - 131
Cyclohexane	20.0	18.1		ppb v/v		90	63 - 128
1,4-Dioxane	20.0	21.3		ppb v/v		106	55 - 141
n-Heptane	20.0	19.3		ppb v/v		96	69 - 129
Hexane	20.0	17.8		ppb v/v		89	63 - 123
Isopropylbenzene	20.0	17.1		ppb v/v		85	75 - 135
Methyl methacrylate	20.0	20.5		ppb v/v		103	71 - 130
Methyl-t-Butyl Ether (MTBE)	20.0	18.4		ppb v/v		92	72 - 132
Naphthalene	20.0	19.6		ppb v/v		98	58 - 150
Propylene	20.0	21.1		ppb v/v		106	72 - 132
Tetrahydrofuran	20.0	18.9		ppb v/v		95	69 - 129
2,2,4-Trimethylpentane	20.0	19.0		ppb v/v		95	72 - 132
Vinyl bromide	20.0	17.9		ppb v/v		90	65 - 125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.0988		mg/m3		91	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.126		mg/m3		92	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.129		mg/m3		84	50 - 132
1,1,2-Trichloroethane	0.11	0.104		mg/m3		95	71 - 131
1,1-Dichloroethane	0.081	0.0745		mg/m3		92	65 - 125
1,1-Dichloroethene	0.079	0.0685		mg/m3		86	53 - 128
1,2,4-Trichlorobenzene	0.15	0.148		mg/m3		100	59 - 150
1,2,4-Trimethylbenzene	0.098	0.0813		mg/m3		83	61 - 145
1,2-Dibromoethane (EDB)	0.15	0.142		mg/m3		92	68 - 131
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.123		mg/m3		88	64 - 124

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125451/5
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	0.12	0.106		mg/m3		89	73 - 143
1,2-Dichloroethane	0.081	0.0770		mg/m3		95	71 - 131
1,2-Dichloropropane	0.092	0.0902		mg/m3		98	74 - 128
1,3,5-Trimethylbenzene	0.098	0.0830		mg/m3		84	65 - 136
1,3-Dichlorobenzene	0.12	0.108		mg/m3		90	77 - 136
1,4-Dichlorobenzene	0.12	0.109		mg/m3		90	73 - 143
2-Butanone (MEK)	0.059	0.0548		mg/m3		93	71 - 131
2-Hexanone	0.082	0.0972		mg/m3		119	70 - 128
4-Ethyltoluene	0.098	0.0768		mg/m3		78	62 - 136
4-Methyl-2-pentanone (MIBK)	0.082	0.0932		mg/m3		114	73 - 133
Acetone	0.048	0.0398		mg/m3		84	71 - 131
Benzene	0.064	0.0583		mg/m3		91	68 - 128
Benzyl chloride	0.10	0.0809		mg/m3		78	58 - 120
Bromodichloromethane	0.13	0.127		mg/m3		94	65 - 130
Bromoform	0.21	0.193		mg/m3		93	64 - 144
Bromomethane	0.078	0.0742		mg/m3		96	70 - 131
Carbon disulfide	0.062	0.0529		mg/m3		85	63 - 123
Carbon tetrachloride	0.13	0.115		mg/m3		91	67 - 127
Chlorobenzene	0.092	0.0803		mg/m3		87	70 - 132
Chloroethane	0.053	0.0524		mg/m3		99	70 - 131
Chloroform	0.098	0.0892		mg/m3		91	69 - 129
Chloromethane	0.041	0.0399		mg/m3		97	67 - 127
cis-1,2-Dichloroethene	0.079	0.0717		mg/m3		90	68 - 128
cis-1,3-Dichloropropene	0.091	0.0955		mg/m3		105	78 - 132
Dibromochloromethane	0.17	0.157		mg/m3		92	68 - 128
Dichlorodifluoromethane	0.099	0.0952		mg/m3		96	69 - 129
Ethylbenzene	0.087	0.0752		mg/m3		87	76 - 136
Hexachlorobutadiene	0.21	0.172		mg/m3		80	42 - 150
m,p-Xylene	0.17	0.149		mg/m3		86	75 - 138
Methylene Chloride	0.069	0.0603		mg/m3		87	65 - 125
o-Xylene	0.087	0.0750		mg/m3		86	77 - 132
Styrene	0.085	0.0805		mg/m3		95	76 - 144
Tetrachloroethene	0.14	0.116		mg/m3		86	56 - 138
Toluene	0.075	0.0670		mg/m3		89	71 - 132
trans-1,2-Dichloroethene	0.079	0.0742		mg/m3		94	70 - 130
trans-1,3-Dichloropropene	0.091	0.0789		mg/m3		87	56 - 136
Trichloroethene	0.11	0.0951		mg/m3		89	64 - 127
Trichlorofluoromethane	0.11	0.106		mg/m3		95	68 - 128
Vinyl acetate	0.070	0.0708		mg/m3		101	77 - 134
Vinyl chloride	0.051	0.0494		mg/m3		97	69 - 129
Allyl chloride	0.063	0.0630		mg/m3		101	77 - 137
1,3-Butadiene	0.044	0.0418		mg/m3		94	58 - 126
2-Chlorotoluene	0.10	0.0867		mg/m3		84	73 - 131
Cyclohexane	0.069	0.0622		mg/m3		90	63 - 128
1,4-Dioxane	0.072	0.0768		mg/m3		106	55 - 141
n-Heptane	0.082	0.0789		mg/m3		96	69 - 129
Hexane	0.070	0.0627		mg/m3		89	63 - 123
Isopropylbenzene	0.098	0.0840		mg/m3		85	75 - 135

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125451/5
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl methacrylate	0.082	0.0841		mg/m3		103	71 - 130
Methyl-t-Butyl Ether (MTBE)	0.072	0.0664		mg/m3		92	72 - 132
Naphthalene	0.10	0.103		mg/m3		98	58 - 150
Propylene	0.034	0.0364		mg/m3		106	72 - 132
Tetrahydrofuran	0.059	0.0558		mg/m3		95	69 - 129
2,2,4-Trimethylpentane	0.093	0.0887		mg/m3		95	72 - 132
Vinyl bromide	0.087	0.0784		mg/m3		90	65 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCS 320-125451/8
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	100	83.1		ppb v/v		83	62 - 131
2-Propanol	20.0	20.3		ppb v/v		102	55 - 139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	0.19	0.157		mg/m3		83	62 - 131
2-Propanol	0.049	0.0500		mg/m3		102	55 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 320-125451/12
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)	5000	4280		ppb v/v		86	70 - 130	6	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)	20	17.5		mg/m3		86	70 - 130	6	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*142*	*X*	*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125451/6
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	18.4		ppb v/v		92	65 - 124	1	25
1,1,2,2-Tetrachloroethane	20.0	17.2		ppb v/v		86	75 - 135	7	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.9		ppb v/v		85	50 - 132	0	25
1,1,2-Trichloroethane	20.0	18.5		ppb v/v		93	71 - 131	3	25
1,1-Dichloroethane	20.0	18.6		ppb v/v		93	65 - 125	1	25
1,1-Dichloroethene	20.0	17.3		ppb v/v		87	53 - 128	0	25
1,2,4-Trichlorobenzene	20.0	18.8		ppb v/v		94	59 - 150	6	25
1,2,4-Trimethylbenzene	20.0	15.2		ppb v/v		76	61 - 145	9	25
1,2-Dibromoethane (EDB)	20.0	18.0		ppb v/v		90	68 - 131	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	17.1		ppb v/v		86	64 - 124	2	25
1,2-Dichlorobenzene	20.0	16.9		ppb v/v		84	73 - 143	5	25
1,2-Dichloroethane	20.0	18.5		ppb v/v		93	71 - 131	3	25
1,2-Dichloropropane	20.0	19.0		ppb v/v		95	74 - 128	3	25
1,3,5-Trimethylbenzene	20.0	15.5		ppb v/v		78	65 - 136	9	25
1,3-Dichlorobenzene	20.0	17.3		ppb v/v		87	77 - 136	4	25
1,4-Dichlorobenzene	20.0	17.4		ppb v/v		87	73 - 143	4	25
2-Butanone (MEK)	20.0	17.9		ppb v/v		90	71 - 131	3	25
2-Hexanone	20.0	21.9		ppb v/v		109	70 - 128	8	25
4-Ethyltoluene	20.0	14.4		ppb v/v		72	62 - 136	8	25
4-Methyl-2-pentanone (MIBK)	20.0	21.0		ppb v/v		105	73 - 133	8	25
Acetone	20.0	16.1		ppb v/v		80	71 - 131	4	25
Benzene	20.0	17.7		ppb v/v		88	68 - 128	3	25
Benzyl chloride	20.0	14.5		ppb v/v		72	58 - 120	8	25
Bromodichloromethane	20.0	18.4		ppb v/v		92	65 - 130	3	25
Bromoform	20.0	18.1		ppb v/v		90	64 - 144	3	25
Bromomethane	20.0	19.7		ppb v/v		99	70 - 131	3	25
Carbon disulfide	20.0	17.1		ppb v/v		86	63 - 123	1	25
Carbon tetrachloride	20.0	17.7		ppb v/v		88	67 - 127	3	25
Chlorobenzene	20.0	16.9		ppb v/v		85	70 - 132	3	25
Chloroethane	20.0	20.0		ppb v/v		100	70 - 131	1	25
Chloroform	20.0	18.5		ppb v/v		93	69 - 129	1	25
Chloromethane	20.0	20.0		ppb v/v		100	67 - 127	3	25
cis-1,2-Dichloroethene	20.0	18.4		ppb v/v		92	68 - 128	2	25
cis-1,3-Dichloropropene	20.0	20.6		ppb v/v		103	78 - 132	2	25
Dibromochloromethane	20.0	17.9		ppb v/v		89	68 - 128	3	25
Dichlorodifluoromethane	20.0	19.9		ppb v/v		99	69 - 129	3	25
Ethylbenzene	20.0	16.4		ppb v/v		82	76 - 136	5	25
Hexachlorobutadiene	20.0	15.6		ppb v/v		78	42 - 150	3	25
m,p-Xylene	40.0	32.1		ppb v/v		80	75 - 138	7	25
Methylene Chloride	20.0	17.4		ppb v/v		87	65 - 125	0	25
o-Xylene	20.0	16.2		ppb v/v		81	77 - 132	6	25
Styrene	20.0	17.9		ppb v/v		89	76 - 144	6	25
Tetrachloroethene	20.0	16.6		ppb v/v		83	56 - 138	3	25
Toluene	20.0	17.4		ppb v/v		87	71 - 132	2	25
trans-1,2-Dichloroethene	20.0	18.8		ppb v/v		94	70 - 130	1	25
trans-1,3-Dichloropropene	20.0	16.8		ppb v/v		84	56 - 136	3	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125451/6
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene	20.0	17.7		ppb v/v		89	64 - 127	0	25
Trichlorofluoromethane	20.0	19.2		ppb v/v		96	68 - 128	1	25
Vinyl acetate	20.0	19.3		ppb v/v		97	77 - 134	4	25
Vinyl chloride	20.0	20.2		ppb v/v		101	69 - 129	5	25
Allyl chloride	20.0	20.2		ppb v/v		101	77 - 137	1	25
1,3-Butadiene	20.0	19.3		ppb v/v		96	58 - 126	2	25
2-Chlorotoluene	20.0	16.1		ppb v/v		81	73 - 131	4	25
Cyclohexane	20.0	17.4		ppb v/v		87	63 - 128	4	25
1,4-Dioxane	20.0	19.6		ppb v/v		98	55 - 141	8	25
n-Heptane	20.0	18.6		ppb v/v		93	69 - 129	4	25
Hexane	20.0	17.9		ppb v/v		89	63 - 123	0	25
Isopropylbenzene	20.0	16.0		ppb v/v		80	75 - 135	7	25
Methyl methacrylate	20.0	18.8		ppb v/v		94	71 - 130	9	25
Methyl-t-Butyl Ether (MTBE)	20.0	18.0		ppb v/v		90	72 - 132	2	25
Naphthalene	20.0	18.5		ppb v/v		92	58 - 150	6	25
Propylene	20.0	21.7		ppb v/v		109	72 - 132	3	25
Tetrahydrofuran	20.0	18.4		ppb v/v		92	69 - 129	3	25
2,2,4-Trimethylpentane	20.0	18.5		ppb v/v		92	72 - 132	3	25
Vinyl bromide	20.0	18.2		ppb v/v		91	65 - 125	2	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.11	0.100		mg/m3		92	65 - 124	1	25
1,1,2,2-Tetrachloroethane	0.14	0.118		mg/m3		86	75 - 135	7	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.130		mg/m3		85	50 - 132	0	25
1,1,2-Trichloroethane	0.11	0.101		mg/m3		93	71 - 131	3	25
1,1-Dichloroethane	0.081	0.0754		mg/m3		93	65 - 125	1	25
1,1-Dichloroethene	0.079	0.0688		mg/m3		87	53 - 128	0	25
1,2,4-Trichlorobenzene	0.15	0.140		mg/m3		94	59 - 150	6	25
1,2,4-Trimethylbenzene	0.098	0.0746		mg/m3		76	61 - 145	9	25
1,2-Dibromoethane (EDB)	0.15	0.138		mg/m3		90	68 - 131	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.120		mg/m3		86	64 - 124	2	25
1,2-Dichlorobenzene	0.12	0.101		mg/m3		84	73 - 143	5	25
1,2-Dichloroethane	0.081	0.0749		mg/m3		93	71 - 131	3	25
1,2-Dichloropropane	0.092	0.0876		mg/m3		95	74 - 128	3	25
1,3,5-Trimethylbenzene	0.098	0.0762		mg/m3		78	65 - 136	9	25
1,3-Dichlorobenzene	0.12	0.104		mg/m3		87	77 - 136	4	25
1,4-Dichlorobenzene	0.12	0.105		mg/m3		87	73 - 143	4	25
2-Butanone (MEK)	0.059	0.0529		mg/m3		90	71 - 131	3	25
2-Hexanone	0.082	0.0896		mg/m3		109	70 - 128	8	25
4-Ethyltoluene	0.098	0.0710		mg/m3		72	62 - 136	8	25
4-Methyl-2-pentanone (MIBK)	0.082	0.0860		mg/m3		105	73 - 133	8	25
Acetone	0.048	0.0382		mg/m3		80	71 - 131	4	25
Benzene	0.064	0.0564		mg/m3		88	68 - 128	3	25
Benzyl chloride	0.10	0.0749		mg/m3		72	58 - 120	8	25
Bromodichloromethane	0.13	0.123		mg/m3		92	65 - 130	3	25
Bromoform	0.21	0.187		mg/m3		90	64 - 144	3	25
Bromomethane	0.078	0.0766		mg/m3		99	70 - 131	3	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125451/6
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide			0.062	0.0533		mg/m3		86	63 - 123	1	25
Carbon tetrachloride			0.13	0.111		mg/m3		88	67 - 127	3	25
Chlorobenzene			0.092	0.0780		mg/m3		85	70 - 132	3	25
Chloroethane			0.053	0.0529		mg/m3		100	70 - 131	1	25
Chloroform			0.098	0.0905		mg/m3		93	69 - 129	1	25
Chloromethane			0.041	0.0413		mg/m3		100	67 - 127	3	25
cis-1,2-Dichloroethene			0.079	0.0730		mg/m3		92	68 - 128	2	25
cis-1,3-Dichloropropene			0.091	0.0934		mg/m3		103	78 - 132	2	25
Dibromochloromethane			0.17	0.152		mg/m3		89	68 - 128	3	25
Dichlorodifluoromethane			0.099	0.0982		mg/m3		99	69 - 129	3	25
Ethylbenzene			0.087	0.0714		mg/m3		82	76 - 136	5	25
Hexachlorobutadiene			0.21	0.167		mg/m3		78	42 - 150	3	25
m,p-Xylene			0.17	0.139		mg/m3		80	75 - 138	7	25
Methylene Chloride			0.069	0.0604		mg/m3		87	65 - 125	0	25
o-Xylene			0.087	0.0703		mg/m3		81	77 - 132	6	25
Styrene			0.085	0.0760		mg/m3		89	76 - 144	6	25
Tetrachloroethene			0.14	0.112		mg/m3		83	56 - 138	3	25
Toluene			0.075	0.0655		mg/m3		87	71 - 132	2	25
trans-1,2-Dichloroethene			0.079	0.0746		mg/m3		94	70 - 130	1	25
trans-1,3-Dichloropropene			0.091	0.0764		mg/m3		84	56 - 136	3	25
Trichloroethene			0.11	0.0952		mg/m3		89	64 - 127	0	25
Trichlorofluoromethane			0.11	0.108		mg/m3		96	68 - 128	1	25
Vinyl acetate			0.070	0.0680		mg/m3		97	77 - 134	4	25
Vinyl chloride			0.051	0.0517		mg/m3		101	69 - 129	5	25
Allyl chloride			0.063	0.0634		mg/m3		101	77 - 137	1	25
1,3-Butadiene			0.044	0.0426		mg/m3		96	58 - 126	2	25
2-Chlorotoluene			0.10	0.0836		mg/m3		81	73 - 131	4	25
Cyclohexane			0.069	0.0598		mg/m3		87	63 - 128	4	25
1,4-Dioxane			0.072	0.0705		mg/m3		98	55 - 141	8	25
n-Heptane			0.082	0.0761		mg/m3		93	69 - 129	4	25
Hexane			0.070	0.0630		mg/m3		89	63 - 123	0	25
Isopropylbenzene			0.098	0.0786		mg/m3		80	75 - 135	7	25
Methyl methacrylate			0.082	0.0771		mg/m3		94	71 - 130	9	25
Methyl-t-Butyl Ether (MTBE)			0.072	0.0648		mg/m3		90	72 - 132	2	25
Naphthalene			0.10	0.0969		mg/m3		92	58 - 150	6	25
Propylene			0.034	0.0374		mg/m3		109	72 - 132	3	25
Tetrahydrofuran			0.059	0.0543		mg/m3		92	69 - 129	3	25
2,2,4-Trimethylpentane			0.093	0.0863		mg/m3		92	72 - 132	3	25
Vinyl bromide			0.087	0.0797		mg/m3		91	65 - 125	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125451/9
Matrix: Air
Analysis Batch: 125451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			100	74.4		ppb v/v		74	62 - 131	11	25
2-Propanol			20.0	18.5		ppb v/v		92	55 - 139	9	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			0.19	0.140		mg/m3		74	62 - 131	11	25
2-Propanol			0.049	0.0455		mg/m3		92	55 - 139	9	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 320-125749/9
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	0.065	ppb v/v			09/06/16 15:30	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			09/06/16 15:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			09/06/16 15:30	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			09/06/16 15:30	1
1,1-Dichloroethane	ND		0.30	0.072	ppb v/v			09/06/16 15:30	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			09/06/16 15:30	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			09/06/16 15:30	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			09/06/16 15:30	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			09/06/16 15:30	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			09/06/16 15:30	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			09/06/16 15:30	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			09/06/16 15:30	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			09/06/16 15:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/06/16 15:30	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			09/06/16 15:30	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			09/06/16 15:30	1
2-Butanone (MEK)	ND		0.80	0.20	ppb v/v			09/06/16 15:30	1
2-Hexanone	ND		0.40	0.087	ppb v/v			09/06/16 15:30	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			09/06/16 15:30	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			09/06/16 15:30	1
Acetone	ND		5.0	0.18	ppb v/v			09/06/16 15:30	1
Benzene	ND		0.40	0.079	ppb v/v			09/06/16 15:30	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			09/06/16 15:30	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			09/06/16 15:30	1
Bromoform	ND		0.40	0.070	ppb v/v			09/06/16 15:30	1
Bromomethane	ND		0.80	0.34	ppb v/v			09/06/16 15:30	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			09/06/16 15:30	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			09/06/16 15:30	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			09/06/16 15:30	1
Chloroethane	ND		0.80	0.31	ppb v/v			09/06/16 15:30	1
Chloroform	ND		0.30	0.095	ppb v/v			09/06/16 15:30	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-125749/9
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		0.80	0.20	ppb v/v			09/06/16 15:30	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			09/06/16 15:30	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			09/06/16 15:30	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			09/06/16 15:30	1
Dichlorodifluoromethane	ND		0.40	0.15	ppb v/v			09/06/16 15:30	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			09/06/16 15:30	1
Gasoline Range Organics (C6-C12)	ND		100	40	ppb v/v			09/06/16 15:30	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			09/06/16 15:30	1
m,p-Xylene	ND		0.80	0.10	ppb v/v			09/06/16 15:30	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			09/06/16 15:30	1
o-Xylene	ND		0.40	0.054	ppb v/v			09/06/16 15:30	1
Styrene	ND		0.40	0.059	ppb v/v			09/06/16 15:30	1
Tetrachloroethene	ND		0.40	0.051	ppb v/v			09/06/16 15:30	1
Toluene	ND		0.40	0.051	ppb v/v			09/06/16 15:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/06/16 15:30	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			09/06/16 15:30	1
Trichloroethene	ND		0.40	0.11	ppb v/v			09/06/16 15:30	1
Trichlorofluoromethane	ND		0.40	0.20	ppb v/v			09/06/16 15:30	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			09/06/16 15:30	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			09/06/16 15:30	1
Allyl chloride	ND		0.80	0.11	ppb v/v			09/06/16 15:30	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			09/06/16 15:30	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			09/06/16 15:30	1
Cyclohexane	ND		0.40	0.084	ppb v/v			09/06/16 15:30	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			09/06/16 15:30	1
Ethanol	ND		1.0	0.18	ppb v/v			09/06/16 15:30	1
n-Heptane	ND		0.80	0.063	ppb v/v			09/06/16 15:30	1
Hexane	ND		0.80	0.075	ppb v/v			09/06/16 15:30	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			09/06/16 15:30	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			09/06/16 15:30	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.050	ppb v/v			09/06/16 15:30	1
Naphthalene	ND		0.80	0.56	ppb v/v			09/06/16 15:30	1
2-Propanol	ND		2.0	0.23	ppb v/v			09/06/16 15:30	1
Propylene	ND		0.40	0.099	ppb v/v			09/06/16 15:30	1
Tetrahydrofuran	ND		0.80	0.079	ppb v/v			09/06/16 15:30	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			09/06/16 15:30	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			09/06/16 15:30	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			09/06/16 15:30	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			09/06/16 15:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			09/06/16 15:30	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			09/06/16 15:30	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			09/06/16 15:30	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			09/06/16 15:30	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			09/06/16 15:30	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			09/06/16 15:30	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			09/06/16 15:30	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-125749/9
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			09/06/16 15:30	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			09/06/16 15:30	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			09/06/16 15:30	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			09/06/16 15:30	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			09/06/16 15:30	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			09/06/16 15:30	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			09/06/16 15:30	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			09/06/16 15:30	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			09/06/16 15:30	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			09/06/16 15:30	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			09/06/16 15:30	1
Acetone	ND		0.012	0.00042	mg/m3			09/06/16 15:30	1
Benzene	ND		0.0013	0.00025	mg/m3			09/06/16 15:30	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			09/06/16 15:30	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			09/06/16 15:30	1
Bromoform	ND		0.0041	0.00072	mg/m3			09/06/16 15:30	1
Bromomethane	ND		0.0031	0.0013	mg/m3			09/06/16 15:30	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			09/06/16 15:30	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			09/06/16 15:30	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			09/06/16 15:30	1
Chloroethane	ND		0.0021	0.00081	mg/m3			09/06/16 15:30	1
Chloroform	ND		0.0015	0.00046	mg/m3			09/06/16 15:30	1
Chloromethane	ND		0.0017	0.00041	mg/m3			09/06/16 15:30	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			09/06/16 15:30	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			09/06/16 15:30	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			09/06/16 15:30	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			09/06/16 15:30	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			09/06/16 15:30	1
Gasoline Range Organics (C6-C12)	ND		0.41	0.16	mg/m3			09/06/16 15:30	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			09/06/16 15:30	1
m,p-Xylene	ND		0.0035	0.00043	mg/m3			09/06/16 15:30	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			09/06/16 15:30	1
o-Xylene	ND		0.0017	0.00023	mg/m3			09/06/16 15:30	1
Styrene	ND		0.0017	0.00025	mg/m3			09/06/16 15:30	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			09/06/16 15:30	1
Toluene	ND		0.0015	0.00019	mg/m3			09/06/16 15:30	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			09/06/16 15:30	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			09/06/16 15:30	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			09/06/16 15:30	1
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			09/06/16 15:30	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			09/06/16 15:30	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			09/06/16 15:30	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			09/06/16 15:30	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			09/06/16 15:30	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			09/06/16 15:30	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			09/06/16 15:30	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			09/06/16 15:30	1
Ethanol	ND		0.0019	0.00034	mg/m3			09/06/16 15:30	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-125749/9
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Heptane	ND		0.0033	0.00026	mg/m3			09/06/16 15:30	1
Hexane	ND		0.0028	0.00026	mg/m3			09/06/16 15:30	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			09/06/16 15:30	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			09/06/16 15:30	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00018	mg/m3			09/06/16 15:30	1
Naphthalene	ND		0.0042	0.0029	mg/m3			09/06/16 15:30	1
2-Propanol	ND		0.0049	0.00058	mg/m3			09/06/16 15:30	1
Propylene	ND		0.00069	0.00017	mg/m3			09/06/16 15:30	1
Tetrahydrofuran	ND		0.0024	0.00023	mg/m3			09/06/16 15:30	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			09/06/16 15:30	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			09/06/16 15:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/06/16 15:30*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*09/06/16 15:30*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/06/16 15:30*	*1*

Lab Sample ID: LCS 320-125749/4
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	17.3		ppb v/v		87	65 - 124
1,1,2,2-Tetrachloroethane	20.0	16.7		ppb v/v		83	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	15.5		ppb v/v		78	50 - 132
1,1,2-Trichloroethane	20.0	18.9		ppb v/v		94	71 - 131
1,1-Dichloroethane	20.0	17.3		ppb v/v		87	65 - 125
1,1-Dichloroethene	20.0	15.6		ppb v/v		78	53 - 128
1,2,4-Trichlorobenzene	20.0	18.5		ppb v/v		92	59 - 150
1,2,4-Trimethylbenzene	20.0	16.4		ppb v/v		82	61 - 145
1,2-Dibromoethane (EDB)	20.0	18.3		ppb v/v		92	68 - 131
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	13.4		ppb v/v		67	64 - 124
1,2-Dichlorobenzene	20.0	16.5		ppb v/v		82	73 - 143
1,2-Dichloroethane	20.0	18.0		ppb v/v		90	71 - 131
1,2-Dichloropropane	20.0	18.5		ppb v/v		93	74 - 128
1,3,5-Trimethylbenzene	20.0	15.2		ppb v/v		76	65 - 136
1,3-Dichlorobenzene	20.0	16.8		ppb v/v		84	77 - 136
1,4-Dichlorobenzene	20.0	17.0		ppb v/v		85	73 - 143
2-Butanone (MEK)	20.0	15.5		ppb v/v		78	71 - 131
2-Hexanone	20.0	21.6		ppb v/v		108	70 - 128
4-Ethyltoluene	20.0	14.0		ppb v/v		70	62 - 136
4-Methyl-2-pentanone (MIBK)	20.0	19.8		ppb v/v		99	73 - 133
Acetone	20.0	13.7	*	ppb v/v		68	71 - 131
Benzene	20.0	17.1		ppb v/v		86	68 - 128
Benzyl chloride	20.0	13.8		ppb v/v		69	58 - 120
Bromodichloromethane	20.0	17.8		ppb v/v		89	65 - 130

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125749/4
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	18.5		ppb v/v		92	64 - 144
Bromomethane	20.0	18.6		ppb v/v		93	70 - 131
Carbon disulfide	20.0	15.6		ppb v/v		78	63 - 123
Carbon tetrachloride	20.0	16.6		ppb v/v		83	67 - 127
Chlorobenzene	20.0	17.3		ppb v/v		87	70 - 132
Chloroethane	20.0	18.2		ppb v/v		91	70 - 131
Chloroform	20.0	17.4		ppb v/v		87	69 - 129
Chloromethane	20.0	18.8		ppb v/v		94	67 - 127
cis-1,2-Dichloroethene	20.0	17.1		ppb v/v		85	68 - 128
cis-1,3-Dichloropropene	20.0	19.8		ppb v/v		99	78 - 132
Dibromochloromethane	20.0	18.3		ppb v/v		91	68 - 128
Dichlorodifluoromethane	20.0	17.5		ppb v/v		88	69 - 129
Ethylbenzene	20.0	15.9		ppb v/v		79	76 - 136
Hexachlorobutadiene	20.0	15.4		ppb v/v		77	42 - 150
m,p-Xylene	40.0	31.1		ppb v/v		78	75 - 138
Methylene Chloride	20.0	16.0		ppb v/v		80	65 - 125
o-Xylene	20.0	15.7		ppb v/v		79	77 - 132
Styrene	20.0	17.2		ppb v/v		86	76 - 144
Tetrachloroethene	20.0	17.0		ppb v/v		85	56 - 138
Toluene	20.0	16.7		ppb v/v		83	71 - 132
trans-1,2-Dichloroethene	20.0	17.3		ppb v/v		86	70 - 130
trans-1,3-Dichloropropene	20.0	17.1		ppb v/v		86	56 - 136
Trichloroethene	20.0	17.5		ppb v/v		87	64 - 127
Trichlorofluoromethane	20.0	17.4		ppb v/v		87	68 - 128
Vinyl acetate	20.0	15.7		ppb v/v		79	77 - 134
Vinyl chloride	20.0	19.0		ppb v/v		95	69 - 129
Allyl chloride	20.0	18.5		ppb v/v		92	77 - 137
1,3-Butadiene	20.0	18.2		ppb v/v		91	58 - 126
2-Chlorotoluene	20.0	15.8		ppb v/v		79	73 - 131
Cyclohexane	20.0	16.5		ppb v/v		82	63 - 128
1,4-Dioxane	20.0	18.1		ppb v/v		90	55 - 141
n-Heptane	20.0	18.1		ppb v/v		91	69 - 129
Hexane	20.0	16.8		ppb v/v		84	63 - 123
Isopropylbenzene	20.0	15.5		ppb v/v		78	75 - 135
Methyl methacrylate	20.0	17.0		ppb v/v		85	71 - 130
Methyl-t-Butyl Ether (MTBE)	20.0	15.7		ppb v/v		78	72 - 132
Naphthalene	20.0	18.0		ppb v/v		90	58 - 150
Propylene	20.0	19.3		ppb v/v		96	72 - 132
Tetrahydrofuran	20.0	15.9		ppb v/v		79	69 - 129
2,2,4-Trimethylpentane	20.0	17.8		ppb v/v		89	72 - 132
Vinyl bromide	20.0	16.5		ppb v/v		83	65 - 125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.0946		mg/m3		87	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.114		mg/m3		83	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.119		mg/m3		78	50 - 132
1,1,2-Trichloroethane	0.11	0.103		mg/m3		94	71 - 131

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125749/4
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	0.081	0.0701		mg/m3		87	65 - 125
1,1-Dichloroethene	0.079	0.0619		mg/m3		78	53 - 128
1,2,4-Trichlorobenzene	0.15	0.137		mg/m3		92	59 - 150
1,2,4-Trimethylbenzene	0.098	0.0806		mg/m3		82	61 - 145
1,2-Dibromoethane (EDB)	0.15	0.141		mg/m3		92	68 - 131
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.0938		mg/m3		67	64 - 124
1,2-Dichlorobenzene	0.12	0.0992		mg/m3		82	73 - 143
1,2-Dichloroethane	0.081	0.0727		mg/m3		90	71 - 131
1,2-Dichloropropane	0.092	0.0857		mg/m3		93	74 - 128
1,3,5-Trimethylbenzene	0.098	0.0745		mg/m3		76	65 - 136
1,3-Dichlorobenzene	0.12	0.101		mg/m3		84	77 - 136
1,4-Dichlorobenzene	0.12	0.102		mg/m3		85	73 - 143
2-Butanone (MEK)	0.059	0.0458		mg/m3		78	71 - 131
2-Hexanone	0.082	0.0887		mg/m3		108	70 - 128
4-Ethyltoluene	0.098	0.0687		mg/m3		70	62 - 136
4-Methyl-2-pentanone (MIBK)	0.082	0.0812		mg/m3		99	73 - 133
Acetone	0.048	0.0325	*	mg/m3		68	71 - 131
Benzene	0.064	0.0547		mg/m3		86	68 - 128
Benzyl chloride	0.10	0.0716		mg/m3		69	58 - 120
Bromodichloromethane	0.13	0.120		mg/m3		89	65 - 130
Bromoform	0.21	0.191		mg/m3		92	64 - 144
Bromomethane	0.078	0.0721		mg/m3		93	70 - 131
Carbon disulfide	0.062	0.0484		mg/m3		78	63 - 123
Carbon tetrachloride	0.13	0.105		mg/m3		83	67 - 127
Chlorobenzene	0.092	0.0798		mg/m3		87	70 - 132
Chloroethane	0.053	0.0480		mg/m3		91	70 - 131
Chloroform	0.098	0.0849		mg/m3		87	69 - 129
Chloromethane	0.041	0.0389		mg/m3		94	67 - 127
cis-1,2-Dichloroethene	0.079	0.0678		mg/m3		85	68 - 128
cis-1,3-Dichloropropene	0.091	0.0900		mg/m3		99	78 - 132
Dibromochloromethane	0.17	0.156		mg/m3		91	68 - 128
Dichlorodifluoromethane	0.099	0.0866		mg/m3		88	69 - 129
Ethylbenzene	0.087	0.0689		mg/m3		79	76 - 136
Hexachlorobutadiene	0.21	0.164		mg/m3		77	42 - 150
m,p-Xylene	0.17	0.135		mg/m3		78	75 - 138
Methylene Chloride	0.069	0.0556		mg/m3		80	65 - 125
o-Xylene	0.087	0.0682		mg/m3		79	77 - 132
Styrene	0.085	0.0734		mg/m3		86	76 - 144
Tetrachloroethene	0.14	0.115		mg/m3		85	56 - 138
Toluene	0.075	0.0628		mg/m3		83	71 - 132
trans-1,2-Dichloroethene	0.079	0.0685		mg/m3		86	70 - 130
trans-1,3-Dichloropropene	0.091	0.0777		mg/m3		86	56 - 136
Trichloroethene	0.11	0.0940		mg/m3		87	64 - 127
Trichlorofluoromethane	0.11	0.0980		mg/m3		87	68 - 128
Vinyl acetate	0.070	0.0555		mg/m3		79	77 - 134
Vinyl chloride	0.051	0.0485		mg/m3		95	69 - 129
Allyl chloride	0.063	0.0579		mg/m3		92	77 - 137

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-125749/4
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Butadiene	0.044	0.0403		mg/m3		91	58 - 126
2-Chlorotoluene	0.10	0.0816		mg/m3		79	73 - 131
Cyclohexane	0.069	0.0567		mg/m3		82	63 - 128
1,4-Dioxane	0.072	0.0651		mg/m3		90	55 - 141
n-Heptane	0.082	0.0743		mg/m3		91	69 - 129
Hexane	0.070	0.0592		mg/m3		84	63 - 123
Isopropylbenzene	0.098	0.0762		mg/m3		78	75 - 135
Methyl methacrylate	0.082	0.0696		mg/m3		85	71 - 130
Methyl-t-Butyl Ether (MTBE)	0.072	0.0564		mg/m3		78	72 - 132
Naphthalene	0.10	0.0942		mg/m3		90	58 - 150
Propylene	0.034	0.0331		mg/m3		96	72 - 132
Tetrahydrofuran	0.059	0.0468		mg/m3		79	69 - 129
2,2,4-Trimethylpentane	0.093	0.0833		mg/m3		89	72 - 132
Vinyl bromide	0.087	0.0723		mg/m3		83	65 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCS 320-125749/6
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	100	76.7		ppb v/v		77	62 - 131
2-Propanol	20.0	19.2		ppb v/v		96	55 - 139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	0.19	0.145		mg/m3		77	62 - 131
2-Propanol	0.049	0.0472		mg/m3		96	55 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 320-125749/5
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	17.2		ppb v/v		86	65 - 124	1	25
1,1,2,2-Tetrachloroethane	20.0	17.0		ppb v/v		85	75 - 135	2	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	15.4		ppb v/v		77	50 - 132	1	25
1,1,2-Trichloroethane	20.0	18.5		ppb v/v		93	71 - 131	2	25
1,1-Dichloroethane	20.0	17.1		ppb v/v		85	65 - 125	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125749/5
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	20.0	15.9		ppb v/v		80	53 - 128	2	25
1,2,4-Trichlorobenzene	20.0	18.7		ppb v/v		93	59 - 150	1	25
1,2,4-Trimethylbenzene	20.0	14.8		ppb v/v		74	61 - 145	10	25
1,2-Dibromoethane (EDB)	20.0	17.9		ppb v/v		89	68 - 131	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	11.8	*	ppb v/v		59	64 - 124	13	25
1,2-Dichlorobenzene	20.0	16.8		ppb v/v		84	73 - 143	2	25
1,2-Dichloroethane	20.0	17.7		ppb v/v		88	71 - 131	2	25
1,2-Dichloropropane	20.0	18.5		ppb v/v		92	74 - 128	0	25
1,3,5-Trimethylbenzene	20.0	15.2		ppb v/v		76	65 - 136	0	25
1,3-Dichlorobenzene	20.0	17.2		ppb v/v		86	77 - 136	2	25
1,4-Dichlorobenzene	20.0	17.3		ppb v/v		87	73 - 143	2	25
2-Butanone (MEK)	20.0	16.0		ppb v/v		80	71 - 131	3	25
2-Hexanone	20.0	21.4		ppb v/v		107	70 - 128	1	25
4-Ethyltoluene	20.0	14.0		ppb v/v		70	62 - 136	0	25
4-Methyl-2-pentanone (MIBK)	20.0	19.8		ppb v/v		99	73 - 133	0	25
Acetone	20.0	14.6		ppb v/v		73	71 - 131	6	25
Benzene	20.0	16.9		ppb v/v		84	68 - 128	1	25
Benzyl chloride	20.0	14.0		ppb v/v		70	58 - 120	1	25
Bromodichloromethane	20.0	17.7		ppb v/v		88	65 - 130	1	25
Bromoform	20.0	17.8		ppb v/v		89	64 - 144	3	25
Bromomethane	20.0	18.5		ppb v/v		93	70 - 131	0	25
Carbon disulfide	20.0	15.8		ppb v/v		79	63 - 123	2	25
Carbon tetrachloride	20.0	16.3		ppb v/v		81	67 - 127	2	25
Chlorobenzene	20.0	16.9		ppb v/v		85	70 - 132	3	25
Chloroethane	20.0	18.2		ppb v/v		91	70 - 131	0	25
Chloroform	20.0	17.3		ppb v/v		86	69 - 129	1	25
Chloromethane	20.0	18.8		ppb v/v		94	67 - 127	0	25
cis-1,2-Dichloroethene	20.0	16.9		ppb v/v		85	68 - 128	1	25
cis-1,3-Dichloropropene	20.0	19.7		ppb v/v		99	78 - 132	1	25
Dibromochloromethane	20.0	17.8		ppb v/v		89	68 - 128	3	25
Dichlorodifluoromethane	20.0	17.5		ppb v/v		88	69 - 129	0	25
Ethylbenzene	20.0	16.2		ppb v/v		81	76 - 136	2	25
Hexachlorobutadiene	20.0	15.6		ppb v/v		78	42 - 150	2	25
m,p-Xylene	40.0	31.6		ppb v/v		79	75 - 138	2	25
Methylene Chloride	20.0	15.8		ppb v/v		79	65 - 125	1	25
o-Xylene	20.0	16.0		ppb v/v		80	77 - 132	2	25
Styrene	20.0	17.5		ppb v/v		88	76 - 144	2	25
Tetrachloroethene	20.0	16.5		ppb v/v		83	56 - 138	3	25
Toluene	20.0	16.6		ppb v/v		83	71 - 132	1	25
trans-1,2-Dichloroethene	20.0	17.2		ppb v/v		86	70 - 130	1	25
trans-1,3-Dichloropropene	20.0	16.7		ppb v/v		84	56 - 136	2	25
Trichloroethene	20.0	17.2		ppb v/v		86	64 - 127	2	25
Trichlorofluoromethane	20.0	17.8		ppb v/v		89	68 - 128	2	25
Vinyl acetate	20.0	16.7		ppb v/v		84	77 - 134	6	25
Vinyl chloride	20.0	18.9		ppb v/v		95	69 - 129	0	25
Allyl chloride	20.0	18.1		ppb v/v		91	77 - 137	2	25
1,3-Butadiene	20.0	18.1		ppb v/v		91	58 - 126	0	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125749/5
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chlorotoluene	20.0	16.1		ppb v/v		81	73 - 131	2	25
Cyclohexane	20.0	16.3		ppb v/v		82	63 - 128	1	25
1,4-Dioxane	20.0	18.5		ppb v/v		93	55 - 141	2	25
n-Heptane	20.0	17.8		ppb v/v		89	69 - 129	2	25
Hexane	20.0	16.5		ppb v/v		82	63 - 123	2	25
Isopropylbenzene	20.0	15.7		ppb v/v		78	75 - 135	1	25
Methyl methacrylate	20.0	17.5		ppb v/v		87	71 - 130	3	25
Methyl-t-Butyl Ether (MTBE)	20.0	16.4		ppb v/v		82	72 - 132	5	25
Naphthalene	20.0	18.4		ppb v/v		92	58 - 150	2	25
Propylene	20.0	19.5		ppb v/v		97	72 - 132	1	25
Tetrahydrofuran	20.0	16.6		ppb v/v		83	69 - 129	4	25
2,2,4-Trimethylpentane	20.0	17.6		ppb v/v		88	72 - 132	1	25
Vinyl bromide	20.0	16.7		ppb v/v		84	65 - 125	1	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.11	0.0939		mg/m3		86	65 - 124	1	25
1,1,2,2-Tetrachloroethane	0.14	0.117		mg/m3		85	75 - 135	2	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.118		mg/m3		77	50 - 132	1	25
1,1,2-Trichloroethane	0.11	0.101		mg/m3		93	71 - 131	2	25
1,1-Dichloroethane	0.081	0.0691		mg/m3		85	65 - 125	1	25
1,1-Dichloroethene	0.079	0.0631		mg/m3		80	53 - 128	2	25
1,2,4-Trichlorobenzene	0.15	0.139		mg/m3		93	59 - 150	1	25
1,2,4-Trimethylbenzene	0.098	0.0727		mg/m3		74	61 - 145	10	25
1,2-Dibromoethane (EDB)	0.15	0.137		mg/m3		89	68 - 131	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.0825	*	mg/m3		59	64 - 124	13	25
1,2-Dichlorobenzene	0.12	0.101		mg/m3		84	73 - 143	2	25
1,2-Dichloroethane	0.081	0.0715		mg/m3		88	71 - 131	2	25
1,2-Dichloropropane	0.092	0.0853		mg/m3		92	74 - 128	0	25
1,3,5-Trimethylbenzene	0.098	0.0746		mg/m3		76	65 - 136	0	25
1,3-Dichlorobenzene	0.12	0.103		mg/m3		86	77 - 136	2	25
1,4-Dichlorobenzene	0.12	0.104		mg/m3		87	73 - 143	2	25
2-Butanone (MEK)	0.059	0.0473		mg/m3		80	71 - 131	3	25
2-Hexanone	0.082	0.0876		mg/m3		107	70 - 128	1	25
4-Ethyltoluene	0.098	0.0686		mg/m3		70	62 - 136	0	25
4-Methyl-2-pentanone (MIBK)	0.082	0.0811		mg/m3		99	73 - 133	0	25
Acetone	0.048	0.0346		mg/m3		73	71 - 131	6	25
Benzene	0.064	0.0540		mg/m3		84	68 - 128	1	25
Benzyl chloride	0.10	0.0723		mg/m3		70	58 - 120	1	25
Bromodichloromethane	0.13	0.119		mg/m3		88	65 - 130	1	25
Bromoform	0.21	0.184		mg/m3		89	64 - 144	3	25
Bromomethane	0.078	0.0719		mg/m3		93	70 - 131	0	25
Carbon disulfide	0.062	0.0493		mg/m3		79	63 - 123	2	25
Carbon tetrachloride	0.13	0.103		mg/m3		81	67 - 127	2	25
Chlorobenzene	0.092	0.0778		mg/m3		85	70 - 132	3	25
Chloroethane	0.053	0.0481		mg/m3		91	70 - 131	0	25
Chloroform	0.098	0.0843		mg/m3		86	69 - 129	1	25
Chloromethane	0.041	0.0387		mg/m3		94	67 - 127	0	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-125749/5
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			0.079	0.0671		mg/m3		85	68 - 128	1	25
cis-1,3-Dichloropropene			0.091	0.0895		mg/m3		99	78 - 132	1	25
Dibromochloromethane			0.17	0.151		mg/m3		89	68 - 128	3	25
Dichlorodifluoromethane			0.099	0.0868		mg/m3		88	69 - 129	0	25
Ethylbenzene			0.087	0.0702		mg/m3		81	76 - 136	2	25
Hexachlorobutadiene			0.21	0.167		mg/m3		78	42 - 150	2	25
m,p-Xylene			0.17	0.137		mg/m3		79	75 - 138	2	25
Methylene Chloride			0.069	0.0550		mg/m3		79	65 - 125	1	25
o-Xylene			0.087	0.0693		mg/m3		80	77 - 132	2	25
Styrene			0.085	0.0746		mg/m3		88	76 - 144	2	25
Tetrachloroethene			0.14	0.112		mg/m3		83	56 - 138	3	25
Toluene			0.075	0.0625		mg/m3		83	71 - 132	1	25
trans-1,2-Dichloroethene			0.079	0.0680		mg/m3		86	70 - 130	1	25
trans-1,3-Dichloropropene			0.091	0.0760		mg/m3		84	56 - 136	2	25
Trichloroethene			0.11	0.0923		mg/m3		86	64 - 127	2	25
Trichlorofluoromethane			0.11	0.0999		mg/m3		89	68 - 128	2	25
Vinyl acetate			0.070	0.0588		mg/m3		84	77 - 134	6	25
Vinyl chloride			0.051	0.0484		mg/m3		95	69 - 129	0	25
Allyl chloride			0.063	0.0568		mg/m3		91	77 - 137	2	25
1,3-Butadiene			0.044	0.0402		mg/m3		91	58 - 126	0	25
2-Chlorotoluene			0.10	0.0834		mg/m3		81	73 - 131	2	25
Cyclohexane			0.069	0.0562		mg/m3		82	63 - 128	1	25
1,4-Dioxane			0.072	0.0667		mg/m3		93	55 - 141	2	25
n-Heptane			0.082	0.0730		mg/m3		89	69 - 129	2	25
Hexane			0.070	0.0580		mg/m3		82	63 - 123	2	25
Isopropylbenzene			0.098	0.0771		mg/m3		78	75 - 135	1	25
Methyl methacrylate			0.082	0.0715		mg/m3		87	71 - 130	3	25
Methyl-t-Butyl Ether (MTBE)			0.072	0.0591		mg/m3		82	72 - 132	5	25
Naphthalene			0.10	0.0964		mg/m3		92	58 - 150	2	25
Propylene			0.034	0.0335		mg/m3		97	72 - 132	1	25
Tetrahydrofuran			0.059	0.0489		mg/m3		83	69 - 129	4	25
2,2,4-Trimethylpentane			0.093	0.0825		mg/m3		88	72 - 132	1	25
Vinyl bromide			0.087	0.0731		mg/m3		84	65 - 125	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 320-125749/7
Matrix: Air
Analysis Batch: 125749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			100	74.5		ppb v/v		74	62 - 131	3	25
2-Propanol			20.0	18.4		ppb v/v		92	55 - 139	4	25

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			0.19	0.140		mg/m3		74	62 - 131	3	25
2-Propanol			0.049	0.0453		mg/m3		92	55 - 139	4	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Air - GC/MS VOA

Analysis Batch: 125451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-4339-1	LFB-8-082616	Total/NA	Air	TO-15	
590-4339-2	LFB-9-082616	Total/NA	Air	TO-15	
590-4339-3	LFB-10-082616	Total/NA	Air	TO-15	
590-4339-4	LFB-11-082616	Total/NA	Air	TO-15	
590-4339-5	LFB-4-082616	Total/NA	Air	TO-15	
590-4339-6	LFB-3-082616	Total/NA	Air	TO-15	
590-4339-7	LFB-15-082616	Total/NA	Air	TO-15	
590-4339-8	LFB-16-082616	Total/NA	Air	TO-15	
590-4339-9	LFB-17-082616	Total/NA	Air	TO-15	
590-4339-10	LFB-5-082616	Total/NA	Air	TO-15	
MB 320-125451/14	Method Blank	Total/NA	Air	TO-15	
LCS 320-125451/11	Lab Control Sample	Total/NA	Air	TO-15	
LCS 320-125451/5	Lab Control Sample	Total/NA	Air	TO-15	
LCS 320-125451/8	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-125451/12	Lab Control Sample Dup	Total/NA	Air	TO-15	
LCSD 320-125451/6	Lab Control Sample Dup	Total/NA	Air	TO-15	
LCSD 320-125451/9	Lab Control Sample Dup	Total/NA	Air	TO-15	

Analysis Batch: 125749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-4339-1 - RA	LFB-8-082616	Total/NA	Air	TO-15	
590-4339-2 - DL	LFB-9-082616	Total/NA	Air	TO-15	
590-4339-3 - RA	LFB-10-082616	Total/NA	Air	TO-15	
590-4339-4 - DL	LFB-11-082616	Total/NA	Air	TO-15	
590-4339-5 - RA	LFB-4-082616	Total/NA	Air	TO-15	
590-4339-6 - DL	LFB-3-082616	Total/NA	Air	TO-15	
590-4339-7 - RA	LFB-15-082616	Total/NA	Air	TO-15	
590-4339-8 - RA	LFB-16-082616	Total/NA	Air	TO-15	
590-4339-10 - RA	LFB-5-082616	Total/NA	Air	TO-15	
MB 320-125749/9	Method Blank	Total/NA	Air	TO-15	
LCS 320-125749/4	Lab Control Sample	Total/NA	Air	TO-15	
LCS 320-125749/6	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-125749/5	Lab Control Sample Dup	Total/NA	Air	TO-15	
LCSD 320-125749/7	Lab Control Sample Dup	Total/NA	Air	TO-15	

Client Sample ID: LFB-8-082616 — **Lab Sample ID: 590-4339-1**
Date Collected: 08/26/16 11:45 — **Matrix: Air**
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	460 mL	250 mL	125451	09/02/16 20:51	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	1	719 mL	250 mL	125749	09/06/16 16:37	AP1	TAL SAC

Client Sample ID: LFB-9-082616 — **Lab Sample ID: 590-4339-2**
Date Collected: 08/26/16 12:24 — **Matrix: Air**
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	470 mL	250 mL	125451	09/02/16 21:37	AP1	TAL SAC
Total/NA	Analysis	TO-15	DL	6.28	75 mL	250 mL	125749	09/07/16 09:01	AP1	TAL SAC

Client Sample ID: LFB-10-082616 — **Lab Sample ID: 590-4339-3**
Date Collected: 08/26/16 12:52 — **Matrix: Air**
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	495 mL	250 mL	125451	09/02/16 22:31	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	1	745 mL	250 mL	125749	09/06/16 18:20	AP1	TAL SAC

Client Sample ID: LFB-11-082616 — **Lab Sample ID: 590-4339-4**
Date Collected: 08/26/16 13:09 — **Matrix: Air**
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		13.63	35 mL	250 mL	125451	09/02/16 23:15	AP1	TAL SAC
Total/NA	Analysis	TO-15	DL	43.35	11 mL	250 mL	125749	09/06/16 19:06	AP1	TAL SAC

Client Sample ID: LFB-4-082616 — **Lab Sample ID: 590-4339-5**
Date Collected: 08/26/16 13:30 — **Matrix: Air**
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		13.46	35 mL	250 mL	125451	09/02/16 23:58	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	13.46	35 mL	250 mL	125749	09/06/16 19:51	AP1	TAL SAC

Client Sample ID: LFB-3-082616 — **Lab Sample ID: 590-4339-6**
Date Collected: 08/26/16 13:52 — **Matrix: Air**
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		24.25	20 mL	250 mL	125451	09/03/16 00:42	AP1	TAL SAC

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Client Sample ID: LFB-3-082616
Lab Sample ID: 590-4339-6
Date Collected: 08/26/16 13:52
Matrix: Air
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	DL	48.5	10 mL	250 mL	125749	09/06/16 20:35	AP1	TAL SAC

Client Sample ID: LFB-15-082616
Lab Sample ID: 590-4339-7
Date Collected: 08/26/16 14:14
Matrix: Air
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	477 mL	250 mL	125451	09/03/16 01:28	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	1	739 mL	250 mL	125749	09/06/16 21:22	AP1	TAL SAC

Client Sample ID: LFB-16-082616
Lab Sample ID: 590-4339-8
Date Collected: 08/26/16 14:35
Matrix: Air
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	460 mL	250 mL	125451	09/03/16 02:23	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	1	722 mL	250 mL	125749	09/06/16 22:09	AP1	TAL SAC

Client Sample ID: LFB-17-082616
Lab Sample ID: 590-4339-9
Date Collected: 08/26/16 15:05
Matrix: Air
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		13.51	35 mL	250 mL	125451	09/03/16 03:06	AP1	TAL SAC

Client Sample ID: LFB-5-082616
Lab Sample ID: 590-4339-10
Date Collected: 08/26/16 15:30
Matrix: Air
Date Received: 08/26/16 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		16.11	28 mL	250 mL	125451	09/03/16 03:49	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	16.11	28 mL	250 mL	125749	09/06/16 22:53	AP1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-16 *
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4339-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
phone 916.374.4378 fax 916.372.1059

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Jon Rudders	**Samples Collected By:** JML
Company Name: GeoEngineers	Phone: 509-363-3125	
Address: 523 E. Second Ave	Email: JRudders@GeoEngineers.com	
City/State/Zip Spokane, WA 99202		
Phone: 509 363 3125	Site Contact:	
FAX: 509 363 3126	TA Contact:	
Project Name: Marshall	**Anaylsis Turnaround Time**	
Site/Location: Marshall, WA	Standard (Specific):	
P O # 0504-109-00	Rush (Specifiy):	

COC No: _____ of _____ COCs

For Lab Use Only:
Walk-in Client:
Lab Sampling:

Job / SDG No.:
(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
LFB-8:082616	8/26/16	1145	1155	-27	-1	7453	A7045D	X												X		
LFB-9:082616		1224	1234	-29	-2	7476	5022D	X												X		
LFB-10:082616		1252	1302	-27	-1	7220	A6169D	X												X		
LFB-11:082616		1309	1319	-28	-1	7547	5043D	X												X		
LFB-4:082616		1330	1340	-30	-2	7514	A7128D	X												X		
LFB-3:082616		1352	1402	-30	-1	7132	A7141D	X												X		
LFB-15:082616		1414	1424	-27	0	7475	A6873D	X												X		
LFB-16:082616		1435	1445	-30	-1	7672	A6841D	X												X		
LFB-17:082616		1505	1515	-30	0	7092	A1147D	X												X		
LFB-5:082616	↓	1530	1540	-30	-3	7671	A6967D	X												X		

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

590-4339 Chain of Custody

Special Instructions/QC Requirements & Comments: VOCs, Gasoline range petroleum hydrocarbons by TO-15

Samples Shipped by:	**Date / Time:**	**Samples Received by:**
Samples Relinquished by: Josh Lee	**Date / Time:** 8/26/2016 1620	**Received by:** 8/26/16 16:20
Relinquished by:	**Date / Time:**	**Received by:**

Lab Use Only: **Shipper Name:** **Opened by:** **Condition:**

Form No. CA-C-WI-003, Rev. 1, dated 05/10/2013

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1967.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4339-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/8/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15/Air_Pass_Can (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-8-082616 (590-4339-1)	8/26/16	11:45 Pacific		Air			X	1	
LFB-9-082616 (590-4339-2)	8/26/16	12:24 Pacific		Air			X	1	
LFB-10-082616 (590-4339-3)	8/26/16	12:52 Pacific		Air			X	1	
LFB-11-082616 (590-4339-4)	8/26/16	13:09 Pacific		Air			X	1	
LFB-4-082616 (590-4339-5)	8/26/16	13:30 Pacific		Air			X	1	
LFB-3-082616 (590-4339-6)	8/26/16	13:52 Pacific		Air			X	1	
LFB-15-082616 (590-4339-7)	8/26/16	14:14 Pacific		Air			X	1	
LFB-16-082616 (590-4339-8)	8/26/16	14:35 Pacific		Air			X	1	
LFB-17-082616 (590-4339-9)	8/26/16	15:05 Pacific		Air			X	1	
LFB-5-082616 (590-4339-10)	8/26/16	15:30 Pacific		Air			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kratz	8/29/16 1310	TAS/Spok		1430 8/30/16	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

9/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1967.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4339-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/8/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15/Air_Pass_Can (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-8-082616 (590-4339-1)	8/26/16	11:45 Pacific		Air			X	1	
LFB-9-082616 (590-4339-2)	8/26/16	12:24 Pacific		Air			X	1	
LFB-10-082616 (590-4339-3)	8/26/16	12:52 Pacific		Air			X	1	
LFB-11-082616 (590-4339-4)	8/26/16	13:09 Pacific		Air			X	1	
LFB-4-082616 (590-4339-5)	8/26/16	13:30 Pacific		Air			X	1	
LFB-3-082616 (590-4339-6)	8/26/16	13:52 Pacific		Air			X	1	
LFB-15-082616 (590-4339-7)	8/26/16	14:14 Pacific		Air			X	1	
LFB-16-082616 (590-4339-8)	8/26/16	14:35 Pacific		Air			X	1	
LFB-17-082616 (590-4339-9)	8/26/16	15:05 Pacific		Air			X	1	
LFB-5-082616 (590-4339-10)	8/26/16	15:30 Pacific		Air			X	1	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kratz	8/29/16 1310	TAS Spok		1430 8/30/16	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

9/20/2016

Airbill Here

7672 7671
7453 7220 7476
7475 7132 7092
7514 7567

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento

Sample Receiving Notes - Job_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes:	Cooler Custody Seal:_____
607638058 1850	# Bags: _____ 1L, _____ 2L, _____ 10L
Flows were not deleted	# Canisters: _____ 1L, _____ 6L, TA ☐ Non TA ☐
	Transferred by Sacramento - Yes ☐ No ☐
	# Canisters Unused: _____ 1L, _____ 6L
	# Flow Regulators: _____, # Gauges: _____
	Co-locator_____
	Initial & Date_____

N:\QA-828 CANISTER RECEIVING NOTES.DOC QA-828 JS 11/13/2015

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4339-1

Login Number: 4339
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4339-1

Login Number: 4339
List Number: 2
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 08/30/16 05:11 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4348-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
9/29/2016 1:53:44 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Job ID: 590-4348-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 8/29/2016 4:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-8354 recovered above the upper control limit for 1,1,2-Trichlorotrifluoroethane and Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the recovery of acetone was greater than 40%D, the results for this analyte are considered estimates. The following sample is impacted: SW-1:082916 (590-4348-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226767 recovered above the upper control limit for 3,3'-Dichlorobenzidine and 4-Nitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SW-1:082916 (590-4348-1).

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-226767 recovered outside acceptance criteria, low biased, for 4-Nitrophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated sample was non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-226767 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The following analyte recovered outside control limits for the LCS associated with preparation batch 580-226610 and analytical batch 580-226767: 4-Chloroaniline. The sample was non-detect for the affected analyte. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-226610 recovered outside control limits for the following analytes: 4-Nitrophenol, 4-Chloroaniline and 3,3'-Dichlorobenzidine.

Method 8270D: The method blank for preparation batch 580-226610 and analytical batch 580-226767 contained Di-n-butyl phthalate and Butyl benzyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The grand mean exception, as outlined in EPA method 8000B, was applied to the continuing calibration verification (CCV) standard associated with analytical batch 341826. This rule states that when one or more compounds in the CCV fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %D (the grand mean) of all the compounds in the CCV is less than or equal to 15%D. The grand mean of each CCV met acceptance criteria and all sample results were ND for these compounds, therefore, the data has been reported.

Method 8141B: The initial calibration verification (ICV) for 8141 exceeded control criteria for mevinphos on the back (confirmation) column. The impacted sample was ND for mevinphos and is reported from the front, in control, column. Per the laboratory SOP the ICV is acceptable if the average of the percent differences (%D) values for all of the analytes is within +/- 15% and the %D for all individual analytes is within +/- 30%. The data has been qualified and reported.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-343604 recovered outside acceptance criteria, low biased, for simazine on the back column. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported from the column in control.

Job ID: 590-4348-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 8082A: The continuing calibration verification (CCV) associated with batch 590-8331 recovered above the upper control limit for Tetrachloro-m-xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SW-1:082916 (590-4348-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 245.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 580-226414 and 580-227318.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8141B_3510C: The following sample formed emulsions during the extraction procedure: SW-1:082916 (590-4348-1). The emulsions were broken up using the pour back method on the first two spins of the extraction.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 340643.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4348-1	SW-1:082916	Water	08/29/16 16:40	08/30/16 10:27

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			09/01/16 13:34	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/01/16 13:34	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			09/01/16 13:34	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			09/01/16 13:34	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			09/01/16 13:34	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			09/01/16 13:34	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/01/16 13:34	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			09/01/16 13:34	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 13:34	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			09/01/16 13:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 13:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			09/01/16 13:34	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			09/01/16 13:34	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/01/16 13:34	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			09/01/16 13:34	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			09/01/16 13:34	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			09/01/16 13:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			09/01/16 13:34	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			09/01/16 13:34	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			09/01/16 13:34	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			09/01/16 13:34	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			09/01/16 13:34	1
2-Butanone (MEK)	ND		10	4.4	ug/L			09/01/16 13:34	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			09/01/16 13:34	1
2-Hexanone	ND		10	0.75	ug/L			09/01/16 13:34	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			09/01/16 13:34	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			09/01/16 13:34	1
Acetone	ND	*	25	4.1	ug/L			09/01/16 13:34	1
Benzene	ND		0.20	0.093	ug/L			09/01/16 13:34	1
Bromobenzene	ND		1.0	0.28	ug/L			09/01/16 13:34	1
Bromochloromethane	ND		1.0	0.44	ug/L			09/01/16 13:34	1
Bromodichloromethane	ND		1.0	0.43	ug/L			09/01/16 13:34	1
Bromoform	ND		2.0	0.80	ug/L			09/01/16 13:34	1
Bromomethane	ND		5.0	0.22	ug/L			09/01/16 13:34	1
Carbon disulfide	ND		1.0	0.052	ug/L			09/01/16 13:34	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			09/01/16 13:34	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/01/16 13:34	1
Chloroethane	ND		2.0	1.1	ug/L			09/01/16 13:34	1
Chloroform	ND		1.0	0.41	ug/L			09/01/16 13:34	1
Chloromethane	ND		3.0	0.22	ug/L			09/01/16 13:34	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			09/01/16 13:34	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			09/01/16 13:34	1
Dibromochloromethane	ND		1.0	0.35	ug/L			09/01/16 13:34	1
Dibromomethane	ND		1.0	0.50	ug/L			09/01/16 13:34	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			09/01/16 13:34	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			09/01/16 13:34	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/01/16 13:34	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			09/01/16 13:34	1
Hexane	ND		1.0	0.084	ug/L			09/01/16 13:34	1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			09/01/16 13:34	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/01/16 13:34	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			09/01/16 13:34	1
Methylene Chloride	**4.6**	**J**	5.0	3.4	ug/L			09/01/16 13:34	1
Naphthalene	ND		2.0	0.63	ug/L			09/01/16 13:34	1
n-Butylbenzene	ND		1.0	0.20	ug/L			09/01/16 13:34	1
N-Propylbenzene	ND		1.0	0.063	ug/L			09/01/16 13:34	1
o-Xylene	ND		1.0	0.16	ug/L			09/01/16 13:34	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			09/01/16 13:34	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			09/01/16 13:34	1
Styrene	ND		1.0	0.10	ug/L			09/01/16 13:34	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			09/01/16 13:34	1
Tetrachloroethene	ND		1.0	0.45	ug/L			09/01/16 13:34	1
Toluene	ND		1.0	0.31	ug/L			09/01/16 13:34	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			09/01/16 13:34	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			09/01/16 13:34	1
Trichloroethene	ND		1.0	0.44	ug/L			09/01/16 13:34	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			09/01/16 13:34	1
Vinyl chloride	ND		0.20	0.13	ug/L			09/01/16 13:34	1
Xylenes, Total	ND		3.0	0.16	ug/L			09/01/16 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 125*		*09/01/16 13:34*	*1*
4-Bromofluorobenzene (Surr)	*105*		*69 - 120*		*09/01/16 13:34*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*09/01/16 13:34*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/01/16 13:34*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			09/01/16 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*09/01/16 13:34*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
2-Chlorophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
2-Methylphenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2-Nitroaniline	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
2-Nitrophenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
3,3'-Dichlorobenzidine	ND	*	1.9	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
3-Nitroaniline	ND		0.38	0.11	ug/L		09/02/16 12:49	09/06/16 15:30	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		09/02/16 12:49	09/06/16 15:30	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
4-Nitroaniline	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
4-Nitrophenol	ND	*	2.8	0.95	ug/L		09/02/16 12:49	09/06/16 15:30	1
Acenaphthene	ND		0.095	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Acenaphthylene	ND		0.076	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Anthracene	ND		0.038	0.0095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzoic acid	ND		2.8	0.57	ug/L		09/02/16 12:49	09/06/16 15:30	1
Benzyl alcohol	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Bis(2-ethylhexyl) phthalate	ND		2.8	1.1	ug/L		09/02/16 12:49	09/06/16 15:30	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		09/02/16 12:49	09/06/16 15:30	1
Carbazole	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Chrysene	ND		0.038	0.012	ug/L		09/02/16 12:49	09/06/16 15:30	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Dibenzofuran	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Diethyl phthalate	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		09/02/16 12:49	09/06/16 15:30	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		09/02/16 12:49	09/06/16 15:30	1
Fluoranthene	ND		0.047	0.012	ug/L		09/02/16 12:49	09/06/16 15:30	1
Fluorene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Hexachloroethane	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Isophorone	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Naphthalene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Nitrobenzene	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.66	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Phenanthrene	ND		0.076	0.019	ug/L		09/02/16 12:49	09/06/16 15:30	1
Phenol	ND		0.57	0.095	ug/L		09/02/16 12:49	09/06/16 15:30	1
Pyrene	ND		0.057	0.012	ug/L		09/02/16 12:49	09/06/16 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*57 - 132*	*09/02/16 12:49*	*09/06/16 15:30*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*09/02/16 12:49*	*09/06/16 15:30*	*1*
2-Fluorophenol	*83*		*50 - 113*	*09/02/16 12:49*	*09/06/16 15:30*	*1*
Nitrobenzene-d5	*104*		*59 - 120*	*09/02/16 12:49*	*09/06/16 15:30*	*1*
Phenol-d5	*87*		*52 - 120*	*09/02/16 12:49*	*09/06/16 15:30*	*1*
Terphenyl-d14	*97*		*72 - 140*	*09/02/16 12:49*	*09/06/16 15:30*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 11:30	08/30/16 17:15	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0061	ug/L		08/31/16 10:32	08/31/16 22:51	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 22:51	1
4,4'-DDT	ND		0.030	0.0051	ug/L		08/31/16 10:32	08/31/16 22:51	1
Aldrin	ND		0.030	0.0071	ug/L		08/31/16 10:32	08/31/16 22:51	1
alpha-BHC	ND		0.030	0.0071	ug/L		08/31/16 10:32	08/31/16 22:51	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 22:51	1
beta-BHC	ND		0.051	0.012	ug/L		08/31/16 10:32	08/31/16 22:51	1
delta-BHC	ND		0.051	0.010	ug/L		08/31/16 10:32	08/31/16 22:51	1
Dieldrin	ND		0.030	0.0051	ug/L		08/31/16 10:32	08/31/16 22:51	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 22:51	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 22:51	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 22:51	1
Endrin	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 22:51	1
Endrin aldehyde	ND		0.20	0.035	ug/L		08/31/16 10:32	08/31/16 22:51	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 22:51	1
gamma-BHC (Lindane)	ND		0.030	0.0051	ug/L		08/31/16 10:32	08/31/16 22:51	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 22:51	1
Heptachlor	ND		0.020	0.0041	ug/L		08/31/16 10:32	08/31/16 22:51	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 22:51	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/31/16 10:32	08/31/16 22:51	1
Toxaphene	ND		1.0	0.22	ug/L		08/31/16 10:32	08/31/16 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*08/31/16 10:32*	*08/31/16 22:51*	*1*
Tetrachloro-m-xylene	*75*		*40 - 113*	*08/31/16 10:32*	*08/31/16 22:51*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 01:49	1
PCB-1221	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 01:49	1
PCB-1232	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 01:49	1
PCB-1242	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 01:49	1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 01:49	1
PCB-1254	ND		0.10	0.063	ug/L		08/30/16 13:27	08/31/16 01:49	1
PCB-1260	ND		0.10	0.044	ug/L		08/30/16 13:27	08/31/16 01:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*20 - 120*	*08/30/16 13:27*	*08/31/16 01:49*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*36 - 138*	*08/30/16 13:27*	*08/31/16 01:49*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		09/01/16 09:56	09/24/16 23:59	1
Azinphos-methyl	ND		2.4	0.16	ug/L		09/01/16 09:56	09/24/16 23:59	1
Bolstar	ND		0.97	0.30	ug/L		09/01/16 09:56	09/24/16 23:59	1
Chlorpyrifos	ND		1.5	0.35	ug/L		09/01/16 09:56	09/24/16 23:59	1
Coumaphos	ND		0.97	0.13	ug/L		09/01/16 09:56	09/24/16 23:59	1
Demeton, Total	ND		2.9	0.20	ug/L		09/01/16 09:56	09/24/16 23:59	1
Diazinon	ND		0.48	0.14	ug/L		09/01/16 09:56	09/24/16 23:59	1
Dichlorvos	ND		0.48	0.16	ug/L		09/01/16 09:56	09/24/16 23:59	1
Dimethoate	ND		1.5	0.43	ug/L		09/01/16 09:56	09/24/16 23:59	1
Disulfoton	ND		0.97	0.31	ug/L		09/01/16 09:56	09/24/16 23:59	1
EPN	ND		1.2	0.14	ug/L		09/01/16 09:56	09/24/16 23:59	1
Famphur	ND		0.97	0.17	ug/L		09/01/16 09:56	09/24/16 23:59	1
Fensulfothion	ND		2.4	0.53	ug/L		09/01/16 09:56	09/24/16 23:59	1
Fenthion	ND		2.4	0.15	ug/L		09/01/16 09:56	09/24/16 23:59	1
Malathion	ND		1.9	0.13	ug/L		09/01/16 09:56	09/24/16 23:59	1
Merphos	ND		4.8	0.17	ug/L		09/01/16 09:56	09/24/16 23:59	1
Methyl parathion	ND		3.9	0.14	ug/L		09/01/16 09:56	09/24/16 23:59	1
Mevinphos	ND		6.0	0.44	ug/L		09/01/16 09:56	09/24/16 23:59	1
Ethyl Parathion	ND		0.97	0.14	ug/L		09/01/16 09:56	09/24/16 23:59	1
Phorate	ND		1.2	0.15	ug/L		09/01/16 09:56	09/24/16 23:59	1
Ronnel	ND		9.7	0.11	ug/L		09/01/16 09:56	09/24/16 23:59	1
Simazine	ND		9.7	0.22	ug/L		09/01/16 09:56	09/24/16 23:59	1
Sulfotepp	ND		1.5	0.16	ug/L		09/01/16 09:56	09/24/16 23:59	1
Thionazin	ND		0.97	0.30	ug/L		09/01/16 09:56	09/24/16 23:59	1
Tokuthion	ND		1.5	0.12	ug/L		09/01/16 09:56	09/24/16 23:59	1
Trichloronate	ND		1.5	0.23	ug/L		09/01/16 09:56	09/24/16 23:59	1
Ethoprop	ND		1.5	0.17	ug/L		09/01/16 09:56	09/24/16 23:59	1
Propazine	ND		9.7	0.28	ug/L		09/01/16 09:56	09/24/16 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*57*		*49 - 171*	*09/01/16 09:56*	*09/24/16 23:59*	*1*
Triphenylphosphate	*90*		*60 - 154*	*09/01/16 09:56*	*09/24/16 23:59*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		09/02/16 09:19	09/14/16 19:40	1
2,4-D	ND		3.8	0.20	ug/L		09/02/16 09:19	09/14/16 19:40	1
2,4-DB	ND		3.8	0.34	ug/L		09/02/16 09:19	09/14/16 19:40	1
Dalapon	ND		1.9	0.86	ug/L		09/02/16 09:19	09/14/16 19:40	1
Dicamba	ND		1.9	0.14	ug/L		09/02/16 09:19	09/14/16 19:40	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		09/02/16 09:19	09/14/16 19:40	1
MCPA	ND		380	16	ug/L		09/02/16 09:19	09/14/16 19:40	1
MCPP	ND		380	31	ug/L		09/02/16 09:19	09/14/16 19:40	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		09/02/16 09:19	09/14/16 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*85*		*39 - 135*	*09/02/16 09:19*	*09/14/16 19:40*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.14	0.045	mg/L		09/06/16 09:00	09/06/16 12:56	1
Residual Range Organics (RRO) (C25-C36)	ND		0.23	0.068	mg/L		09/06/16 09:00	09/06/16 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*09/06/16 09:00*	*09/06/16 12:56*	*1*
n-Triacontane-d62	*84*		*50 - 150*	*09/06/16 09:00*	*09/06/16 12:56*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45**		0.80	0.42	mg/L			08/30/16 11:39	1
Nitrate as N	**0.26**		0.20	0.039	mg/L			08/30/16 11:39	1
Nitrite as N	ND		0.20	0.069	mg/L			08/30/16 11:39	1
Sulfate	**23**		0.50	0.13	mg/L			08/30/16 11:39	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		09/01/16 15:12	09/02/16 14:22	1
Antimony	**0.00012**	**J B**	0.00040	0.000080	mg/L		09/01/16 15:12	09/02/16 14:22	1
Barium	**0.050**	**B**	0.0012	0.000054	mg/L		09/01/16 15:12	09/02/16 14:22	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 15:12	09/02/16 14:22	1
Cadmium	**0.000051**	**J B**	0.00040	0.000028	mg/L		09/01/16 15:12	09/02/16 14:22	1
Chromium	**0.00082**		0.00040	0.00014	mg/L		09/01/16 15:12	09/02/16 14:22	1
Copper	**0.0011**	**J**	0.0020	0.00060	mg/L		09/01/16 15:12	09/02/16 14:22	1
Iron	**0.018**	**J**	0.040	0.0058	mg/L		09/01/16 15:12	09/02/16 14:22	1
Lead	**0.000082**	**J B**	0.00040	0.000034	mg/L		09/01/16 15:12	09/02/16 14:22	1
Manganese	**0.0012**	**J**	0.0020	0.00035	mg/L		09/01/16 15:12	09/02/16 14:22	1
Nickel	ND		0.0030	0.00040	mg/L		09/01/16 15:12	09/02/16 14:22	1
Selenium	ND		0.0010	0.00030	mg/L		09/01/16 15:12	09/02/16 14:22	1
Silver	**0.000031**	**J B**	0.00040	0.000030	mg/L		09/01/16 15:12	09/02/16 14:22	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 15:12	09/02/16 14:22	1
Vanadium	**0.0053**		0.0040	0.00098	mg/L		09/01/16 15:12	09/02/16 14:22	1
Zinc	ND		0.0070	0.0019	mg/L		09/01/16 15:12	09/02/16 14:22	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		09/07/16 17:02	09/08/16 13:35	1
Antimony	ND		0.00040	0.000080	mg/L		09/07/16 17:02	09/08/16 13:35	1
Barium	**0.045**		0.0012	0.000054	mg/L		09/07/16 17:02	09/08/16 13:35	1
Beryllium	ND		0.00040	0.00010	mg/L		09/07/16 17:02	09/08/16 13:35	1

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000032	J	0.00040	0.000028	mg/L		09/07/16 17:02	09/08/16 13:35	1
Chromium	0.00027	J	0.00040	0.00014	mg/L		09/07/16 17:02	09/08/16 13:35	1
Copper	0.00093	J	0.0020	0.00060	mg/L		09/07/16 17:02	09/08/16 13:35	1
Iron	ND		0.040	0.0058	mg/L		09/07/16 17:02	09/08/16 13:35	1
Lead	ND		0.00040	0.000034	mg/L		09/07/16 17:02	09/08/16 13:35	1
Manganese	0.0010	J	0.0020	0.00035	mg/L		09/07/16 17:02	09/08/16 13:35	1
Nickel	ND		0.0030	0.00040	mg/L		09/07/16 17:02	09/08/16 13:35	1
Selenium	ND		0.0010	0.00030	mg/L		09/07/16 17:02	09/08/16 13:35	1
Silver	ND		0.00040	0.000030	mg/L		09/07/16 17:02	09/08/16 13:35	1
Thallium	ND		0.0010	0.00014	mg/L		09/07/16 17:02	09/08/16 13:35	1
Vanadium	0.0058		0.0040	0.00098	mg/L		09/07/16 17:02	09/08/16 13:35	1
Zinc	0.0024	J	0.0070	0.0019	mg/L		09/07/16 17:02	09/08/16 13:35	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000065	J B	0.00020	0.000041	mg/L		09/13/16 09:23	09/13/16 13:03	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000060	J B	0.00020	0.000041	mg/L		09/13/16 09:45	09/13/16 12:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/12/16 07:30	09/12/16 08:30	1
Ammonia (as N)	0.075	J	0.10	0.060	mg/L		09/01/16 10:29	09/02/16 11:33	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			09/01/16 17:43	1
Total Organic Carbon	2.2		1.0	0.50	mg/L			09/07/16 15:23	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	1600				MPN/100mL			08/30/16 11:30	1
Escherichia coli	4.0				MPN/100mL			08/30/16 11:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-8354/5
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			09/01/16 11:25	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/01/16 11:25	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			09/01/16 11:25	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			09/01/16 11:25	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			09/01/16 11:25	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			09/01/16 11:25	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 11:25	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			09/01/16 11:25	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			09/01/16 11:25	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			09/01/16 11:25	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/01/16 11:25	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			09/01/16 11:25	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			09/01/16 11:25	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			09/01/16 11:25	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			09/01/16 11:25	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			09/01/16 11:25	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			09/01/16 11:25	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			09/01/16 11:25	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			09/01/16 11:25	1
2-Butanone (MEK)	ND		10	4.4	ug/L			09/01/16 11:25	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			09/01/16 11:25	1
2-Hexanone	ND		10	0.75	ug/L			09/01/16 11:25	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			09/01/16 11:25	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			09/01/16 11:25	1
Acetone	8.91	J	25	4.1	ug/L			09/01/16 11:25	1
Benzene	ND		0.20	0.093	ug/L			09/01/16 11:25	1
Bromobenzene	ND		1.0	0.28	ug/L			09/01/16 11:25	1
Bromochloromethane	ND		1.0	0.44	ug/L			09/01/16 11:25	1
Bromodichloromethane	ND		1.0	0.43	ug/L			09/01/16 11:25	1
Bromoform	ND		2.0	0.80	ug/L			09/01/16 11:25	1
Bromomethane	ND		5.0	0.22	ug/L			09/01/16 11:25	1
Carbon disulfide	ND		1.0	0.052	ug/L			09/01/16 11:25	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			09/01/16 11:25	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/01/16 11:25	1
Chloroethane	ND		2.0	1.1	ug/L			09/01/16 11:25	1
Chloroform	ND		1.0	0.41	ug/L			09/01/16 11:25	1
Chloromethane	ND		3.0	0.22	ug/L			09/01/16 11:25	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			09/01/16 11:25	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			09/01/16 11:25	1
Dibromochloromethane	ND		1.0	0.35	ug/L			09/01/16 11:25	1
Dibromomethane	ND		1.0	0.50	ug/L			09/01/16 11:25	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			09/01/16 11:25	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			09/01/16 11:25	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/01/16 11:25	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			09/01/16 11:25	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-8354/5
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			09/01/16 11:25	1
Isopropylbenzene	ND		1.0	0.063	ug/L			09/01/16 11:25	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/01/16 11:25	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			09/01/16 11:25	1
Methylene Chloride	ND		5.0	3.4	ug/L			09/01/16 11:25	1
Naphthalene	ND		2.0	0.63	ug/L			09/01/16 11:25	1
n-Butylbenzene	ND		1.0	0.20	ug/L			09/01/16 11:25	1
N-Propylbenzene	ND		1.0	0.063	ug/L			09/01/16 11:25	1
o-Xylene	ND		1.0	0.16	ug/L			09/01/16 11:25	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			09/01/16 11:25	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			09/01/16 11:25	1
Styrene	ND		1.0	0.10	ug/L			09/01/16 11:25	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			09/01/16 11:25	1
Tetrachloroethene	ND		1.0	0.45	ug/L			09/01/16 11:25	1
Toluene	ND		1.0	0.31	ug/L			09/01/16 11:25	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			09/01/16 11:25	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			09/01/16 11:25	1
Trichloroethene	ND		1.0	0.44	ug/L			09/01/16 11:25	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			09/01/16 11:25	1
Vinyl chloride	ND		0.20	0.13	ug/L			09/01/16 11:25	1
Xylenes, Total	ND		3.0	0.16	ug/L			09/01/16 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*09/01/16 11:25*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*09/01/16 11:25*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*09/01/16 11:25*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*09/01/16 11:25*	*1*

Lab Sample ID: LCS 590-8354/1004
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.1		ug/L		101	75 - 124
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.5		ug/L		105	66 - 122
1,1,2-Trichloroethane	10.0	9.64		ug/L		96	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	12.1		ug/L		121	70 - 127
1,1-Dichloroethane	10.0	10.2		ug/L		102	79 - 121
1,1-Dichloroethene	10.0	10.3		ug/L		103	69 - 127
1,1-Dichloropropene	10.0	10.3		ug/L		103	76 - 125
1,2,3-Trichlorobenzene	10.0	10.9		ug/L		109	60 - 125
1,2,3-Trichloropropane	10.0	10.0		ug/L		100	60 - 124
1,2,4-Trichlorobenzene	10.0	10.3		ug/L		103	66 - 124
1,2,4-Trimethylbenzene	10.0	10.6		ug/L		106	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.36	J	ug/L		84	36 - 140
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8354/1004
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.7		ug/L		107	76 - 121
1,3,5-Trimethylbenzene	10.0	11.0		ug/L		110	75 - 122
1,3-Dichlorobenzene	10.0	10.1		ug/L		101	77 - 120
1,3-Dichloropropane	10.0	9.90		ug/L		99	75 - 120
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	77 - 121
2,2-Dichloropropane	10.0	11.3		ug/L		113	49 - 147
2-Butanone (MEK)	50.0	59.8		ug/L		120	40 - 150
2-Chlorotoluene	10.0	10.5		ug/L		105	75 - 121
2-Hexanone	50.0	56.2		ug/L		112	46 - 146
4-Chlorotoluene	10.0	10.4		ug/L		104	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	49.1		ug/L		98	60 - 127
Acetone	50.0	88.2	*	ug/L		176	20 - 150
Benzene	10.0	10.7		ug/L		107	80 - 120
Bromobenzene	10.0	10.4		ug/L		104	74 - 121
Bromochloromethane	10.0	10.2		ug/L		102	70 - 126
Bromodichloromethane	10.0	10.1		ug/L		101	67 - 125
Bromoform	10.0	9.17		ug/L		92	60 - 122
Bromomethane	10.0	11.1		ug/L		111	45 - 150
Carbon disulfide	10.0	11.2		ug/L		112	67 - 129
Carbon tetrachloride	10.0	10.9		ug/L		109	68 - 134
Chlorobenzene	10.0	10.4		ug/L		104	79 - 125
Chloroethane	10.0	11.0		ug/L		110	48 - 150
Chloroform	10.0	10.3		ug/L		103	73 - 126
Chloromethane	10.0	10.6		ug/L		106	51 - 150
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	76 - 121
cis-1,3-Dichloropropene	10.0	9.79		ug/L		98	72 - 120
Dibromochloromethane	10.0	9.15		ug/L		92	72 - 120
Dibromomethane	10.0	9.61		ug/L		96	71 - 120
Dichlorodifluoromethane	10.0	11.2		ug/L		112	32 - 150
Dichlorofluoromethane	10.0	10.8		ug/L		108	60 - 140
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120
Hexachlorobutadiene	10.0	10.1		ug/L		101	62 - 132
Hexane	10.0	11.1		ug/L		111	68 - 125
Isopropylbenzene	10.0	10.9		ug/L		109	77 - 123
m,p-Xylene	10.0	10.6		ug/L		106	80 - 120
Methyl tert-butyl ether	10.0	10.8		ug/L		108	71 - 128
Methylene Chloride	10.0	11.7		ug/L		117	20 - 150
Naphthalene	10.0	10.5		ug/L		105	63 - 124
n-Butylbenzene	10.0	10.4		ug/L		104	71 - 120
N-Propylbenzene	10.0	10.7		ug/L		107	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	11.1		ug/L		111	77 - 120
sec-Butylbenzene	10.0	10.7		ug/L		107	74 - 121
Styrene	10.0	9.65		ug/L		96	73 - 120
tert-Butylbenzene	10.0	10.7		ug/L		107	79 - 120
Tetrachloroethene	10.0	9.97		ug/L		100	71 - 132
Toluene	10.0	10.5		ug/L		105	80 - 123
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-8354/1004
Matrix: Water
Analysis Batch: 8354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	9.36		ug/L		94	70 - 121
Trichloroethene	10.0	9.99		ug/L		100	75 - 129
Trichlorofluoromethane	10.0	11.1		ug/L		111	60 - 140
Vinyl chloride	10.0	10.3		ug/L		103	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: 590-4348-1 MS
Matrix: Water
Analysis Batch: 8354

Client Sample ID: SW-1:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.58		ug/L		96	50 - 150
1,1,1-Trichloroethane	ND		10.0	11.1		ug/L		111	50 - 150
1,1,2,2-Tetrachloroethane	ND		10.0	10.5		ug/L		105	50 - 150
1,1,2-Trichloroethane	ND		10.0	9.13		ug/L		91	50 - 150
1,1,2-Trichlorotrifluoroethane	ND		10.0	13.6		ug/L		136	50 - 150
1,1-Dichloroethane	ND		10.0	10.7		ug/L		107	50 - 150
1,1-Dichloroethene	ND		10.0	11.1		ug/L		111	50 - 150
1,1-Dichloropropene	ND		10.0	11.0		ug/L		110	50 - 150
1,2,3-Trichlorobenzene	ND		10.0	9.06		ug/L		91	50 - 150
1,2,3-Trichloropropane	ND		10.0	8.82		ug/L		88	50 - 150
1,2,4-Trichlorobenzene	ND		10.0	9.37		ug/L		94	50 - 150
1,2,4-Trimethylbenzene	ND		10.0	10.9		ug/L		109	50 - 150
1,2-Dibromo-3-Chloropropane	ND		10.0	8.32	J	ug/L		83	50 - 150
1,2-Dichlorobenzene	ND		10.0	10.1		ug/L		101	50 - 150
1,2-Dichloroethane	ND		10.0	10.2		ug/L		102	50 - 150
1,2-Dichloropropane	ND		10.0	10.2		ug/L		102	50 - 150
1,3,5-Trimethylbenzene	ND		10.0	10.7		ug/L		107	50 - 150
1,3-Dichlorobenzene	ND		10.0	10.0		ug/L		100	50 - 150
1,3-Dichloropropane	ND		10.0	9.06		ug/L		91	50 - 150
1,4-Dichlorobenzene	ND		10.0	10.3		ug/L		103	50 - 150
2,2-Dichloropropane	ND		10.0	11.9		ug/L		119	50 - 150
2-Butanone (MEK)	ND		50.0	52.8		ug/L		106	50 - 150
2-Chlorotoluene	ND		10.0	11.1		ug/L		111	50 - 150
2-Hexanone	ND		50.0	45.0		ug/L		90	50 - 150
4-Chlorotoluene	ND		10.0	11.1		ug/L		111	50 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	43.7		ug/L		87	50 - 150
Acetone	ND	*	50.0	63.7		ug/L		127	50 - 150
Benzene	ND		10.0	10.9		ug/L		109	50 - 150
Bromobenzene	ND		10.0	10.9		ug/L		109	50 - 150
Bromochloromethane	ND		10.0	10.4		ug/L		104	50 - 150
Bromodichloromethane	ND		10.0	10.1		ug/L		101	50 - 150
Bromoform	ND		10.0	8.13		ug/L		81	50 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 590-4348-1 MS
Matrix: Water
Analysis Batch: 8354

Client Sample ID: SW-1:082916
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	ND		10.0	11.5		ug/L		115	50 - 150
Carbon disulfide	ND		10.0	8.91		ug/L		89	50 - 150
Carbon tetrachloride	ND		10.0	10.8		ug/L		108	50 - 150
Chlorobenzene	ND		10.0	10.1		ug/L		101	50 - 150
Chloroethane	ND		10.0	11.4		ug/L		114	50 - 150
Chloroform	ND		10.0	10.6		ug/L		106	50 - 150
Chloromethane	ND		10.0	10.9		ug/L		109	50 - 150
cis-1,2-Dichloroethene	ND		10.0	10.3		ug/L		103	50 - 150
cis-1,3-Dichloropropene	ND		10.0	9.37		ug/L		94	50 - 150
Dibromochloromethane	ND		10.0	8.30		ug/L		83	50 - 150
Dibromomethane	ND		10.0	9.70		ug/L		97	50 - 150
Dichlorodifluoromethane	ND		10.0	11.6		ug/L		116	50 - 150
Dichlorofluoromethane	ND		10.0	11.4		ug/L		114	50 - 150
Ethylbenzene	ND		10.0	10.3		ug/L		103	50 - 150
Hexachlorobutadiene	ND		10.0	9.47		ug/L		95	50 - 150
Hexane	ND		10.0	10.7		ug/L		107	50 - 150
Isopropylbenzene	ND		10.0	10.3		ug/L		103	50 - 150
m,p-Xylene	ND		10.0	10.2		ug/L		102	50 - 150
Methyl tert-butyl ether	ND		10.0	10.0		ug/L		100	50 - 150
Methylene Chloride	4.6	J	10.0	16.6		ug/L		120	50 - 150
Naphthalene	ND		10.0	9.06		ug/L		91	50 - 150
n-Butylbenzene	ND		10.0	10.3		ug/L		103	50 - 150
N-Propylbenzene	ND		10.0	11.2		ug/L		112	50 - 150
o-Xylene	ND		10.0	10.1		ug/L		101	50 - 150
p-Isopropyltoluene	ND		10.0	11.0		ug/L		110	50 - 150
sec-Butylbenzene	ND		10.0	11.3		ug/L		113	50 - 150
Styrene	ND		10.0	8.96		ug/L		90	50 - 150
tert-Butylbenzene	ND		10.0	11.5		ug/L		115	50 - 150
Tetrachloroethene	ND		10.0	10.2		ug/L		102	50 - 150
Toluene	ND		10.0	10.6		ug/L		106	50 - 150
trans-1,2-Dichloroethene	ND		10.0	11.1		ug/L		111	50 - 150
trans-1,3-Dichloropropene	ND		10.0	9.23		ug/L		92	50 - 150
Trichloroethene	ND		10.0	10.4		ug/L		104	50 - 150
Trichlorofluoromethane	ND		10.0	11.8		ug/L		118	50 - 150
Vinyl chloride	ND		10.0	10.9		ug/L		109	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-8355/5
Matrix: Water
Analysis Batch: 8355

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			09/01/16 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*09/01/16 11:25*	*1*

Lab Sample ID: LCS 590-8355/1003
Matrix: Water
Analysis Batch: 8355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			998	1080		ug/L		109	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-226610/1-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Methylphenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		09/02/16 12:49	09/06/16 14:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226610/1-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		09/02/16 12:49	09/06/16 14:12	1
Acenaphthene	ND		0.10	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Anthracene	ND		0.040	0.010	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzoic acid	ND		3.0	0.60	ug/L		09/02/16 12:49	09/06/16 14:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		09/02/16 12:49	09/06/16 14:12	1
Butyl benzyl phthalate	0.510	J	0.60	0.20	ug/L		09/02/16 12:49	09/06/16 14:12	1
Carbazole	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Chrysene	ND		0.040	0.013	ug/L		09/02/16 12:49	09/06/16 14:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Di-n-butyl phthalate	0.256	J	0.40	0.13	ug/L		09/02/16 12:49	09/06/16 14:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		09/02/16 12:49	09/06/16 14:12	1
Fluoranthene	ND		0.050	0.013	ug/L		09/02/16 12:49	09/06/16 14:12	1
Fluorene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Isophorone	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Naphthalene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Pentachlorophenol	ND		0.70	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Phenanthrene	ND		0.080	0.020	ug/L		09/02/16 12:49	09/06/16 14:12	1
Phenol	ND		0.60	0.10	ug/L		09/02/16 12:49	09/06/16 14:12	1
Pyrene	ND		0.060	0.013	ug/L		09/02/16 12:49	09/06/16 14:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*73*		*57 - 132*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
2-Fluorobiphenyl	*66*		*50 - 120*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
2-Fluorophenol	*62*		*50 - 113*	*09/02/16 12:49*	*09/06/16 14:12*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*09/02/16 12:49*	*09/06/16 14:12*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-226610/1-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226610

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5	69		52 - 120	09/02/16 12:49	09/06/16 14:12	1
Terphenyl-d14	80		72 - 140	09/02/16 12:49	09/06/16 14:12	1

Lab Sample ID: LCS 580-226610/2-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.59		ug/L		79	40 - 115
1,2-Dichlorobenzene	2.00	1.53		ug/L		76	44 - 119
1,3-Dichlorobenzene	2.00	1.41		ug/L		71	34 - 116
1,4-Dichlorobenzene	2.00	1.35		ug/L		68	40 - 118
1-Methylnaphthalene	2.00	1.65		ug/L		83	54 - 119
2,4,5-Trichlorophenol	2.00	1.66		ug/L		83	56 - 122
2,4,6-Trichlorophenol	2.00	1.53		ug/L		76	55 - 134
2,4-Dichlorophenol	2.00	1.67		ug/L		84	50 - 125
2,4-Dimethylphenol	2.00	1.41	J	ug/L		70	20 - 106
2,4-Dinitrophenol	4.00	2.40	J	ug/L		60	24 - 139
2,4-Dinitrotoluene	2.00	1.80		ug/L		90	40 - 143
2,6-Dinitrotoluene	2.00	1.75		ug/L		88	45 - 134
2-Chloronaphthalene	2.00	1.68		ug/L		84	55 - 125
2-Chlorophenol	2.00	1.73		ug/L		86	57 - 125
2-Methylnaphthalene	2.00	1.64		ug/L		82	56 - 117
2-Methylphenol	2.00	1.50		ug/L		75	53 - 118
2-Nitroaniline	2.00	1.96		ug/L		98	58 - 124
2-Nitrophenol	2.00	1.70		ug/L		85	20 - 150
3 & 4 Methylphenol	2.00	1.54		ug/L		77	54 - 112
3,3'-Dichlorobenzidine	4.00	1.17	J	ug/L		29	20 - 121
3-Nitroaniline	2.00	1.24		ug/L		62	22 - 124
4,6-Dinitro-2-methylphenol	4.00	2.80	J	ug/L		70	20 - 150
4-Bromophenyl phenyl ether	2.00	1.81		ug/L		90	62 - 132
4-Chloro-3-methylphenol	2.00	1.70		ug/L		85	56 - 133
4-Chloroaniline	2.00	0.332	J *	ug/L		17	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.53		ug/L		77	59 - 125
4-Nitroaniline	2.00	1.43		ug/L		72	40 - 118
4-Nitrophenol	4.00	1.77	J	ug/L		44	20 - 150
Acenaphthene	2.00	1.46		ug/L		73	55 - 113
Acenaphthylene	2.00	1.49		ug/L		74	24 - 135
Anthracene	2.00	1.10		ug/L		55	20 - 125
Benzo[a]anthracene	2.00	1.77		ug/L		89	49 - 115
Benzo[a]pyrene	2.00	1.04		ug/L		52	20 - 115
Benzo[b]fluoranthene	2.00	1.76		ug/L		88	63 - 129
Benzo[g,h,i]perylene	2.00	1.78		ug/L		89	58 - 127
Benzo[k]fluoranthene	2.00	1.72		ug/L		86	60 - 134
Benzoic acid	4.00	3.92		ug/L		98	20 - 150
Benzyl alcohol	2.00	1.63		ug/L		82	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.51		ug/L		76	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.67		ug/L		84	59 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-226610/2-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	2.00	1.67		ug/L		84	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.27	J	ug/L		114	22 - 150
Butyl benzyl phthalate	2.00	2.64		ug/L		132	46 - 150
Carbazole	2.00	1.92		ug/L		96	68 - 142
Chrysene	2.00	1.83		ug/L		92	57 - 131
Dibenz(a,h)anthracene	2.00	1.59		ug/L		79	56 - 124
Dibenzofuran	2.00	1.64		ug/L		82	60 - 125
Diethyl phthalate	2.00	1.59		ug/L		79	60 - 134
Dimethyl phthalate	2.00	1.85		ug/L		92	65 - 134
Di-n-butyl phthalate	2.00	2.10		ug/L		105	67 - 140
Di-n-octyl phthalate	2.00	2.01		ug/L		100	55 - 150
Fluoranthene	2.00	1.87		ug/L		94	70 - 135
Fluorene	2.00	1.61		ug/L		80	57 - 125
Hexachlorobenzene	2.00	1.58		ug/L		79	55 - 135
Hexachlorobutadiene	2.00	1.40		ug/L		70	25 - 125
Hexachlorocyclopentadiene	2.00	0.661	J	ug/L		33	20 - 110
Hexachloroethane	2.00	1.33		ug/L		67	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.79		ug/L		90	54 - 124
Isophorone	2.00	1.68		ug/L		84	64 - 125
Naphthalene	2.00	1.59		ug/L		80	56 - 119
Nitrobenzene	2.00	1.68		ug/L		84	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.70		ug/L		85	54 - 120
N-Nitrosodiphenylamine	2.00	1.30		ug/L		65	40 - 124
Pentachlorophenol	4.00	2.24		ug/L		56	30 - 122
Phenanthrene	2.00	1.68		ug/L		84	57 - 125
Phenol	2.00	1.48		ug/L		74	53 - 113
Pyrene	2.00	1.64		ug/L		82	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*86*		*57 - 132*
2-Fluorobiphenyl	*73*		*50 - 120*
2-Fluorophenol	*72*		*50 - 113*
Nitrobenzene-d5	*87*		*59 - 120*
Phenol-d5	*74*		*52 - 120*
Terphenyl-d14	*82*		*72 - 140*

Lab Sample ID: LCSD 580-226610/3-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.69		ug/L		85	40 - 115	6	20
1,2-Dichlorobenzene	2.00	1.65		ug/L		82	44 - 119	8	20
1,3-Dichlorobenzene	2.00	1.61		ug/L		80	34 - 116	13	29
1,4-Dichlorobenzene	2.00	1.54		ug/L		77	40 - 118	13	20
1-Methylnaphthalene	2.00	1.63		ug/L		82	54 - 119	1	20
2,4,5-Trichlorophenol	2.00	1.77		ug/L		89	56 - 122	6	20
2,4,6-Trichlorophenol	2.00	1.55		ug/L		77	55 - 134	1	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226610/3-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dichlorophenol	2.00	1.74		ug/L		87	50 - 125	4	26
2,4-Dimethylphenol	2.00	1.46	J	ug/L		73	20 - 106	3	35
2,4-Dinitrophenol	4.00	2.41	J	ug/L		60	24 - 139	0	35
2,4-Dinitrotoluene	2.00	1.78		ug/L		89	40 - 143	1	29
2,6-Dinitrotoluene	2.00	1.79		ug/L		90	45 - 134	2	31
2-Chloronaphthalene	2.00	1.68		ug/L		84	55 - 125	0	20
2-Chlorophenol	2.00	1.75		ug/L		87	57 - 125	1	20
2-Methylnaphthalene	2.00	1.65		ug/L		82	56 - 117	0	20
2-Methylphenol	2.00	1.50		ug/L		75	53 - 118	0	33
2-Nitroaniline	2.00	1.90		ug/L		95	58 - 124	3	20
2-Nitrophenol	2.00	1.69		ug/L		84	20 - 150	1	35
3 & 4 Methylphenol	2.00	1.59		ug/L		79	54 - 112	3	20
3,3'-Dichlorobenzidine	4.00	2.06	*	ug/L		52	20 - 121	56	35
3-Nitroaniline	2.00	1.31		ug/L		66	22 - 124	6	35
4,6-Dinitro-2-methylphenol	4.00	3.08	J	ug/L		77	20 - 150	10	30
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	62 - 132	1	20
4-Chloro-3-methylphenol	2.00	1.65		ug/L		82	56 - 133	3	20
4-Chloroaniline	2.00	0.492	*	ug/L		25	20 - 110	39	35
4-Chlorophenyl phenyl ether	2.00	1.57		ug/L		79	59 - 125	3	20
4-Nitroaniline	2.00	1.38		ug/L		69	40 - 118	4	20
4-Nitrophenol	4.00	2.53	J *	ug/L		63	20 - 150	35	29
Acenaphthene	2.00	1.50		ug/L		75	55 - 113	3	20
Acenaphthylene	2.00	1.53		ug/L		77	24 - 135	3	20
Anthracene	2.00	1.24		ug/L		62	20 - 125	12	26
Benzo[a]anthracene	2.00	1.70		ug/L		85	49 - 115	4	20
Benzo[a]pyrene	2.00	1.17		ug/L		58	20 - 115	11	35
Benzo[b]fluoranthene	2.00	1.83		ug/L		91	63 - 129	4	20
Benzo[g,h,i]perylene	2.00	1.75		ug/L		87	58 - 127	2	20
Benzo[k]fluoranthene	2.00	1.60		ug/L		80	60 - 134	7	20
Benzoic acid	4.00	3.85		ug/L		96	20 - 150	2	35
Benzyl alcohol	2.00	1.58		ug/L		79	52 - 124	3	20
bis (2-chloroisopropyl) ether	2.00	1.54		ug/L		77	44 - 123	2	20
Bis(2-chloroethoxy)methane	2.00	1.74		ug/L		87	59 - 125	4	20
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	55 - 125	1	20
Bis(2-ethylhexyl) phthalate	2.00	2.50	J	ug/L		125	22 - 150	9	20
Butyl benzyl phthalate	2.00	2.56		ug/L		128	46 - 150	3	20
Carbazole	2.00	1.98		ug/L		99	68 - 142	3	20
Chrysene	2.00	1.75		ug/L		87	57 - 131	5	20
Dibenz(a,h)anthracene	2.00	1.73		ug/L		87	56 - 124	9	20
Dibenzofuran	2.00	1.65		ug/L		82	60 - 125	0	20
Diethyl phthalate	2.00	1.57		ug/L		78	60 - 134	1	20
Dimethyl phthalate	2.00	1.84		ug/L		92	65 - 134	0	20
Di-n-butyl phthalate	2.00	2.13		ug/L		107	67 - 140	1	20
Di-n-octyl phthalate	2.00	1.98		ug/L		99	55 - 150	1	20
Fluoranthene	2.00	1.95		ug/L		97	70 - 135	4	20
Fluorene	2.00	1.62		ug/L		81	57 - 125	1	20
Hexachlorobenzene	2.00	1.63		ug/L		82	55 - 135	3	20
Hexachlorobutadiene	2.00	1.62		ug/L		81	25 - 125	14	31

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-226610/3-A
Matrix: Water
Analysis Batch: 226767

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorocyclopentadiene			2.00	0.781	J	ug/L		39	20 - 110	17	35
Hexachloroethane			2.00	1.58		ug/L		79	24 - 125	17	35
Indeno[1,2,3-cd]pyrene			2.00	1.88		ug/L		94	54 - 124	5	20
Isophorone			2.00	1.69		ug/L		84	64 - 125	0	20
Naphthalene			2.00	1.64		ug/L		82	56 - 119	3	20
Nitrobenzene			2.00	1.73		ug/L		86	62 - 125	3	20
N-Nitrosodi-n-propylamine			2.00	1.72		ug/L		86	54 - 120	1	20
N-Nitrosodiphenylamine			2.00	1.41		ug/L		70	40 - 124	8	20
Pentachlorophenol			4.00	2.07		ug/L		52	30 - 122	8	35
Phenanthrene			2.00	1.73		ug/L		86	57 - 125	3	20
Phenol			2.00	1.52		ug/L		76	53 - 113	3	20
Pyrene			2.00	1.71		ug/L		85	64 - 128	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*86*		*57 - 132*
2-Fluorobiphenyl	*73*		*50 - 120*
2-Fluorophenol	*68*		*50 - 113*
Nitrobenzene-d5	*89*		*59 - 120*
Phenol-d5	*76*		*52 - 120*
Terphenyl-d14	*82*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-8317/2-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		08/30/16 09:37	08/30/16 11:12	1

Lab Sample ID: LCS 590-8317/3-A
Matrix: Water
Analysis Batch: 8316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8317

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.125	0.135		ug/L		108	60 - 140		

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-226346/1-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		08/31/16 10:32	08/31/16 20:36	1
4,4'-DDE	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
4,4'-DDT	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
Aldrin	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 20:36	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-226346/1-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.030	0.0070	ug/L		08/31/16 10:32	08/31/16 20:36	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
beta-BHC	ND		0.050	0.012	ug/L		08/31/16 10:32	08/31/16 20:36	1
delta-BHC	ND		0.050	0.010	ug/L		08/31/16 10:32	08/31/16 20:36	1
Dieldrin	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan I	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan II	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin aldehyde	ND		0.20	0.034	ug/L		08/31/16 10:32	08/31/16 20:36	1
Endrin ketone	ND		0.020	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		08/31/16 10:32	08/31/16 20:36	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Heptachlor	ND		0.020	0.0040	ug/L		08/31/16 10:32	08/31/16 20:36	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		08/31/16 10:32	08/31/16 20:36	1
Methoxychlor	ND		0.10	0.0020	ug/L		08/31/16 10:32	08/31/16 20:36	1
Toxaphene	ND		1.0	0.22	ug/L		08/31/16 10:32	08/31/16 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*67*		*22 - 150*	*08/31/16 10:32*	*08/31/16 20:36*	*1*
Tetrachloro-m-xylene	*71*		*40 - 113*	*08/31/16 10:32*	*08/31/16 20:36*	*1*

Lab Sample ID: LCS 580-226346/2-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.148		ug/L		74	32 - 133
4,4'-DDE	0.200	0.146		ug/L		73	30 - 138
4,4'-DDT	0.200	0.162		ug/L		81	34 - 131
Aldrin	0.200	0.143		ug/L		71	35 - 124
alpha-BHC	0.200	0.145		ug/L		73	39 - 126
alpha-Chlordane	0.200	0.139		ug/L		69	37 - 133
beta-BHC	0.200	0.140		ug/L		70	38 - 114
delta-BHC	0.200	0.140		ug/L		70	20 - 138
Dieldrin	0.200	0.145		ug/L		73	39 - 140
Endosulfan I	0.200	0.146		ug/L		73	23 - 142
Endosulfan II	0.200	0.147		ug/L		74	20 - 150
Endosulfan sulfate	0.200	0.143		ug/L		71	36 - 130
Endrin	0.200	0.180		ug/L		90	32 - 130
Endrin aldehyde	0.200	0.201		ug/L		100	37 - 139
Endrin ketone	0.200	0.141		ug/L		71	32 - 136
gamma-BHC (Lindane)	0.200	0.137		ug/L		69	40 - 121
gamma-Chlordane	0.200	0.141		ug/L		71	38 - 136
Heptachlor	0.200	0.148		ug/L		74	39 - 129
Heptachlor epoxide	0.200	0.139		ug/L		70	34 - 135
Methoxychlor	0.200	0.172		ug/L		86	33 - 139

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-226346/2-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226346

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*84*		*22 - 150*
Tetrachloro-m-xylene	*79*		*40 - 113*

Lab Sample ID: LCSD 580-226346/3-A
Matrix: Water
Analysis Batch: 226447

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226346

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.165		ug/L		83	32 - 133	11	35
4,4'-DDE			0.200	0.162		ug/L		81	30 - 138	10	35
4,4'-DDT			0.200	0.180		ug/L		90	34 - 131	11	35
Aldrin			0.200	0.158		ug/L		79	35 - 124	10	35
alpha-BHC			0.200	0.162		ug/L		81	39 - 126	11	35
alpha-Chlordane			0.200	0.155		ug/L		77	37 - 133	11	35
beta-BHC			0.200	0.158		ug/L		79	38 - 114	12	35
delta-BHC			0.200	0.156		ug/L		78	20 - 138	11	35
Dieldrin			0.200	0.160		ug/L		80	39 - 140	10	35
Endosulfan I			0.200	0.162		ug/L		81	23 - 142	10	35
Endosulfan II			0.200	0.164		ug/L		82	20 - 150	11	35
Endosulfan sulfate			0.200	0.161		ug/L		80	36 - 130	12	35
Endrin			0.200	0.199		ug/L		99	32 - 130	10	35
Endrin aldehyde			0.200	0.227		ug/L		114	37 - 139	12	35
Endrin ketone			0.200	0.158		ug/L		79	32 - 136	11	35
gamma-BHC (Lindane)			0.200	0.156		ug/L		78	40 - 121	13	35
gamma-Chlordane			0.200	0.158		ug/L		79	38 - 136	11	35
Heptachlor			0.200	0.167		ug/L		84	39 - 129	12	35
Heptachlor epoxide			0.200	0.155		ug/L		78	34 - 135	11	35
Methoxychlor			0.200	0.194		ug/L		97	33 - 139	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*90*		*22 - 150*
Tetrachloro-m-xylene	*86*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1221	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1232	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1242	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1248	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1254	ND		0.10	0.062	ug/L		08/30/16 13:27	08/30/16 18:44	1
PCB-1260	ND		0.10	0.043	ug/L		08/30/16 13:27	08/30/16 18:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-8323/1-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8323

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*20 - 120*	*08/30/16 13:27*	*08/30/16 18:44*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*36 - 138*	*08/30/16 13:27*	*08/30/16 18:44*	*1*

Lab Sample ID: LCS 590-8323/2-A
Matrix: Water
Analysis Batch: 8331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.60	1.56		ug/L		98	23 - 140
PCB-1260	1.60	1.47		ug/L		92	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*106*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-340418/1-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		09/01/16 09:56	09/24/16 15:37	1
Azinphos-methyl	ND		2.5	0.17	ug/L		09/01/16 09:56	09/24/16 15:37	1
Bolstar	ND		1.0	0.31	ug/L		09/01/16 09:56	09/24/16 15:37	1
Chlorpyrifos	ND		1.5	0.36	ug/L		09/01/16 09:56	09/24/16 15:37	1
Coumaphos	ND		1.0	0.14	ug/L		09/01/16 09:56	09/24/16 15:37	1
Demeton, Total	ND		3.0	0.21	ug/L		09/01/16 09:56	09/24/16 15:37	1
Diazinon	ND		0.50	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Dichlorvos	ND		0.50	0.16	ug/L		09/01/16 09:56	09/24/16 15:37	1
Dimethoate	ND		1.5	0.45	ug/L		09/01/16 09:56	09/24/16 15:37	1
Disulfoton	ND		1.0	0.32	ug/L		09/01/16 09:56	09/24/16 15:37	1
EPN	ND		1.2	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Famphur	ND		1.0	0.18	ug/L		09/01/16 09:56	09/24/16 15:37	1
Fensulfothion	ND		2.5	0.54	ug/L		09/01/16 09:56	09/24/16 15:37	1
Fenthion	ND		2.5	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Malathion	ND		2.0	0.13	ug/L		09/01/16 09:56	09/24/16 15:37	1
Merphos	ND		5.0	0.17	ug/L		09/01/16 09:56	09/24/16 15:37	1
Methyl parathion	ND		4.0	0.14	ug/L		09/01/16 09:56	09/24/16 15:37	1
Mevinphos	ND		6.2	0.46	ug/L		09/01/16 09:56	09/24/16 15:37	1
Ethyl Parathion	ND		1.0	0.14	ug/L		09/01/16 09:56	09/24/16 15:37	1
Phorate	ND		1.2	0.15	ug/L		09/01/16 09:56	09/24/16 15:37	1
Ronnel	ND		10	0.12	ug/L		09/01/16 09:56	09/24/16 15:37	1
Simazine	ND		10	0.22	ug/L		09/01/16 09:56	09/24/16 15:37	1
Sulfotepp	ND		1.5	0.17	ug/L		09/01/16 09:56	09/24/16 15:37	1
Thionazin	ND		1.0	0.31	ug/L		09/01/16 09:56	09/24/16 15:37	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-340418/1-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tokuthion	ND		1.6	0.12	ug/L		09/01/16 09:56	09/24/16 15:37	1
Trichloronate	ND		1.5	0.24	ug/L		09/01/16 09:56	09/24/16 15:37	1
Ethoprop	ND		1.5	0.18	ug/L		09/01/16 09:56	09/24/16 15:37	1
Propazine	ND		10	0.29	ug/L		09/01/16 09:56	09/24/16 15:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*86*		*49 - 171*	*09/01/16 09:56*	*09/24/16 15:37*	*1*
Triphenylphosphate	*119*		*60 - 154*	*09/01/16 09:56*	*09/24/16 15:37*	*1*

Lab Sample ID: LCS 280-340418/2-A
Matrix: Water
Analysis Batch: 343604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	3.17	J	ug/L		79	52 - 115
Azinphos-methyl	4.00	3.95		ug/L		99	59 - 115
Chlorpyrifos	4.00	3.59		ug/L		90	54 - 115
Coumaphos	4.00	3.98		ug/L		99	63 - 118
Demeton, Total	4.00	2.91	J	ug/L		73	44 - 115
Diazinon	4.00	3.47		ug/L		87	47 - 115
Dichlorvos	4.00	4.57		ug/L		114	53 - 128
Dimethoate	4.00	3.29		ug/L		82	42 - 115
Disulfoton	4.00	3.19		ug/L		80	45 - 115
EPN	4.00	3.81		ug/L		95	56 - 115
Famphur	4.00	3.71		ug/L		93	62 - 115
Fensulfothion	4.00	4.11		ug/L		103	50 - 115
Fenthion	4.00	3.59		ug/L		90	55 - 115
Malathion	4.00	3.27		ug/L		82	52 - 115
Merphos	4.00	2.12	J	ug/L		53	31 - 115
Methyl parathion	4.00	3.87	J	ug/L		97	58 - 115
Mevinphos	4.00	3.06	J	ug/L		76	42 - 115
Ethyl Parathion	4.00	3.73		ug/L		93	55 - 115
Phorate	4.00	2.89		ug/L		72	40 - 115
Ronnel	4.00	3.75	J	ug/L		94	55 - 115
Simazine	4.00	2.89	J	ug/L		72	39 - 115
Sulfotepp	4.00	3.62		ug/L		90	53 - 115
Thionazin	4.00	3.57		ug/L		89	54 - 115
Trichloronate	4.00	3.21		ug/L		80	48 - 115
Ethoprop	4.00	3.53		ug/L		88	50 - 115
BolstarFamphur	4.00	7.60		ug/L		190	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*81*		*49 - 171*
Triphenylphosphate	*104*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-340643/1-A
Matrix: Water
Analysis Batch: 341826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		09/02/16 09:19	09/14/16 18:10	1
2,4-D	ND		4.0	0.21	ug/L		09/02/16 09:19	09/14/16 18:10	1
2,4-DB	ND		4.0	0.36	ug/L		09/02/16 09:19	09/14/16 18:10	1
Dalapon	ND		2.0	0.91	ug/L		09/02/16 09:19	09/14/16 18:10	1
Dicamba	ND		2.0	0.15	ug/L		09/02/16 09:19	09/14/16 18:10	1
Dichlorprop	ND		4.0	0.65	ug/L		09/02/16 09:19	09/14/16 18:10	1
MCPA	ND		400	17	ug/L		09/02/16 09:19	09/14/16 18:10	1
MCPP	ND		400	33	ug/L		09/02/16 09:19	09/14/16 18:10	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		09/02/16 09:19	09/14/16 18:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*73*		*39 - 135*	*09/02/16 09:19*	*09/14/16 18:10*	*1*

Lab Sample ID: LCS 280-340643/2-A
Matrix: Water
Analysis Batch: 341826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340643

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	3.85		ug/L		77	45 - 135		
2,4-D			5.00	3.90	J	ug/L		78	46 - 126		
2,4-DB			5.00	3.86	J	ug/L		77	18 - 135		
Dalapon			5.00	3.75		ug/L		75	52 - 119		
Dicamba			5.00	3.99		ug/L		80	50 - 128		
Dichlorprop			5.00	3.94	J	ug/L		79	44 - 121		
MCPA			500	389	J	ug/L		78	43 - 118		
MCPP			500	444		ug/L		89	45 - 121		
Silvex (2,4,5-TP)			5.00	4.25		ug/L		85	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*

Lab Sample ID: LCSD 280-340643/3-A
Matrix: Water
Analysis Batch: 341826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340643

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.22		ug/L		84	45 - 135	9	30
2,4-D			5.00	4.30		ug/L		86	46 - 126	10	30
2,4-DB			5.00	4.53		ug/L		91	18 - 135	16	30
Dalapon			5.00	3.48		ug/L		70	52 - 119	8	30
Dicamba			5.00	4.30		ug/L		86	50 - 128	8	30
Dichlorprop			5.00	4.30		ug/L		86	44 - 121	9	30
MCPA			500	427		ug/L		85	43 - 118	9	30
MCPP			500	494		ug/L		99	45 - 121	11	30
Silvex (2,4,5-TP)			5.00	4.62		ug/L		92	48 - 127	8	30

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-340643/3-A
Matrix: Water
Analysis Batch: 341826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340643

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	90		39 - 135

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-8395/1-A
Matrix: Water
Analysis Batch: 8394

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 8395

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		09/06/16 09:00	09/06/16 12:03	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		09/06/16 09:00	09/06/16 12:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150	09/06/16 09:00	09/06/16 12:03	1
n-Triacontane-d62	79		50 - 150	09/06/16 09:00	09/06/16 12:03	1

Lab Sample ID: LCS 590-8395/2-A
Matrix: Water
Analysis Batch: 8394

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 8395

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.07		mg/L		66	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.29		mg/L		81	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	91		50 - 150
n-Triacontane-d62	82		50 - 150

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-8318/1010
Matrix: Water
Analysis Batch: 8318

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			08/30/16 12:39	1
Sulfate	ND		0.50	0.13	mg/L			08/30/16 12:39	1

Lab Sample ID: LCS 590-8318/1009
Matrix: Water
Analysis Batch: 8318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.3		mg/L		107	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 590-8318/1009
Matrix: Water
Analysis Batch: 8318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	12.5	13.4		mg/L		107	90 - 110

Lab Sample ID: MB 590-8319/1010
Matrix: Water
Analysis Batch: 8319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			08/30/16 12:39	1
Nitrite as N	ND		0.20	0.069	mg/L			08/30/16 12:39	1

Lab Sample ID: LCS 590-8319/1009
Matrix: Water
Analysis Batch: 8319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.29		mg/L		106	90 - 110
Nitrite as N	5.00	5.17		mg/L		103	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-226510/10-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 226510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		09/01/16 15:12	09/02/16 13:29	1
Antimony	0.0000991	J	0.00040	0.000080	mg/L		09/01/16 15:12	09/02/16 13:29	1
Barium	0.0000930	J	0.0012	0.000054	mg/L		09/01/16 15:12	09/02/16 13:29	1
Beryllium	ND		0.00040	0.00010	mg/L		09/01/16 15:12	09/02/16 13:29	1
Cadmium	0.0000494	J	0.00040	0.000028	mg/L		09/01/16 15:12	09/02/16 13:29	1
Chromium	ND		0.00040	0.00014	mg/L		09/01/16 15:12	09/02/16 13:29	1
Copper	ND		0.0020	0.00060	mg/L		09/01/16 15:12	09/02/16 13:29	1
Iron	ND		0.040	0.0058	mg/L		09/01/16 15:12	09/02/16 13:29	1
Lead	0.0000573	J	0.00040	0.000034	mg/L		09/01/16 15:12	09/02/16 13:29	1
Manganese	ND		0.0020	0.00035	mg/L		09/01/16 15:12	09/02/16 13:29	1
Nickel	ND		0.0030	0.00040	mg/L		09/01/16 15:12	09/02/16 13:29	1
Selenium	ND		0.0010	0.00030	mg/L		09/01/16 15:12	09/02/16 13:29	1
Silver	0.0000546	J	0.00040	0.000030	mg/L		09/01/16 15:12	09/02/16 13:29	1
Thallium	ND		0.0010	0.00014	mg/L		09/01/16 15:12	09/02/16 13:29	1
Vanadium	ND		0.0040	0.00098	mg/L		09/01/16 15:12	09/02/16 13:29	1
Zinc	ND		0.0070	0.0019	mg/L		09/01/16 15:12	09/02/16 13:29	1

Lab Sample ID: LCS 580-226510/11-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.101		mg/L		101	85 - 115
Antimony	0.100	0.104		mg/L		104	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226510/11-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.100	0.106		mg/L		106	85 - 115
Beryllium	0.100	0.0990		mg/L		99	85 - 115
Cadmium	0.100	0.102		mg/L		102	85 - 115
Chromium	0.100	0.0983		mg/L		98	85 - 115
Copper	0.100	0.113		mg/L		113	85 - 115
Iron	10.0	9.69		mg/L		97	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0989		mg/L		99	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.103		mg/L		103	85 - 115
Silver	0.100	0.101		mg/L		101	85 - 115
Thallium	0.100	0.0882		mg/L		88	85 - 115
Vanadium	0.100	0.0996		mg/L		100	85 - 115
Zinc	0.100	0.102		mg/L		102	85 - 115

Lab Sample ID: LCSD 580-226510/12-A
Matrix: Water
Analysis Batch: 226722

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226510

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.100		mg/L		100	85 - 115	1	20
Antimony	0.100	0.109		mg/L		109	85 - 115	5	20
Barium	0.100	0.112		mg/L		112	85 - 115	5	20
Beryllium	0.100	0.0982		mg/L		98	85 - 115	1	20
Cadmium	0.100	0.106		mg/L		106	85 - 115	3	20
Chromium	0.100	0.0972		mg/L		97	85 - 115	1	20
Copper	0.100	0.104		mg/L		104	85 - 115	8	20
Iron	10.0	9.68		mg/L		97	85 - 115	0	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0994		mg/L		99	85 - 115	1	20
Nickel	0.100	0.0979		mg/L		98	85 - 115	3	20
Selenium	0.100	0.104		mg/L		104	85 - 115	1	20
Silver	0.100	0.103		mg/L		103	85 - 115	2	20
Thallium	0.100	0.103		mg/L		103	85 - 115	15	20
Vanadium	0.100	0.0985		mg/L		99	85 - 115	1	20
Zinc	0.100	0.0973		mg/L		97	85 - 115	5	20

Lab Sample ID: LCS 580-226939/9-A
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0971		mg/L		97	85 - 115
Antimony	0.100	0.0991		mg/L		99	85 - 115
Barium	0.100	0.0999		mg/L		100	85 - 115
Beryllium	0.100	0.0975		mg/L		98	85 - 115
Cadmium	0.100	0.0957		mg/L		96	85 - 115
Chromium	0.100	0.0982		mg/L		98	85 - 115
Copper	0.100	0.0998		mg/L		100	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-226939/9-A
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 226939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.77		mg/L		98	85 - 115
Lead	0.100	0.0988		mg/L		99	85 - 115
Manganese	0.100	0.0976		mg/L		98	85 - 115
Nickel	0.100	0.0970		mg/L		97	85 - 115
Selenium	0.100	0.0963		mg/L		96	85 - 115
Silver	0.100	0.0930		mg/L		93	85 - 115
Thallium	0.100	0.0903		mg/L		90	85 - 115
Vanadium	0.100	0.0982		mg/L		98	85 - 115
Zinc	0.100	0.0974		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-226939/10-A
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 226939

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0988		mg/L		99	85 - 115	2	20
Antimony	0.100	0.0994		mg/L		99	85 - 115	0	20
Barium	0.100	0.100		mg/L		100	85 - 115	1	20
Beryllium	0.100	0.0991		mg/L		99	85 - 115	2	20
Cadmium	0.100	0.0969		mg/L		97	85 - 115	1	20
Chromium	0.100	0.0988		mg/L		99	85 - 115	1	20
Copper	0.100	0.101		mg/L		101	85 - 115	1	20
Iron	10.0	9.87		mg/L		99	85 - 115	1	20
Lead	0.100	0.0995		mg/L		99	85 - 115	1	20
Manganese	0.100	0.0985		mg/L		98	85 - 115	1	20
Nickel	0.100	0.0993		mg/L		99	85 - 115	2	20
Selenium	0.100	0.0977		mg/L		98	85 - 115	1	20
Silver	0.100	0.0941		mg/L		94	85 - 115	1	20
Thallium	0.100	0.0927		mg/L		93	85 - 115	3	20
Vanadium	0.100	0.0992		mg/L		99	85 - 115	1	20
Zinc	0.100	0.0986		mg/L		99	85 - 115	1	20

Lab Sample ID: MB 580-226414/5-B
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		09/07/16 17:02	09/08/16 12:41	1
Antimony	ND		0.00040	0.000080	mg/L		09/07/16 17:02	09/08/16 12:41	1
Barium	ND		0.0012	0.000054	mg/L		09/07/16 17:02	09/08/16 12:41	1
Beryllium	ND		0.00040	0.00010	mg/L		09/07/16 17:02	09/08/16 12:41	1
Cadmium	ND		0.00040	0.000028	mg/L		09/07/16 17:02	09/08/16 12:41	1
Chromium	ND		0.00040	0.00014	mg/L		09/07/16 17:02	09/08/16 12:41	1
Copper	ND		0.0020	0.00060	mg/L		09/07/16 17:02	09/08/16 12:41	1
Iron	ND		0.040	0.0058	mg/L		09/07/16 17:02	09/08/16 12:41	1
Lead	ND		0.00040	0.000034	mg/L		09/07/16 17:02	09/08/16 12:41	1
Manganese	ND		0.0020	0.00035	mg/L		09/07/16 17:02	09/08/16 12:41	1
Nickel	ND		0.0030	0.00040	mg/L		09/07/16 17:02	09/08/16 12:41	1
Selenium	ND		0.0010	0.00030	mg/L		09/07/16 17:02	09/08/16 12:41	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-226414/5-B
Matrix: Water
Analysis Batch: 227068

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 226939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.00040	0.000030	mg/L		09/07/16 17:02	09/08/16 12:41	1
Thallium	ND		0.0010	0.00014	mg/L		09/07/16 17:02	09/08/16 12:41	1
Vanadium	ND		0.0040	0.00098	mg/L		09/07/16 17:02	09/08/16 12:41	1
Zinc	ND		0.0070	0.0019	mg/L		09/07/16 17:02	09/08/16 12:41	1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-227314/21-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227314

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000852	J	0.00020	0.000041	mg/L		09/13/16 09:23	09/13/16 12:47	1

Lab Sample ID: LCS 580-227314/22-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227314

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00214		mg/L		107	85 - 115

Lab Sample ID: LCSD 580-227314/23-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 227314

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00214		mg/L		107	85 - 115	0	20

Lab Sample ID: LCS 580-227318/5-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227318

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00225		mg/L		113	85 - 115

Lab Sample ID: LCSD 580-227318/6-A
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 227318

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00218		mg/L		109	85 - 115	4	20

Lab Sample ID: MB 580-226414/5-C
Matrix: Water
Analysis Batch: 227356

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 227318

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000864	J	0.00020	0.000041	mg/L		09/13/16 09:45	09/13/16 11:58	1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 590-4348-1 DU
Matrix: Water
Analysis Batch: 227356

Client Sample ID: SW-1:082916
Prep Type: Dissolved
Prep Batch: 227318

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.000060	J B		0.0000782	J F5	mg/L				26	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-369413/1-A
Matrix: Water
Analysis Batch: 369460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 369413

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		09/12/16 07:30	09/12/16 08:30	1

Lab Sample ID: LCS 490-369413/3-A
Matrix: Water
Analysis Batch: 369460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 369413

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.106		mg/L		106	90 - 110		

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-367213/1-A
Matrix: Water
Analysis Batch: 367515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		09/01/16 10:29	09/02/16 11:21	1

Lab Sample ID: LCS 490-367213/2-A
Matrix: Water
Analysis Batch: 367515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367213

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia (as N)			5.00	4.60		mg/L		92	90 - 110		

Lab Sample ID: 590-4348-1 MS
Matrix: Water
Analysis Batch: 367515

Client Sample ID: SW-1:082916
Prep Type: Total/NA
Prep Batch: 367213

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia (as N)	0.075	J	5.00	5.37		mg/L		106	90 - 110		

Method: 410.4 - COD

Lab Sample ID: MB 490-367367/3
Matrix: Water
Analysis Batch: 367367

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			09/01/16 17:43	1

Lab Sample ID: LCS 490-367367/4
Matrix: Water
Analysis Batch: 367367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.9		mg/L		98	90 - 110

Lab Sample ID: LCSD 490-367367/5
Matrix: Water
Analysis Batch: 367367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	49.4		mg/L		99	90 - 110	1	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-368642/1
Matrix: Water
Analysis Batch: 368642

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			09/07/16 15:23	1

Lab Sample ID: LCS 490-368642/4
Matrix: Water
Analysis Batch: 368642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.96		mg/L		100	90 - 110
TOC Result 1	10.0	9.69		mg/L		97	90 - 110
TOC Result 2	10.0	10.2		mg/L		102	90 - 110

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Client Sample ID: SW-1:082916

Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	8354	09/01/16 13:34	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	8355	09/01/16 13:34	MRS	TAL SPK
Total/NA	Prep	3520C			1056.3 mL	2 mL	226610	09/02/16 12:49	DSO	TAL SEA
Total/NA	Analysis	8270D		1			226767	09/06/16 15:30	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	8317	08/30/16 11:30	NMI	TAL SPK
Total/NA	Analysis	8011		1			8316	08/30/16 17:15	NMI	TAL SPK
Total/NA	Prep	3510C			246.1 mL	2.5 mL	226346	08/31/16 10:32	JCV	TAL SEA
Total/NA	Analysis	8081B		1			226447	08/31/16 22:51	DCV	TAL SEA
Total/NA	Prep	3510C			248 mL	2 mL	8323	08/30/16 13:27	NMI	TAL SPK
Total/NA	Analysis	8082A		1			8331	08/31/16 01:49	NMI	TAL SPK
Total/NA	Prep	3510C			1033.9 mL	2 mL	340418	09/01/16 09:56	JRA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	343604	09/24/16 23:59	TEM	TAL DEN
Total/NA	Prep	8151A			1056.8 mL	10 mL	340643	09/02/16 09:19	KI	TAL DEN
Total/NA	Analysis	8151A		1			341826	09/14/16 19:40	SAT	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			220.1 mL	2 mL	8395	09/06/16 09:00	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			8394	09/06/16 12:56	NMI	TAL SPK
Total/NA	Analysis	300.0		1			8318	08/30/16 11:39	CBW	TAL SPK
Total/NA	Analysis	300.0		1			8319	08/30/16 11:39	CBW	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226414	08/31/16 18:20	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	226939	09/07/16 17:02	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	227068	09/08/16 13:35	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	226510	09/01/16 15:12	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	226722	09/02/16 14:22	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	226414	08/31/16 18:20	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	227318	09/13/16 09:45	MKN	TAL SEA
Dissolved	Analysis	245.1		1			227356	09/13/16 12:04	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	227314	09/13/16 09:23	MKN	TAL SEA
Total/NA	Analysis	245.1		1			227356	09/13/16 13:03	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	369413	09/12/16 07:30	REM	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	369460	09/12/16 08:30	REM	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	367213	09/01/16 10:29	LDT	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	367515	09/02/16 11:33	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	367367	09/01/16 17:43	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	368642	09/07/16 15:23	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			8333	08/30/16 11:30	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-03-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Aqueous)	8290A - Dioxins (17 Isomers Only)	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D_DW_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
SW-1:0829/16	8/29/16	1450	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
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				Water																	
				Water																	
				Water																	

590-4348 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/29/16 1645	GEI	Sheila Kraby	8/29/16 1640	TA Spok

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3°C IR003

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.2
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc		Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202	PO #: Purchase Order not required			
Phone: 509-363-3125	WO #:			
Email: jmlee@geoengineers.com	Project #: 59000577			
Project Name: Marshall 0504-104-00	SSOW#:			
Site: Marshall				Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VWTPH_Gx_MS - Gx by GC/MS	9223_ColiQT_WW - Quantitray TC E.coli	3011 - 1,2-Dibromoethane (EDB)	VWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:		F	X	A	R	N	A	X	
SW-1:0829/16	8/29/16	1450	G	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/29/16 1645	GEI	Theresa Kratz	8/29/16 1645	TAL SPK
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.3°C IR0003

9/29/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1976.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 590-4348-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/9/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SW-1:082916 (590-4348-1)	8/29/16	16:40 Pacific		Water			X	X	4	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kratz	8/30/16 1505	TA SPK			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-4348 Chain of Custody

Cooler Received/Opened On 8/31/2016 @ 0935

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 2283 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 097310166 pH Strip Lot HC564992 Chlorine Strip Lot 012516A

2. Temperature of rep. sample or temp blank when opened: 0.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (side)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) HG

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) HG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) HG

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) HG

I certify that I attached a label with the unique LIMS number to each container (intial) HG

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
4348

TestAmerica
LEADER IN ENVIRONMENTAL TESTING

9/29/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Lo: 1980.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page 1 of 1
Company: TestAmerica Laboratories, Inc		**Analysis Requested**	Job #: 590-4348-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 9/9/2016		**Preservation Codes:**
City: Nashville	TAT Requested (days):		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		Other:
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
SW-1:082916 (590-4348-1)	8/29/16	16:40 Pacific		Water			X	X	X	X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Sheila Trask	Date/Time: 8/30/16 1550	Company TA SPK	Received by: 0.9	Date/Time: 8/31/16 0935	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1977.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4348-1

Address: 5755 8th Street East,	Due Date Requested: 9/9/2016
City: Tacoma	TAT Requested (days):
State, Zip: WA, 98424	
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:
Email:	WO #:
Project Name: Marshall 0504-104-00	Project #: 59000577
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	245.1/245.1_Prep Total Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	245.1/FILTRATION Dissolved Mercury - Seattle	8270D/3520C Standard Reporting List	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
SW-1 082916 (590-4348-1)	8/29/16	16:40 Pacific		Water			X	X	X	X	X	X	6	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Sheila Trask	8/30/16 1500	TACOMA	B. Hall	8.31.16 0945	SEATTA
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR 2 = 0.3/0.4 w/o

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4348-1

Login Number: 4348
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4348-1

Login Number: 4348
List Number: 4
Creator: Muniz, Ashley T

List Source: TestAmerica Denver
List Creation: 08/31/16 04:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4348-1

Login Number: 4348
List Number: 2
Creator: Gundi, Hozar K

List Source: TestAmerica Nashville
List Creation: 08/31/16 11:17 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4348-1

Login Number: 4348
List Number: 3
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 08/31/16 10:38 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-4348-2
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
10/3/2016 10:20:37 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Job ID: 590-4348-2

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 8/29/2016 4:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

Dioxin
Method 8290A: The Isotope Dilution Analyte (IDA 13C-OCDD) recovery associated with the ending Continuing Calibration Verification (CCV) is below the method recommended limit: CCV 320-129406/14. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for this IDA in this CCV and all associated samples. The 13C-OCDD IDA recovery for all associated samples is within recovery limits.

Method 8290A: The bracketing continuing calibration verification (CCV) associated with batch 320-129408 1,2,3,4,7,8-HxCDD with percent difference values that are between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-4348-1	SW-1:082916	Water	08/29/16 16:40	08/30/16 10:27

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.42	pg/L		09/19/16 17:09	09/27/16 05:53	1
2,3,7,8-TCDF	ND		9.6	0.40	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,7,8-PeCDD	ND		48	0.63	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,7,8-PeCDF	ND		48	0.54	pg/L		09/19/16 17:09	09/27/16 05:53	1
2,3,4,7,8-PeCDF	ND		48	0.55	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,4,7,8-HxCDD	ND		48	0.43	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,6,7,8-HxCDD	ND		48	0.44	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,7,8,9-HxCDD	ND		48	0.36	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,4,7,8-HxCDF	ND		48	0.44	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,6,7,8-HxCDF	ND		48	0.43	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,7,8,9-HxCDF	ND		48	0.47	pg/L		09/19/16 17:09	09/27/16 05:53	1
2,3,4,6,7,8-HxCDF	ND		48	0.45	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,4,6,7,8-HpCDD	**1.0**	**J q B**	48	0.34	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,4,6,7,8-HpCDF	**0.54**	**J q B**	48	0.28	pg/L		09/19/16 17:09	09/27/16 05:53	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.33	pg/L		09/19/16 17:09	09/27/16 05:53	1
OCDD	**5.8**	**J B**	96	0.55	pg/L		09/19/16 17:09	09/27/16 05:53	1
OCDF	ND		96	0.91	pg/L		09/19/16 17:09	09/27/16 05:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*81*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-1,2,3,6,7,8-HxCDD	*101*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-1,2,3,4,7,8-HxCDF	*91*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*81*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*92*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*
13C-OCDD	*66*		*40 - 135*	*09/19/16 17:09*	*09/27/16 05:53*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-127940/1-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 127940

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,7,8-TCDF	ND		10	0.27	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDD	ND		50	0.56	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8-PeCDF	ND		50	0.47	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,7,8-PeCDF	ND		50	0.48	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDD	ND		50	0.41	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDD	ND		50	0.42	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDD	ND		50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8-HxCDF	ND		50	0.32	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,6,7,8-HxCDF	ND		50	0.31	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,7,8,9-HxCDF	ND		50	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
2,3,4,6,7,8-HxCDF	ND		50	0.33	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDD	1.10	J	50	0.35	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,6,7,8-HpCDF	0.430	J q	50	0.19	pg/L		09/19/16 15:17	09/25/16 19:27	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.22	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDD	3.50	J	100	0.34	pg/L		09/19/16 15:17	09/25/16 19:27	1
OCDF	ND		100	0.40	pg/L		09/19/16 15:17	09/25/16 19:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*
13C-OCDD	*72*		*40 - 135*	*09/19/16 15:17*	*09/25/16 19:27*	*1*

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	191		pg/L		95	64 - 142
2,3,7,8-TCDF	200	199		pg/L		100	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135
2,3,4,7,8-PeCDF	1000	1030		pg/L		103	74 - 137
1,2,3,4,7,8-HxCDD	1000	853		pg/L		85	56 - 146
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	73 - 144
1,2,3,7,8,9-HxCDD	1000	949		pg/L		95	71 - 151
1,2,3,4,7,8-HxCDF	1000	1040		pg/L		104	75 - 131
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	77 - 142
2,3,4,6,7,8-HxCDF	1000	1080		pg/L		108	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	999		pg/L		100	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-127940/2-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,7,8,9-HpCDF	1000	942		pg/L		94	83 - 130
OCDD	2000	2000		pg/L		100	80 - 132
OCDF	2000	2170		pg/L		109	72 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*64*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*83*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*77*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-127940/3-A
Matrix: Water
Analysis Batch: 129092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 127940

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	200	213		pg/L		107	64 - 142	11	20
2,3,7,8-TCDF	200	212		pg/L		106	71 - 142	6	20
1,2,3,7,8-PeCDD	1000	1070		pg/L		107	71 - 140	6	20
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135	1	20
2,3,4,7,8-PeCDF	1000	1050		pg/L		105	74 - 137	2	20
1,2,3,4,7,8-HxCDD	1000	969		pg/L		97	56 - 146	13	20
1,2,3,6,7,8-HxCDD	1000	1080		pg/L		108	73 - 144	5	20
1,2,3,7,8,9-HxCDD	1000	1030		pg/L		103	71 - 151	9	20
1,2,3,4,7,8-HxCDF	1000	1100		pg/L		110	75 - 131	6	20
1,2,3,6,7,8-HxCDF	1000	1200		pg/L		120	76 - 133	5	20
1,2,3,7,8,9-HxCDF	1000	1120		pg/L		112	77 - 142	8	20
2,3,4,6,7,8-HxCDF	1000	1170		pg/L		117	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD	1000	1060		pg/L		106	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF	1000	1070		pg/L		107	79 - 133	5	20
1,2,3,4,7,8,9-HpCDF	1000	1010		pg/L		101	83 - 130	7	20
OCDD	2000	2170		pg/L		108	80 - 132	8	20
OCDF	2000	2380		pg/L		119	72 - 140	9	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*86*		*40 - 135*
13C-2,3,7,8-TCDF	*83*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*80*		*40 - 135*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Client Sample ID: SW-1:082916
Date Collected: 08/29/16 16:40
Date Received: 08/30/16 10:27

Lab Sample ID: 590-4348-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1047 mL	20 uL	127940	09/19/16 17:09	DXD	TAL SAC
Total/NA	Analysis	8290A		1			129408	09/27/16 05:53	SMA	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-16
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-16
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-4348-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1713-619.1
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicides (Aqueous)	8290A - Dioxins (17 Isomers Only)	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C - Standard List Volatile Organics	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
SW-1:0829/16	8/29/16	1450	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	25	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-4348 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/29/16 1645	GEI	Sheila Kraby	8/29/16 1640	TAS

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3°C IR003

10/3/2016

Page 12 of 16

TestAmerica Spokane
11922 East 1st Ave
Spokane WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Josh Lee / Jon Rudders	Phone: 406-239-7810	Arrington, Randee E E-Mail: randee.arrington@testamericainc.com		590-1713-619.2 Page: Page 2 of 2

Company	Job #
GeoEngineers Inc	

Address	Due Date Requested:
523 East Second Ave	
City: Spokane	TAT Requested (days): Std.
State, Zip: WA, 99202	
Phone: 509-363-3125	PO #: Purchase Order not required
Email: jmlee@geoengineers.com	WO #:
Project Name: Marshall 0504-104-00	Project #: 59000577
Site: Marshall	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Gx_MS - Gx by GC/MS	9223_ColiQT_WW - Quantitray TC E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	R	N	A		
SW-1:0829/6	8/29/16	1450	G	Water	N		X	X	X	X	25	
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Lee	8/29/16 1645	GEI	Theresa Kratz	8/29/16 1645	TAL SPOK
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.3°C IR0003

10/3/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1981.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 590-4348-1
Address: 880 Riverside Parkway,	Due Date Requested: 9/13/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SW-1:082916 (590-4348-1)	8/29/16	16:40 Pacific		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Trad	8/30/16 1600	TA Spok	C. E.	8/31/16 0940	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.5 0.7 OMR 8/31/16 Temp Blank found @ Cooler Bottom

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4348-2

Login Number: 4348
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-4348-2

Login Number: 4348
List Number: 5
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 08/31/16 05:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	False	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Data Validation Report

Project: Marshall Landfill Site
November and December 2016 Samples

GEI File No: 00504-104-00

Date: February 3, 2017

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA, 2009) of analytical data from the analyses of water and air samples collected as part of the November and December 2016 sampling events, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Marshall Landfill site located in Spokane County, Washington.

In summary and in our opinion, the quality and accuracy of the analytical data are acceptable for the intended use, with the qualifications applied from the data validation. The primary data validation qualifiers were: (1) GeoEngineers, Inc. (GeoEngineers) qualified selected data as estimated (J/UJ) because of accuracy outliers; and (2) GeoEngineers qualified selected data as non-detected (U) because of method blank contamination and ion abundance ratio (dioxin/furans only) outliers.

The evaluation criteria and qualifications are discussed in greater detail below; a summary of qualified samples is listed in Table 2.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA, 2008), Inorganic Superfund Data Review (EPA 2010), and Chlorinated Dioxin/Furan Data Review (EPA 2011) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Remedial Investigation/Feasibility Study Work Plan (GeoEngineers 2015), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries
- Method Blanks

- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory and Field Duplicates
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-5079-1	MW-4A:112816, MW-8A:112816, MW-8B:112816, MW-11A:112816
590-5100-1	MW-9A:113016, MW-12A:113016, MW-DUP:113016, MW-14:113016, MW-15:113016, MW-16:113016, MW-16A:113016
590-5101-1	SW-1:113016
590-5117-1	MW-2A:120116, MW-3:120116, MW-5A:120116, MW-7B:120116, MW-7D:120116, MW-15A:120116
590-5134-1	LFB-3:120216, LFB-4:120216, LFB-5:120216, LFB-8:120216, LFB-9:120216, LFB-10:120216, LFB-11:120216, LFB-15:120216, LFB-16:120216, LFB-17:120216

CHEMICAL ANALYSIS PERFORMED

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

Water

- Gasoline-range Hydrocarbons (NWTPH-Gx) by Method NWTPH-Gx;
- Petroleum Hydrocarbons with Silica Gel (SG) Cleanup (NWTPH-Dx/SG) by Method NWTPH-Dx/SG;
- Volatile Organic Compounds (VOCs) by Methods SW8260C
- 1,2-Dibromoethane (EDB) by Method SW8011;
- Semi-volatile Organic Compounds (SVOCs) by Method SW8270D;
- Polychlorinated Biphenyls (PCBs) by Method SW8082A;
- Organochlorine Pesticides by Method SW8081B;
- Organophosphorous Pesticides by Method SW8141B;
- Chlorinated Herbicides by Method SW8151A;
- Dioxins and Furans by Method SW8290A;
- Total Metals by Methods EPA200.8/EPA245.1;
- Dissolved Metals by Methods EPA200.8/EPA245.1;
- Anions by Method EPA300.0;

- Total Cyanide by Method EPA335.4;
- Ammonia (as N) by Method EPA350.1;
- Chemical Oxygen Demand (COD) by Method EPA410.4;
- Total Organic Carbon (TOC) by Method SM5310C; and
- Total Coliform and Escherichia coli by Method SM9223B.

Air

- Volatile Organic Compounds in Air (VOCs-Air) by Method TO-15

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory, with the following exception:

SDG 590-5079-1: The laboratory noted that one 250mL NaOH preserved sample vial and one 1L unpreserved sample vial were received without a sample ID, sample collection date, or sample collection time written on the sample vial labels. The sample vials were identified through process of elimination to be for Samples MW-8A:112816 and MW-11A:112816, respectively.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exception noted below.

SDG 590-5117-1: One sample cooler temperature recorded at the laboratory was 1.4 degrees Celsius. Since the samples were not frozen, this temperature should likely not affect the sample analytical results.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-5079-1: (Organophosphorus Pesticides) The percent recovery for surrogate chlormefos was less than the control limits in Sample MW-4A:112816. The reporting limits for organophosphorus pesticides target analytes were qualified as estimated (UJ) in this sample.

SDG 590-5100-1: (Organophosphorus Pesticides) The percent recovery for surrogate chlormefos was less than the control limits in Samples MW-9A:113016, MW-DUP:113016, MW-14:113016, MW-15:113016, MW-16:113016, and MW-16A:113016. The reporting limits for organophosphorus pesticides target analytes were qualified as estimated (UJ) in these samples.

SDG 590-5134-1: (VOCs-Air) The percent recovery for surrogate 4-Bromofluorobenzene was greater than the control limits in Sample LFB-4:120216; however, the sample was spiked with two additional surrogates and in each case the percent recoveries were within their respective control limits. No action was required for this outlier.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exceptions:

SDG 590-5079-1: (NWTPH-Gx) There was a positive result for gasoline-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/2/2016. The positive results for gasoline-range hydrocarbons were qualified as non-detected (U) in Samples MW-4A:112816, MW-8A:112816, MW-8B:112816, and MW-11A:112816.

(NWTPH-Dx) There was a positive result for diesel-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. The positive results for diesel-range hydrocarbons were qualified as non-detected (U) in Samples MW-8A:112816 and MW-8B:112816. There were no positive results for diesel-range hydrocarbons in Samples MW-4A:112816 and MW-11A:112816; therefore, no qualifications were required.

(SVOCs) There was a positive result for anthracene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. There were no positive results for anthracene in Samples MW-4A:112816, MW-8A:112816, MW-8B:112816, and MW-11A:112816; therefore, no qualifications were required.

(Organochlorine Pesticides) There were positive results for alpha-Chlordane and gamma-Chlordane detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/3/2016. There were no positive results for alpha-Chlordane and gamma-Chlordane in Samples MW-4A:112816, MW-8A:112816, MW-8B:112816, and MW-11A:112816; therefore, no qualifications were required.

(Total Metals) There was a positive result for total silver detected above the method detection limit, but below the reporting limit in the method blank digested on 12/9/2016. The positive results for total silver were qualified as non-detected (U) in Samples MW-4A:112816, MW-8A:112816, and MW-8B:112816. There were no positive results for total silver in Sample MW-11A:112816; therefore, no qualification was required.

There was a positive result for total mercury detected above the method detection limit, but below the reporting limit in the method blank digested on 12/6/2016. The positive results for total mercury were

qualified as non-detected (U) in Samples MW-8B:112816 and MW-11A:112816. There were no positive results for total mercury in Samples MW-4A:112816 and MW-8A:112816; therefore, no qualifications were required.

(Dissolved Metals) There were positive results for dissolved barium, dissolved iron, and dissolved selenium detected above the method detection limit, but below the reporting limit in the method blank digested on 12/7/2016. The positive results for dissolved iron and dissolved selenium were qualified as non-detected (U) in Samples MW-8A:112816 and MW-8B:112816. The positive results for dissolved selenium were qualified as non-detected (U) in Samples MW-4A:112816 and MW-11A:112816. The positive results for dissolved barium in Samples MW-4A:112816, MW-8A:112816, MW-8B:112816, and MW-11A:112816 were greater than 10X the concentration in the method blank; and there were no positive results for dissolved iron in Samples MW-4A:112816 and MW-11A:112816; therefore, no qualifications were required.

(Dioxins/Furans) There were positive results for OCDD and OCDF detected at a concentration of less than 3X the reporting limit in the method blank extracted on 12/2/2016. The positive results for OCDD and OCDF were qualified as non-detected (U) in Samples MW-4A:112816, MW-8A:112816, MW-8B:112816, and MW-11A:112816.

Additionally, there were positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and 2,3,7,8-TCDF detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,7,8,9-HpCDF, and 2,3,7,8-TCDF were qualified as non-detected (U) in Sample MW-8A:112816. The positive results for 1,2,3,4,6,7,8-HpCDD and 1,2,3,4,6,7,8-HpCDF were qualified as non-detected (U) in Samples MW-4A:112816, MW-8B:112816, and MW-11A:112816. The positive result for 1,2,3,4,6,7,8-HpCDF was greater than 5X the concentration in the method blank in Sample MW-8A:112816; and there were no positive results for 1,2,3,4,7,8,9-HpCDF and 2,3,7,8-TCDF in Samples MW-4A:112816, MW-8B:112816, and MW-11A:112816; therefore, no qualifications were required.

SDG 590-5100-1: (NWTPH-Gx) There was a positive result for gasoline-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/2/2016. The positive results for gasoline-range hydrocarbons were qualified as non-detected (U) in Samples MW-9A:113016, MW-12A:113016, MW-DUP:113016, MW-14:113016, MW-15:113016, MW-16:113016, and MW-16A:113016.

(NWTPH-Dx) There was a positive result for diesel-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. There were no positive results for diesel-range hydrocarbons in Samples MW-9A:113016, MW-12A:113016, MW-DUP:113016, MW-14:113016, MW-15:113016, MW-16:113016, and MW-16A:113016; therefore, no qualifications were required.

(SVOCs) There was a positive result for anthracene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. There were no positive results for anthracene in Samples MW-9A:113016, MW-12A:113016, MW-DUP:113016, MW-14:113016, MW-15:113016, MW-16:113016, and MW-16A:113016; therefore, no qualifications were required.

(Organochlorine Pesticides) There were positive results for alpha-Chlordane and gamma-Chlordane detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/3/2016. There were no positive results for alpha-Chlordane and gamma-Chlordane in Samples

MW-9A:113016, MW-12A:113016, MW-DUP:113016, MW-14:113016, MW-15:113016, MW-16:113016, and MW-16A:113016; therefore, no qualifications were required.

(Total Metals) There was a positive result for total selenium detected above the method detection limit, but below the reporting limit in the method blank digested on 12/10/2016. The positive result for total selenium was qualified as non-detected (U) in Sample MW-DUP:113016.

There was a positive result for total mercury detected above the method detection limit, but below the reporting limit in the method blank digested on 12/6/2016. The positive results for total mercury were qualified as non-detected (U) in Samples MW-12A:113016, MW-14:113016, MW-15:113016, MW-16:113016, and MW-16A:113016. There were no positive results for total mercury in Samples MW-9A:113016 and MW-DUP:113016; therefore, no qualifications were required.

(Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 12/6/2016. The positive results for OCDD were qualified as non-detected (U) in Samples MW-9A:113016, MW-12A:113016, MW-14:113016, MW-16:113016, and MW-16A:113016.

Additionally, there were positive results for 1,2,3,4,6,7,8-HpCDD and 2,3,4,6,7,8-HxCDF detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive result for 2,3,4,6,7,8-HxCDF was qualified as non-detected (U) in Sample MW-14:113016. The positive results for 1,2,3,4,6,7,8-HpCDD were qualified as non-detected (U) in Samples MW-9A:113016, MW-12A:113016, MW-16:113016, and MW-16A:113016. The positive result for 1,2,3,4,6,7,8-HpCDD was greater than 5X the concentration in the method blank in Sample MW-14:113016; and there were no positive results for 2,3,4,6,7,8-HxCDF in Samples MW-9A:113016, MW-12A:113016, MW-16:113016, and MW-16A:113016; therefore, no qualifications were required.

There was a positive result for OCDF detected at a concentration of less than 3X the reporting limit in the method blank extracted on 12/12/2016. The positive results for OCDF were qualified as non-detected (U) in Samples MW-15:113016 and MW-DUP:113016.

Additionally, there were positive results for 1,2,3,4,6,7,8-HpCDF and 2,3,4,6,7,8-HxCDF detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive result for 1,2,3,4,6,7,8-HpCDF was qualified as non-detected (U) in Sample MW-15:113016. The positive result for 2,3,4,6,7,8-HxCDF was qualified as non-detected (U) in Sample MW-DUP:113016. The positive result for 1,2,3,4,6,7,8-HpCDF was greater than 5X the concentration in the method blank in Sample MW-DUP:113016; and there were no positive results for 2,3,4,6,7,8-HxCDF in Sample MW-15:113016; therefore, no qualifications were required.

SDG 590-5101-1: (VOCs) There were positive results for bromoform and dibromochloromethane detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/8/2016. There were no positive results for bromoform and dibromochloromethane in Sample SW-1:113016; therefore, no qualifications were required.

(SVOCs) There was a positive result for anthracene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. There were no positive results for anthracene in Sample SW-1:113016; therefore, no qualification was required.

(Organochlorine Pesticides) There were positive results for alpha-Chlordane and gamma-Chlordane detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/3/2016. There were no positive results for alpha-Chlordane and gamma-Chlordane in Sample SW-1:113016; therefore, no qualifications were required.

(Total Metals) There was a positive result for total selenium detected above the method detection limit, but below the reporting limit in the method blank digested on 12/10/2016. The positive result for total selenium was qualified as non-detected (U) in Sample SW-1:113016.

(Dissolved Metals) There were positive results for dissolved barium, dissolved iron, and dissolved selenium detected above the method detection limit, but below the reporting limit in the method blank digested on 12/7/2016. The positive results for dissolved iron and dissolved selenium were qualified as non-detected (U) in Sample SW-1:113016. The positive result for dissolved barium in Sample SW-1:113016 was greater than 10X the concentration in the method blank; therefore, no qualification was required.

(Dioxins/Furans) There was a positive result for OCDF detected at a concentration of less than 3X the reporting limit in the method blank extracted on 12/12/2016. The positive result for OCDF was qualified as non-detected (U) in Sample SW-1:113016.

Additionally, there were positive results for 1,2,3,4,6,7,8-HpCDF and 2,3,4,6,7,8-HxCDF detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive results for 1,2,3,4,6,7,8-HpCDF and 2,3,4,6,7,8-HxCDF were qualified as non-detected (U) in Sample SW-1:113016.

SDG 590-5117-1: (NWTPH-Gx) There was a positive result for gasoline-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/2/2016. The positive results for gasoline-range hydrocarbons were qualified as non-detected (U) in Samples MW-2A:120116, MW-3:120116, MW-5A:120116, MW-7B:120116, MW-7D:120116, and MW-15A:120116.

(NWTPH-Dx) There was a positive result for diesel-range hydrocarbons detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. There were no positive results for diesel-range hydrocarbons in Samples MW-2A:120116, MW-3:120116, MW-5A:120116, MW-7B:120116, MW-7D:120116, and MW-15A:120116; therefore, no qualifications were required.

(SVOCs) There was a positive result for anthracene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/5/2016. There were no positive results for anthracene in Samples MW-2A:120116, MW-3:120116, MW-5A:120116, MW-7B:120116, MW-7D:120116, and MW-15A:120116; therefore, no qualifications were required.

(Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 12/6/2016. The positive results for OCDD were qualified as non-detected (U) in Samples MW-7B:120116, MW-7D:120116, and MW-15A:120116.

Additionally, there were positive results for 1,2,3,4,6,7,8-HpCDD and 2,3,4,6,7,8-HxCDF detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive result for 2,3,4,6,7,8-HxCDF was qualified as non-detected (U) in Sample MW-7B:120116. The positive result for 1,2,3,4,6,7,8-HpCDD was qualified as non-detected (U) in Sample MW-7D:120116. There were no positive results for 1,2,3,4,6,7,8-HpCDD in Sample MW-7B:120116; there were no positive results for 2,3,4,6,7,8-HxCDF in Sample MW-7D:120116; and there were no positive results for 1,2,3,4,6,7,8-HpCDD and 2,3,4,6,7,8-HxCDF in Sample MW-15A:120116; therefore, no qualifications were required.

There was a positive result for OCDF detected at a concentration of less than 3X the reporting limit in the method blank extracted on 12/7/2016. The positive results for OCDF were qualified as non-detected (U) in Samples MW-2A:120116, MW-3:120116, and MW-5A:120116.

Additionally, there was a positive result for 1,2,3,4,6,7,8-HpCDD detected above the estimated detection limit, but below the reporting limit in the same method blank. The positive results for 1,2,3,4,6,7,8-HpCDD were qualified as non-detected (U) in Samples MW-2A:120116, MW-3:120116, and MW-5A:120116.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-5100-1: (COD) The laboratory performed a matrix spike on Sample MW-14:113016. The percent recovery for COD was greater than the control limits in the MS extracted on 12/12/2016. There were no positive results for COD in Sample MW-14:113016; therefore, no qualification was required.

(Ammonia (as N)) The laboratory performed a matrix spike on Sample MW-9A:113016. The percent recovery for ammonia (as N) was less than the control limits in the MS extracted on 12/5/2016. The positive result for ammonia (as N) was qualified as estimated (J) in Sample MW-9A:113016.

SDG 590-5101-1: (Total Cyanide) The laboratory performed a matrix spike on Sample SW-1:113016. The percent recovery for total cyanide was greater than the control limits in the MS extracted on 12/6/2016. There were no positive results for total cyanide in Sample SW-1:113016; therefore, no qualification was required.

SDG 590-5117-1: (COD) The laboratory performed a matrix spike on Sample MW-7D:120116. The percent recovery for COD was less than the control limits in the MS extracted on 12/12/2016. The positive result for COD was qualified as estimated (J) in Sample MW-7D:120116.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-5079-1: (Organophosphorus Pesticides) The percent recovery for azinphos-methyl was greater than the control limits in the LCSD extracted on 12/5/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the percent recoveries for coumaphos and dichlorvos and the RPD values for dichlorvos and mevinphos were greater than the control limits in the LCS and LCSD. There were no positive results for coumaphos, dichlorvos, and mevinphos in the associated field samples; therefore, no qualifications were required.

(Total Cyanide) The percent recovery for total cyanide was greater than the control limits in the LCS extracted on 12/1/2016. There were no positive results for total cyanide in the associated field samples; therefore, no qualifications were required.

SDG 590-5100-1: (Organophosphorus Pesticides) The percent recovery for azinphos-methyl was greater than the control limits in the LCSD extracted on 12/5/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the percent recoveries for coumaphos and dichlorvos and the RPD values for dichlorvos and mevinphos were greater than the control limits in the LCS and LCSD. There were no positive results for coumaphos, dichlorvos, and mevinphos in the associated field samples; therefore, no qualifications were required.

SDG 590-5101-1: (Organophosphorus Pesticides) The percent recovery for azinphos-methyl was greater than the control limits in the LCSD extracted on 12/5/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier. Additionally, in the same LCS/LCSD sample set, the percent recoveries for coumaphos and dichlorvos and the RPD values for dichlorvos and mevinphos were greater than the control limits in the LCS and LCSD. There were no positive results for coumaphos, dichlorvos, and mevinphos in the associated field sample; therefore, no qualifications were required.

SDG 590-5117-1: (Organophosphorus Pesticides) The percent recoveries for azinphos-methyl, coumaphos, dichlorvos, and mevinphos were greater than the control limits in the LCSD extracted on 12/5/2016; however, the percent recovery for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of

the sample analytes has a concentration greater than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 35 percent.

SDG 590-5100-1: One field duplicate sample pair, MW-12A:113016 and MW-DUP:113016, was submitted with this SDG. The precision criteria for all target analytes were met for this sample pair.

Miscellaneous

SDG 590-5079-1: (Dioxins/Furans) The positive results for 1,2,3,7,8-PeCDF and 2,3,4,7,8-PeCDF in Sample MW-8A:112816 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in this sample.

SDG 590-5100-1: (Dioxins/Furans) The positive results for 1,2,3,7,8-PeCDF, 1,2,3,6,7,8-HxCDD, and 1,2,3,6,7,8-HxCDF in Sample MW-14:113016; the positive results for 1,2,3,4,6,7,8-HpCDF and 2,3,7,8-TCDF in Samples MW-12A:113016 and MW-16A:113016; the positive result for 1,2,3,4,7,8,9-HpCDF in Sample MW-15:113016; and the positive results for 1,2,3,6,7,8-HxCDF, 1,2,3,7,8-PeCDF, and 2,3,4,7,8-PeCDF in Sample MW-DUP:113016 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in these samples, accordingly.

SDG 590-5101-1: (Dioxins/Furans) The positive result for 1,2,3,4,6,7,8-HpCDD in Sample SW-1:113016 was noted by the laboratory to represent the Estimated Maximum Possible Concentration for this compound. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The result for this target analyte was qualified as estimated (J) in this sample..

SDG 590-5117-1: (Dioxins/Furans) The positive results OCDF in Samples MW-7D:120116 and MW-15A:120116; the positive results for 1,2,3,6,7,8-HxCDD and 1,2,3,6,7,8-HxCDF in Sample MW-7B:120116; the positive results for 1,2,3,7,8,9-HxCDF and OCDD in Sample MW-2A:120116; the positive result for 1,2,3,6,7,8-HxCDF in Sample MW-3:120116; and the positive results for 1,2,3,4,6,7,8-HpCDF, 2,3,4,6,7,8-HxCDF, and OCDD in Sample MW-5A:120116 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in these samples, accordingly.

Overall Assessment

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
MW-2A:120116	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDD	J	See Miscellaneous
	OCDF	U	Method Blank Contamination
MW-3:120116	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDF	U	Method Blank Contamination
MW-4A:112816	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
	Total silver	U	Method Blank Contamination
	All organophosphorus pesticides target analytes	UJ	Surrogate Recovery
MW-5A:120116	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	J	See Miscellaneous
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDD	J	See Miscellaneous
	OCDF	U	Method Blank Contamination
MW-7B:120116	1,2,3,6,7,8-HxCDD	J	See Miscellaneous
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	U	Method Blank Contamination
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
MW-7D:120116	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	COD	J	MS Recovery
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	OCDF	J	See Miscellaneous

Sample ID	Analyte	Qualifier	Reason
MW-8A:112816	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,7,8,9-HpCDF	U	Method Blank Contamination
	1,2,3,7,8-PeCDF	J	See Miscellaneous
	2,3,4,7,8-PeCDF	J	See Miscellaneous
	2,3,7,8-TCDF	U	Method Blank Contamination
	Diesel-range hydrocarbons	U	Method Blank Contamination
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	Dissolved iron	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
	Total silver	U	Method Blank Contamination
MW-8B:112816	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	Diesel-range hydrocarbons	U	Method Blank Contamination
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	Dissolved iron	U	Method Blank Contamination
	Total mercury	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
	Total silver	U	Method Blank Contamination
MW-9A:113016	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	Ammonia (as N)	J	MS Recovery
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	All organophosphorus pesticides target analytes	UJ	Surrogate Recovery
MW-11A:112816	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	Total mercury	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
MW-12A:113016	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	2,3,7,8-TCDF	J	See Miscellaneous
	Gasoline-range hydrocarbons	U	Method Blank Contamination
	Total mercury	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination

Sample ID	Analyte	Qualifier	Reason
MW-DUP:113016	1,2,3,6,7,8-HxCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF 2,3,4,7,8-PeCDF Gasoline-range hydrocarbons OCDF Total selenium All organophosphorus pesticides target analytes	J J U J U U U UJ	See Miscellaneous See Miscellaneous Method Blank Contamination See Miscellaneous Method Blank Contamination Method Blank Contamination Method Blank Contamination Surrogate Recovery
MW-14:113016	1,2,3,6,7,8-HxCDD 1,2,3,6,7,8-HxCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF Gasoline-range hydrocarbons Total mercury OCDD All organophosphorus pesticides target analytes	J J J U U U U UJ	See Miscellaneous See Miscellaneous See Miscellaneous Method Blank Contamination Method Blank Contamination Method Blank Contamination Method Blank Contamination Surrogate Recovery
MW-15:113016	1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF Gasoline-range hydrocarbons Total mercury OCDF All organophosphorus pesticides target analytes	U J U U U UJ	Method Blank Contamination See Miscellaneous Method Blank Contamination Method Blank Contamination Method Blank Contamination Surrogate Recovery
MW-15A:120116	Gasoline-range hydrocarbons OCDD OCDF	U U J	Method Blank Contamination Method Blank Contamination See Miscellaneous
MW-16:113016	1,2,3,4,6,7,8-HpCDD Gasoline-range hydrocarbons Total mercury OCDD All organophosphorus pesticides target analytes	U U U U UJ	Method Blank Contamination Method Blank Contamination Method Blank Contamination Method Blank Contamination Surrogate Recovery
MW-16A:113016	1,2,3,4,6,7,8-HpCDD 1,2,3,4,6,7,8-HpCDF 2,3,7,8-TCDF Gasoline-range hydrocarbons Total mercury OCDD All organophosphorus pesticides target analytes	U J J U U U UJ	Method Blank Contamination See Miscellaneous See Miscellaneous Method Blank Contamination Method Blank Contamination Method Blank Contamination Surrogate Recovery

Sample ID	Analyte	Qualifier	Reason
SW-1:113016	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	2,3,4,6,7,8-HxCDF	U	Method Blank Contamination
	Dissolved iron	U	Method Blank Contamination
	OCDF	U	Method Blank Contamination
	Total selenium	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5079-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/21/2016 9:06:01 AM

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LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5079-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 11/29/2016 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8º C.

Receipt Exceptions
A 250ml NaOH preserved poly and a 1 Liter unpreserved amber were received without a sample ID, collection date or time listed on the container. The samples were identified by the process of elimination: MW-8A:112816 (590-5079-1) and MW-11A:112816 (590-5079-3).

GC/MS VOA
Method NWTPH-Gx: The method blank for analytical batch 590-9881 contained Gasoline above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-234074 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The method blank for preparation batch 580-233897 and analytical batch 580-234074 contained Anthracene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) associated with batch 280-354373 recovered above the upper control limit for 2,4,5-T, 2,4-D, 2,4-DB, 2,4-Dichlorophenylacetic acid, Dalapon, Dicamba, Dichlorprop, MCPA, MCPP, and Silvex (2,4,5-TP) on the primary column. Recoveries on the confirmation column were in control. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported: MW-8A:112816 (590-5079-1), MW-8B:112816 (590-5079-2), MW-11A:112816 (590-5079-3), MW-4A:112816 (590-5079-4), (CCV 280-354373/19), (CCV 280-354373/30), (CCVRT 280-354373/8), (LCS 280-353896/2-A), (LCSD 280-353896/3-A) and (MB 280-353896/1-A)

Method 8141B: The surrogate, chlormefos, recovered below the lower control limit on both columns: MW-4A:112816 (590-5079-4).

Method 8141B: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-354183 and analytical batch 280-355174 recovered outside control limits for the following analytes: Chlormefos, Coumaphos, Dichlorvos, and Azinphos-methyl. Azinphos-methyl was biased high in the LCSD and was not detected in the associated samples. Coumaphos was biased high in the LCS and LCSD and was not detected in the associated samples. Dichlorvos was biased high in the LCS and biased low in the LCSD. The surrogate, chlormefos, was low in the LCSD.

Method 8141B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 280-354183 recovered outside control limits for the following analytes: Mevinphos.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-355174 recovered outside acceptance criteria, low biased, for Atrazine, Simazine and Propazine. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8081B: The method blank for preparation batch 580-233792 and analytical batch 580-234067 contained gamma-Chlordane and alpha-Chlordane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8081B: The closing continuing calibration verification (CCV) associated with batch 580-234067 recovered above the upper control

Job ID: 590-5079-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

limit for Methoxychlor on the confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported: MW-8A:112816 (590-5079-1), MW-8B:112816 (590-5079-2), MW-11A:112816 (590-5079-3), MW-4A:112816 (590-5079-4) and (CCV 580-234067/56).

Method NWTPH-Dx: The method blank for preparation batch 590-9886 and analytical batch 590-9885 contained Diesel Range Organics (DRO) (C10-C25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 335.4: The laboratory control sample (LCS) for preparation batch 490-391174 and analytical batch 490-391486 recovered outside control limits for the following analyte: Cyanide, Total. The analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-353896.

Method 8141B_3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-354183.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5079-1	MW-8A:112816	Water	11/28/16 10:42	11/29/16 08:30
590-5079-2	MW-8B:112816	Water	11/28/16 12:20	11/29/16 08:30
590-5079-3	MW-11A:112816	Water	11/28/16 15:00	11/29/16 08:30
590-5079-4	MW-4A:112816	Water	11/28/16 15:00	11/29/16 08:30

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-8A:112816
Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 20:52	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 20:52	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 20:52	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 20:52	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 20:52	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 20:52	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 20:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 20:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 20:52	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 20:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 20:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 20:52	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 20:52	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 20:52	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 20:52	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 20:52	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 20:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 20:52	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 20:52	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 20:52	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 20:52	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 20:52	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 20:52	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 20:52	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 20:52	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 20:52	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 20:52	1
Acetone	ND		25	4.1	ug/L			12/02/16 20:52	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 20:52	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 20:52	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 20:52	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 20:52	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 20:52	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 20:52	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 20:52	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 20:52	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 20:52	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 20:52	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 20:52	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 20:52	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 20:52	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 20:52	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 20:52	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 20:52	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 20:52	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 20:52	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 20:52	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 20:52	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 20:52	1

Client Sample ID: MW-8A:112816
Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 20:52	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 20:52	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 20:52	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 20:52	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 20:52	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 20:52	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 20:52	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 20:52	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 20:52	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 20:52	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 20:52	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 20:52	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 20:52	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 20:52	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 20:52	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 20:52	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 20:52	1
Trichlorofluoromethane	**0.31**	**J**	1.0	0.20	ug/L			12/02/16 20:52	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 20:52	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 125*		*12/02/16 20:52*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*12/02/16 20:52*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/02/16 20:52*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/02/16 20:52*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**21**	**J B**	100	18	ug/L			12/02/16 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/02/16 20:52*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-8A:112816
Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 20:35	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/07/16 20:35	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/07/16 20:35	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzoic acid	ND		2.9	0.57	ug/L		12/05/16 16:00	12/07/16 20:35	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/07/16 20:35	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/05/16 16:00	12/07/16 20:35	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 20:35	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/05/16 16:00	12/07/16 20:35	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 20:35	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/07/16 20:35	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1

Client Sample ID: MW-8A:112816
Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 20:35	1
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:35	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*94*		*57 - 132*	*12/05/16 16:00*	*12/07/16 20:35*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/05/16 16:00*	*12/07/16 20:35*	*1*
2-Fluorophenol	*79*		*50 - 113*	*12/05/16 16:00*	*12/07/16 20:35*	*1*
Nitrobenzene-d5	*84*		*59 - 120*	*12/05/16 16:00*	*12/07/16 20:35*	*1*
Phenol-d5	*86*		*52 - 120*	*12/05/16 16:00*	*12/07/16 20:35*	*1*
Terphenyl-d14	*88*		*72 - 140*	*12/05/16 16:00*	*12/07/16 20:35*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 13:16	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0055	ug/L		12/03/16 15:20	12/07/16 00:29	1
4,4'-DDE	ND		0.018	0.0028	ug/L		12/03/16 15:20	12/07/16 00:29	1
4,4'-DDT	ND		0.028	0.0046	ug/L		12/03/16 15:20	12/07/16 00:29	1
Aldrin	ND		0.028	0.0065	ug/L		12/03/16 15:20	12/07/16 00:29	1
alpha-BHC	ND		0.028	0.0065	ug/L		12/03/16 15:20	12/07/16 00:29	1
alpha-Chlordane	ND		0.018	0.0028	ug/L		12/03/16 15:20	12/07/16 00:29	1
beta-BHC	ND		0.046	0.011	ug/L		12/03/16 15:20	12/07/16 00:29	1
delta-BHC	ND		0.046	0.0092	ug/L		12/03/16 15:20	12/07/16 00:29	1
Dieldrin	ND		0.028	0.0046	ug/L		12/03/16 15:20	12/07/16 00:29	1
Endosulfan I	ND		0.018	0.0028	ug/L		12/03/16 15:20	12/07/16 00:29	1
Endosulfan II	ND		0.018	0.0018	ug/L		12/03/16 15:20	12/07/16 00:29	1
Endosulfan sulfate	ND		0.018	0.0018	ug/L		12/03/16 15:20	12/07/16 00:29	1
Endrin	ND		0.018	0.0028	ug/L		12/03/16 15:20	12/07/16 00:29	1
Endrin aldehyde	ND		0.18	0.031	ug/L		12/03/16 15:20	12/07/16 00:29	1
Endrin ketone	ND		0.018	0.0018	ug/L		12/03/16 15:20	12/07/16 00:29	1
gamma-BHC (Lindane)	ND		0.028	0.0046	ug/L		12/03/16 15:20	12/07/16 00:29	1
gamma-Chlordane	ND		0.018	0.0028	ug/L		12/03/16 15:20	12/07/16 00:29	1
Heptachlor	ND		0.018	0.0037	ug/L		12/03/16 15:20	12/07/16 00:29	1
Heptachlor epoxide	ND		0.018	0.0028	ug/L		12/03/16 15:20	12/07/16 00:29	1
Methoxychlor	ND		0.092	0.0018	ug/L		12/03/16 15:20	12/07/16 00:29	1
Toxaphene	ND		0.92	0.20	ug/L		12/03/16 15:20	12/07/16 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*22 - 150*	*12/03/16 15:20*	*12/07/16 00:29*	*1*
Tetrachloro-m-xylene	*67*		*40 - 113*	*12/03/16 15:20*	*12/07/16 00:29*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.094	0.059	ug/L		11/30/16 09:36	11/30/16 16:52	1
PCB-1221	ND		0.094	0.059	ug/L		11/30/16 09:36	11/30/16 16:52	1
PCB-1232	ND		0.094	0.059	ug/L		11/30/16 09:36	11/30/16 16:52	1
PCB-1242	ND		0.094	0.059	ug/L		11/30/16 09:36	11/30/16 16:52	1

Client Sample ID: MW-8A:112816
Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.094	0.059	ug/L		11/30/16 09:36	11/30/16 16:52	1
PCB-1254	ND		0.094	0.059	ug/L		11/30/16 09:36	11/30/16 16:52	1
PCB-1260	ND		0.094	0.041	ug/L		11/30/16 09:36	11/30/16 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*20 - 120*	*11/30/16 09:36*	*11/30/16 16:52*	*1*
DCB Decachlorobiphenyl (Surr)	*100*		*36 - 138*	*11/30/16 09:36*	*11/30/16 16:52*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/12/16 20:54	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/12/16 20:54	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 09:51	12/12/16 20:54	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/12/16 20:54	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 09:51	12/12/16 20:54	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/12/16 20:54	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/12/16 20:54	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/12/16 20:54	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/12/16 20:54	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 09:51	12/12/16 20:54	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/12/16 20:54	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 09:51	12/12/16 20:54	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 09:51	12/12/16 20:54	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/12/16 20:54	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/12/16 20:54	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/12/16 20:54	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/12/16 20:54	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/12/16 20:54	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 09:51	12/12/16 20:54	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 20:54	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 09:51	12/12/16 20:54	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 09:51	12/12/16 20:54	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/12/16 20:54	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 09:51	12/12/16 20:54	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/12/16 20:54	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/12/16 20:54	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/12/16 20:54	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/12/16 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*76*		*49 - 171*	*12/05/16 09:51*	*12/12/16 20:54*	*1*
Triphenylphosphate	*118*		*60 - 154*	*12/05/16 09:51*	*12/12/16 20:54*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/01/16 16:20	12/06/16 19:46	1
2,4-D	ND		3.8	0.20	ug/L		12/01/16 16:20	12/06/16 19:46	1
2,4-DB	ND		3.8	0.34	ug/L		12/01/16 16:20	12/06/16 19:46	1
Dalapon	ND		1.9	0.87	ug/L		12/01/16 16:20	12/06/16 19:46	1
Dicamba	ND		1.9	0.14	ug/L		12/01/16 16:20	12/06/16 19:46	1

Client Sample ID: MW-8A:112816
Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		12/01/16 16:20	12/06/16 19:46	1
MCPA	ND		380	16	ug/L		12/01/16 16:20	12/06/16 19:46	1
MCPP	ND		380	31	ug/L		12/01/16 16:20	12/06/16 19:46	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/01/16 16:20	12/06/16 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*79*		*39 - 135*	*12/01/16 16:20*	*12/06/16 19:46*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.047**	**J B**	0.12	0.040	mg/L		12/05/16 10:22	12/05/16 13:51	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*12/05/16 10:22*	*12/05/16 13:51*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 13:51*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.6**		0.80	0.42	mg/L			11/29/16 13:47	1
Nitrate as N	**1.2**		0.20	0.039	mg/L			11/29/16 13:47	1
Nitrite as N	ND		0.20	0.069	mg/L			11/29/16 13:47	1
Sulfate	**9.3**		0.50	0.13	mg/L			11/29/16 13:47	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.26	pg/L		12/02/16 11:20	12/06/16 17:00	1
2,3,7,8-TCDF	**2.6**	**J B**	9.5	0.21	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,7,8-PeCDD	ND		48	0.36	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,7,8-PeCDF	**0.88**	**J q**	48	0.36	pg/L		12/02/16 11:20	12/06/16 17:00	1
2,3,4,7,8-PeCDF	**1.3**	**J q**	48	0.37	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,4,7,8-HxCDD	**0.80**	**J**	48	0.21	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,6,7,8-HxCDD	**1.4**	**J**	48	0.22	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,7,8,9-HxCDD	**1.4**	**J B**	48	0.18	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,4,7,8-HxCDF	**6.7**	**J**	48	0.49	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,6,7,8-HxCDF	**3.4**	**J**	48	0.46	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,7,8,9-HxCDF	**0.61**	**J**	48	0.51	pg/L		12/02/16 11:20	12/06/16 17:00	1
2,3,4,6,7,8-HxCDF	**3.8**	**J B**	48	0.49	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,4,6,7,8-HpCDD	**17**	**J B**	48	0.26	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,4,6,7,8-HpCDF	**35**	**J B**	48	0.27	pg/L		12/02/16 11:20	12/06/16 17:00	1
1,2,3,4,7,8,9-HpCDF	**6.1**	**J B**	48	0.32	pg/L		12/02/16 11:20	12/06/16 17:00	1
OCDD	**74**	**J B**	95	0.24	pg/L		12/02/16 11:20	12/06/16 17:00	1
OCDF	**110**	**B**	95	0.36	pg/L		12/02/16 11:20	12/06/16 17:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*91*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-2,3,7,8-TCDF	*87*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-1,2,3,7,8-PeCDD	*95*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-1,2,3,7,8-PeCDF	*94*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*

Client Sample ID: MW-8A:112816

Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*98*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*111*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*103*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*
13C-OCDD	*98*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:00*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00061**	**J**	0.0010	0.00027	mg/L		12/09/16 11:50	12/09/16 17:21	1
Antimony	**0.00034**	**J**	0.00040	0.000080	mg/L		12/09/16 11:50	12/09/16 17:21	1
Barium	**0.032**		0.0012	0.000054	mg/L		12/09/16 11:50	12/09/16 17:21	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 11:50	12/09/16 17:21	1
Cadmium	**0.000071**	**J**	0.00040	0.000028	mg/L		12/09/16 11:50	12/09/16 17:21	1
Chromium	**0.00046**		0.00040	0.00014	mg/L		12/09/16 11:50	12/09/16 17:21	1
Copper	**0.0049**		0.0020	0.00060	mg/L		12/09/16 11:50	12/09/16 17:21	1
Iron	**0.0099**	**J**	0.040	0.0058	mg/L		12/09/16 11:50	12/09/16 17:21	1
Lead	**0.00052**		0.00040	0.000034	mg/L		12/09/16 11:50	12/09/16 17:21	1
Manganese	ND		0.0020	0.00035	mg/L		12/09/16 11:50	12/09/16 17:21	1
Nickel	**0.0018**	**J**	0.0030	0.00040	mg/L		12/09/16 11:50	12/09/16 17:21	1
Selenium	**0.00048**	**J**	0.0010	0.00030	mg/L		12/09/16 11:50	12/09/16 17:21	1
Silver	**0.000051**	**J B**	0.00040	0.000030	mg/L		12/09/16 11:50	12/09/16 17:21	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 11:50	12/09/16 17:21	1
Vanadium	**0.0023**	**J**	0.0040	0.00098	mg/L		12/09/16 11:50	12/09/16 17:21	1
Zinc	**0.013**		0.0070	0.0019	mg/L		12/09/16 11:50	12/09/16 17:21	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00038**	**J**	0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 21:12	1
Antimony	**0.00040**		0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 21:12	1
Barium	**0.033**	**B**	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 21:12	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 21:12	1
Cadmium	**0.000067**	**J**	0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 21:12	1
Chromium	**0.00048**		0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 21:12	1
Copper	**0.0048**		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 21:12	1
Iron	**0.0058**	**J B**	0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 21:12	1
Lead	**0.00050**		0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 21:12	1
Manganese	ND		0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 21:12	1
Nickel	**0.0021**	**J**	0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 21:12	1
Selenium	**0.00087**	**J B**	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 21:12	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 21:12	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 21:12	1
Vanadium	**0.0019**	**J**	0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 21:12	1
Zinc	**0.015**		0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 21:12	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:38	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:31	1

Client Sample ID: MW-8A:112816

Lab Sample ID: 590-5079-1
Date Collected: 11/28/16 10:42
Matrix: Water
Date Received: 11/29/16 08:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	*	0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 20:26	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/01/16 10:41	12/05/16 13:29	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/08/16 21:29	1
Total Organic Carbon	**0.59**	**J**	1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			11/30/16 12:00	1
Escherichia coli	**0.00**				MPN/100mL			11/30/16 12:00	1

Client Sample ID: MW-8B:112816

Lab Sample ID: 590-5079-2
Date Collected: 11/28/16 12:20
Matrix: Water
Date Received: 11/29/16 08:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 21:35	1
1,1,1-Trichloroethane	**0.32**	**J**	1.0	0.29	ug/L			12/02/16 21:35	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 21:35	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 21:35	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 21:35	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 21:35	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 21:35	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 21:35	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 21:35	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 21:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 21:35	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 21:35	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 21:35	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 21:35	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 21:35	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 21:35	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 21:35	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 21:35	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 21:35	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 21:35	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 21:35	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 21:35	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 21:35	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 21:35	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 21:35	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 21:35	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 21:35	1
Acetone	ND		25	4.1	ug/L			12/02/16 21:35	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 21:35	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 21:35	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 21:35	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 21:35	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 21:35	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 21:35	1

Client Sample ID: MW-8B:112816
Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 21:35	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 21:35	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 21:35	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 21:35	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 21:35	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 21:35	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 21:35	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 21:35	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 21:35	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 21:35	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 21:35	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 21:35	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 21:35	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 21:35	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 21:35	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 21:35	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 21:35	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 21:35	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 21:35	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 21:35	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 21:35	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 21:35	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 21:35	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 21:35	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 21:35	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 21:35	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 21:35	1
Tetrachloroethene	**0.67**	**J**	1.0	0.45	ug/L			12/02/16 21:35	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 21:35	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 21:35	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 21:35	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 21:35	1
Trichlorofluoromethane	**0.40**	**J**	1.0	0.20	ug/L			12/02/16 21:35	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 21:35	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/02/16 21:35*	*1*
4-Bromofluorobenzene (Surr)	*106*		*69 - 120*		*12/02/16 21:35*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/02/16 21:35*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/02/16 21:35*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**22**	**J B**	100	18	ug/L			12/02/16 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*12/02/16 21:35*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-8B:112816
Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 20:59	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/07/16 20:59	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
4-Nitrophenol	ND		2.8	0.95	ug/L		12/05/16 16:00	12/07/16 20:59	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzoic acid	**0.73**	**J**	2.8	0.57	ug/L		12/05/16 16:00	12/07/16 20:59	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Bis(2-ethylhexyl) phthalate	ND		2.8	1.1	ug/L		12/05/16 16:00	12/07/16 20:59	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/05/16 16:00	12/07/16 20:59	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 20:59	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-8B:112816
Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/05/16 16:00	12/07/16 20:59	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 20:59	1
Fluoranthene	ND		0.047	0.012	ug/L		12/05/16 16:00	12/07/16 20:59	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Pentachlorophenol	ND		0.66	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 20:59	1
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 20:59	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 20:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*57 - 132*	*12/05/16 16:00*	*12/07/16 20:59*	*1*
2-Fluorobiphenyl	*78*		*50 - 120*	*12/05/16 16:00*	*12/07/16 20:59*	*1*
2-Fluorophenol	*77*		*50 - 113*	*12/05/16 16:00*	*12/07/16 20:59*	*1*
Nitrobenzene-d5	*84*		*59 - 120*	*12/05/16 16:00*	*12/07/16 20:59*	*1*
Phenol-d5	*86*		*52 - 120*	*12/05/16 16:00*	*12/07/16 20:59*	*1*
Terphenyl-d14	*93*		*72 - 140*	*12/05/16 16:00*	*12/07/16 20:59*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 13:39	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		12/03/16 15:20	12/07/16 00:48	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 00:48	1
4,4'-DDT	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 00:48	1
Aldrin	ND		0.029	0.0068	ug/L		12/03/16 15:20	12/07/16 00:48	1
alpha-BHC	ND		0.029	0.0068	ug/L		12/03/16 15:20	12/07/16 00:48	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 00:48	1
beta-BHC	ND		0.048	0.012	ug/L		12/03/16 15:20	12/07/16 00:48	1
delta-BHC	ND		0.048	0.0097	ug/L		12/03/16 15:20	12/07/16 00:48	1
Dieldrin	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 00:48	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 00:48	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 00:48	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 00:48	1
Endrin	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 00:48	1
Endrin aldehyde	ND		0.19	0.033	ug/L		12/03/16 15:20	12/07/16 00:48	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 00:48	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 00:48	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 00:48	1

Client Sample ID: MW-8B:112816
Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0039	ug/L		12/03/16 15:20	12/07/16 00:48	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 00:48	1
Methoxychlor	ND		0.097	0.0019	ug/L		12/03/16 15:20	12/07/16 00:48	1
Toxaphene	ND		0.97	0.21	ug/L		12/03/16 15:20	12/07/16 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*84*		*22 - 150*	*12/03/16 15:20*	*12/07/16 00:48*	*1*
Tetrachloro-m-xylene	*70*		*40 - 113*	*12/03/16 15:20*	*12/07/16 00:48*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:13	1
PCB-1221	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:13	1
PCB-1232	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:13	1
PCB-1242	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:13	1
PCB-1248	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:13	1
PCB-1254	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:13	1
PCB-1260	ND		0.093	0.040	ug/L		11/30/16 09:36	11/30/16 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*20 - 120*	*11/30/16 09:36*	*11/30/16 17:13*	*1*
DCB Decachlorobiphenyl (Surr)	*89*		*36 - 138*	*11/30/16 09:36*	*11/30/16 17:13*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/12/16 21:25	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/12/16 21:25	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 09:51	12/12/16 21:25	1
Chlorpyrifos	ND		1.4	0.34	ug/L		12/05/16 09:51	12/12/16 21:25	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 09:51	12/12/16 21:25	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/12/16 21:25	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/12/16 21:25	1
Dichlorvos	ND	*	0.48	0.15	ug/L		12/05/16 09:51	12/12/16 21:25	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/12/16 21:25	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 09:51	12/12/16 21:25	1
EPN	ND		1.1	0.14	ug/L		12/05/16 09:51	12/12/16 21:25	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 09:51	12/12/16 21:25	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 09:51	12/12/16 21:25	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/12/16 21:25	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/12/16 21:25	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/12/16 21:25	1
Methyl parathion	ND		3.8	0.13	ug/L		12/05/16 09:51	12/12/16 21:25	1
Mevinphos	ND	*	5.9	0.44	ug/L		12/05/16 09:51	12/12/16 21:25	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 09:51	12/12/16 21:25	1
Phorate	ND		1.1	0.15	ug/L		12/05/16 09:51	12/12/16 21:25	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 09:51	12/12/16 21:25	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 09:51	12/12/16 21:25	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/12/16 21:25	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 09:51	12/12/16 21:25	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/12/16 21:25	1

Client Sample ID: MW-8B:112816
Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/12/16 21:25	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/12/16 21:25	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/12/16 21:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*114*		*49 - 171*	*12/05/16 09:51*	*12/12/16 21:25*	*1*
Triphenylphosphate	*132*		*60 - 154*	*12/05/16 09:51*	*12/12/16 21:25*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/01/16 16:20	12/06/16 20:09	1
2,4-D	ND		3.8	0.20	ug/L		12/01/16 16:20	12/06/16 20:09	1
2,4-DB	ND		3.8	0.34	ug/L		12/01/16 16:20	12/06/16 20:09	1
Dalapon	ND		1.9	0.87	ug/L		12/01/16 16:20	12/06/16 20:09	1
Dicamba	ND		1.9	0.14	ug/L		12/01/16 16:20	12/06/16 20:09	1
Dichlorprop	ND		3.8	0.62	ug/L		12/01/16 16:20	12/06/16 20:09	1
MCPA	ND		380	16	ug/L		12/01/16 16:20	12/06/16 20:09	1
MCPP	ND		380	31	ug/L		12/01/16 16:20	12/06/16 20:09	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/01/16 16:20	12/06/16 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*	*12/01/16 16:20*	*12/06/16 20:09*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.046**	**J B**	0.12	0.040	mg/L		12/05/16 10:22	12/05/16 14:09	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.059	mg/L		12/05/16 10:22	12/05/16 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*12/05/16 10:22*	*12/05/16 14:09*	*1*
n-Triacontane-d62	*83*		*50 - 150*	*12/05/16 10:22*	*12/05/16 14:09*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17**		0.80	0.42	mg/L			11/29/16 14:21	1
Nitrate as N	**2.9**		0.20	0.039	mg/L			11/29/16 14:21	1
Nitrite as N	ND		0.20	0.069	mg/L			11/29/16 14:21	1
Sulfate	**20**		0.50	0.13	mg/L			11/29/16 14:21	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.30	pg/L		12/02/16 11:20	12/06/16 17:46	1
2,3,7,8-TCDF	ND		9.5	0.19	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,7,8-PeCDD	ND		48	0.32	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,7,8-PeCDF	ND		48	0.22	pg/L		12/02/16 11:20	12/06/16 17:46	1
2,3,4,7,8-PeCDF	ND		48	0.23	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,4,7,8-HxCDD	ND		48	0.17	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,6,7,8-HxCDD	ND		48	0.18	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,7,8,9-HxCDD	ND		48	0.15	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,4,7,8-HxCDF	ND		48	0.21	pg/L		12/02/16 11:20	12/06/16 17:46	1

Client Sample ID: MW-8B:112816

Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		48	0.20	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,7,8,9-HxCDF	ND		48	0.22	pg/L		12/02/16 11:20	12/06/16 17:46	1
2,3,4,6,7,8-HxCDF	ND		48	0.21	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,4,6,7,8-HpCDD	**1.1**	**J B**	48	0.17	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,4,6,7,8-HpCDF	**1.1**	**J B**	48	0.17	pg/L		12/02/16 11:20	12/06/16 17:46	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.20	pg/L		12/02/16 11:20	12/06/16 17:46	1
OCDD	**5.2**	**J B**	95	0.19	pg/L		12/02/16 11:20	12/06/16 17:46	1
OCDF	**3.8**	**J B**	95	0.32	pg/L		12/02/16 11:20	12/06/16 17:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-2,3,7,8-TCDF	*85*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-1,2,3,7,8-PeCDD	*93*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-1,2,3,7,8-PeCDF	*96*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-1,2,3,6,7,8-HxCDD	*96*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-1,2,3,4,7,8-HxCDF	*94*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*100*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*100*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*
13C-OCDD	*87*		*40 - 135*	*12/02/16 11:20*	*12/06/16 17:46*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0013**		0.0010	0.00027	mg/L		12/09/16 11:50	12/09/16 17:25	1
Antimony	**0.000097**	**J**	0.00040	0.000080	mg/L		12/09/16 11:50	12/09/16 17:25	1
Barium	**0.18**		0.0012	0.000054	mg/L		12/09/16 11:50	12/09/16 17:25	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 11:50	12/09/16 17:25	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 11:50	12/09/16 17:25	1
Chromium	**0.00045**		0.00040	0.00014	mg/L		12/09/16 11:50	12/09/16 17:25	1
Copper	**0.0010**	**J**	0.0020	0.00060	mg/L		12/09/16 11:50	12/09/16 17:25	1
Iron	**0.44**		0.040	0.0058	mg/L		12/09/16 11:50	12/09/16 17:25	1
Lead	**0.00061**		0.00040	0.000034	mg/L		12/09/16 11:50	12/09/16 17:25	1
Manganese	**0.030**		0.0020	0.00035	mg/L		12/09/16 11:50	12/09/16 17:25	1
Nickel	**0.00084**	**J**	0.0030	0.00040	mg/L		12/09/16 11:50	12/09/16 17:25	1
Selenium	**0.00040**	**J**	0.0010	0.00030	mg/L		12/09/16 11:50	12/09/16 17:25	1
Silver	**0.000097**	**J B**	0.00040	0.000030	mg/L		12/09/16 11:50	12/09/16 17:25	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 11:50	12/09/16 17:25	1
Vanadium	**0.0036**	**J**	0.0040	0.00098	mg/L		12/09/16 11:50	12/09/16 17:25	1
Zinc	**0.0022**	**J**	0.0070	0.0019	mg/L		12/09/16 11:50	12/09/16 17:25	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00096**	**J**	0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 21:16	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 21:16	1
Barium	**0.19**	**B**	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 21:16	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 21:16	1
Cadmium	ND		0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 21:16	1
Chromium	**0.00029**	**J**	0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 21:16	1
Copper	ND		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 21:16	1
Iron	**0.0061**	**J B**	0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 21:16	1
Lead	**0.000035**	**J**	0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 21:16	1
Manganese	ND		0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 21:16	1

Client Sample ID: MW-8B:112816

Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.00046**	**J**	0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 21:16	1
Selenium	**0.00086**	**J B**	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 21:16	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 21:16	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 21:16	1
Vanadium	**0.0028**	**J**	0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 21:16	1
Zinc	ND		0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 21:16	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000063**	**J B**	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:44	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	*	0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 20:29	1
Ammonia (as N)	**0.15**		0.10	0.060	mg/L		12/01/16 10:41	12/05/16 13:30	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/08/16 21:29	1
Total Organic Carbon	**1.1**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			11/30/16 12:00	1
Escherichia coli	**0.00**				MPN/100mL			11/30/16 12:00	1

Client Sample ID: MW-11A:112816

Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 21:56	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 21:56	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 21:56	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 21:56	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 21:56	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 21:56	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 21:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 21:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 21:56	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 21:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 21:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 21:56	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 21:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 21:56	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 21:56	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 21:56	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 21:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 21:56	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 21:56	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 21:56	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 21:56	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 21:56	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 21:56	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 21:56	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 21:56	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 21:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 21:56	1
Acetone	ND		25	4.1	ug/L			12/02/16 21:56	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 21:56	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 21:56	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 21:56	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 21:56	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 21:56	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 21:56	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 21:56	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 21:56	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 21:56	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 21:56	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 21:56	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 21:56	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 21:56	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 21:56	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 21:56	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 21:56	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 21:56	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 21:56	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 21:56	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 21:56	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 21:56	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 21:56	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 21:56	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 21:56	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 21:56	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 21:56	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 21:56	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 21:56	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 21:56	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 21:56	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 21:56	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 21:56	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 21:56	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 21:56	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 21:56	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 21:56	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 21:56	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 21:56	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 21:56	1

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 21:56	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*12/02/16 21:56*	*1*
4-Bromofluorobenzene (Surr)	*105*		*69 - 120*		*12/02/16 21:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/02/16 21:56*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/02/16 21:56*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	19	J B	100	18	ug/L			12/02/16 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*12/02/16 21:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
1,2-Dichlorobenzene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
1,3-Dichlorobenzene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
1,4-Dichlorobenzene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,4,5-Trichlorophenol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,4,6-Trichlorophenol	ND		0.57	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,4-Dichlorophenol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,4-Dinitrophenol	ND		4.7	0.94	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,4-Dinitrotoluene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2,6-Dinitrotoluene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
2-Chlorophenol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
2-Methylphenol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2-Nitroaniline	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
2-Nitrophenol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
3 & 4 Methylphenol	ND		0.76	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
3,3'-Dichlorobenzidine	ND		1.9	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 21:24	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.94	ug/L		12/05/16 16:00	12/07/16 21:24	1
4-Bromophenyl phenyl ether	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
4-Chloro-3-methylphenol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
4-Chloroaniline	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
4-Chlorophenyl phenyl ether	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
4-Nitroaniline	ND		0.57	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
4-Nitrophenol	ND		2.8	0.94	ug/L		12/05/16 16:00	12/07/16 21:24	1
Acenaphthene	ND		0.094	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Anthracene	ND		0.038	0.0094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Benzoic acid	**0.77**	**J**	2.8	0.57	ug/L		12/05/16 16:00	12/07/16 21:24	1
Benzyl alcohol	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
bis (2-chloroisopropyl) ether	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Bis(2-chloroethoxy)methane	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Bis(2-chloroethyl)ether	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Bis(2-ethylhexyl) phthalate	ND		2.8	1.1	ug/L		12/05/16 16:00	12/07/16 21:24	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/05/16 16:00	12/07/16 21:24	1
Carbazole	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 21:24	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Dibenzofuran	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Diethyl phthalate	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Dimethyl phthalate	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		12/05/16 16:00	12/07/16 21:24	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 21:24	1
Fluoranthene	ND		0.047	0.012	ug/L		12/05/16 16:00	12/07/16 21:24	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Hexachlorobenzene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Hexachlorobutadiene	ND		0.57	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Hexachlorocyclopentadiene	ND		1.9	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Hexachloroethane	ND		0.57	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Isophorone	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Naphthalene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Nitrobenzene	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
N-Nitrosodi-n-propylamine	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
N-Nitrosodiphenylamine	ND		0.38	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Pentachlorophenol	ND		0.66	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 21:24	1
Phenol	ND		0.57	0.094	ug/L		12/05/16 16:00	12/07/16 21:24	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*94*		*57 - 132*	*12/05/16 16:00*	*12/07/16 21:24*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/05/16 16:00*	*12/07/16 21:24*	*1*
2-Fluorophenol	*74*		*50 - 113*	*12/05/16 16:00*	*12/07/16 21:24*	*1*
Nitrobenzene-d5	*88*		*59 - 120*	*12/05/16 16:00*	*12/07/16 21:24*	*1*
Phenol-d5	*80*		*52 - 120*	*12/05/16 16:00*	*12/07/16 21:24*	*1*
Terphenyl-d14	*95*		*72 - 140*	*12/05/16 16:00*	*12/07/16 21:24*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 14:02	1

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.032	0.0065	ug/L		12/03/16 15:20	12/07/16 01:07	1
4,4'-DDE	ND		0.022	0.0032	ug/L		12/03/16 15:20	12/07/16 01:07	1
4,4'-DDT	ND		0.032	0.0054	ug/L		12/03/16 15:20	12/07/16 01:07	1
Aldrin	ND		0.032	0.0076	ug/L		12/03/16 15:20	12/07/16 01:07	1
alpha-BHC	ND		0.032	0.0076	ug/L		12/03/16 15:20	12/07/16 01:07	1
alpha-Chlordane	ND		0.022	0.0032	ug/L		12/03/16 15:20	12/07/16 01:07	1
beta-BHC	ND		0.054	0.013	ug/L		12/03/16 15:20	12/07/16 01:07	1
delta-BHC	ND		0.054	0.011	ug/L		12/03/16 15:20	12/07/16 01:07	1
Dieldrin	ND		0.032	0.0054	ug/L		12/03/16 15:20	12/07/16 01:07	1
Endosulfan I	ND		0.022	0.0032	ug/L		12/03/16 15:20	12/07/16 01:07	1
Endosulfan II	ND		0.022	0.0022	ug/L		12/03/16 15:20	12/07/16 01:07	1
Endosulfan sulfate	ND		0.022	0.0022	ug/L		12/03/16 15:20	12/07/16 01:07	1
Endrin	ND		0.022	0.0032	ug/L		12/03/16 15:20	12/07/16 01:07	1
Endrin aldehyde	ND		0.22	0.037	ug/L		12/03/16 15:20	12/07/16 01:07	1
Endrin ketone	ND		0.022	0.0022	ug/L		12/03/16 15:20	12/07/16 01:07	1
gamma-BHC (Lindane)	ND		0.032	0.0054	ug/L		12/03/16 15:20	12/07/16 01:07	1
gamma-Chlordane	ND		0.022	0.0032	ug/L		12/03/16 15:20	12/07/16 01:07	1
Heptachlor	ND		0.022	0.0043	ug/L		12/03/16 15:20	12/07/16 01:07	1
Heptachlor epoxide	ND		0.022	0.0032	ug/L		12/03/16 15:20	12/07/16 01:07	1
Methoxychlor	ND		0.11	0.0022	ug/L		12/03/16 15:20	12/07/16 01:07	1
Toxaphene	ND		1.1	0.24	ug/L		12/03/16 15:20	12/07/16 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*85*		*22 - 150*	*12/03/16 15:20*	*12/07/16 01:07*	*1*
Tetrachloro-m-xylene	*72*		*40 - 113*	*12/03/16 15:20*	*12/07/16 01:07*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.064	ug/L		11/30/16 09:36	11/30/16 17:34	1
PCB-1221	ND		0.10	0.064	ug/L		11/30/16 09:36	11/30/16 17:34	1
PCB-1232	ND		0.10	0.064	ug/L		11/30/16 09:36	11/30/16 17:34	1
PCB-1242	ND		0.10	0.064	ug/L		11/30/16 09:36	11/30/16 17:34	1
PCB-1248	ND		0.10	0.064	ug/L		11/30/16 09:36	11/30/16 17:34	1
PCB-1254	ND		0.10	0.064	ug/L		11/30/16 09:36	11/30/16 17:34	1
PCB-1260	ND		0.10	0.044	ug/L		11/30/16 09:36	11/30/16 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*20 - 120*	*11/30/16 09:36*	*11/30/16 17:34*	*1*
DCB Decachlorobiphenyl (Surr)	*98*		*36 - 138*	*11/30/16 09:36*	*11/30/16 17:34*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/12/16 21:57	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/12/16 21:57	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 09:51	12/12/16 21:57	1
Chlorpyrifos	ND		1.5	0.35	ug/L		12/05/16 09:51	12/12/16 21:57	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 09:51	12/12/16 21:57	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/12/16 21:57	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/12/16 21:57	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/12/16 21:57	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.43	ug/L		12/05/16 09:51	12/12/16 21:57	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 09:51	12/12/16 21:57	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/12/16 21:57	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 09:51	12/12/16 21:57	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 09:51	12/12/16 21:57	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/12/16 21:57	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/12/16 21:57	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/12/16 21:57	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/12/16 21:57	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/12/16 21:57	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 09:51	12/12/16 21:57	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 21:57	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 09:51	12/12/16 21:57	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 09:51	12/12/16 21:57	1
Sulfotepp	ND		1.5	0.16	ug/L		12/05/16 09:51	12/12/16 21:57	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 09:51	12/12/16 21:57	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/12/16 21:57	1
Trichloronate	ND		1.5	0.23	ug/L		12/05/16 09:51	12/12/16 21:57	1
Ethoprop	ND		1.5	0.17	ug/L		12/05/16 09:51	12/12/16 21:57	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/12/16 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*73*		*49 - 171*	*12/05/16 09:51*	*12/12/16 21:57*	*1*
Triphenylphosphate	*84*		*60 - 154*	*12/05/16 09:51*	*12/12/16 21:57*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/01/16 16:20	12/06/16 20:32	1
2,4-D	ND		3.8	0.20	ug/L		12/01/16 16:20	12/06/16 20:32	1
2,4-DB	ND		3.8	0.34	ug/L		12/01/16 16:20	12/06/16 20:32	1
Dalapon	ND		1.9	0.87	ug/L		12/01/16 16:20	12/06/16 20:32	1
Dicamba	ND		1.9	0.14	ug/L		12/01/16 16:20	12/06/16 20:32	1
Dichlorprop	ND		3.8	0.62	ug/L		12/01/16 16:20	12/06/16 20:32	1
MCPA	ND		380	16	ug/L		12/01/16 16:20	12/06/16 20:32	1
MCPP	ND		380	32	ug/L		12/01/16 16:20	12/06/16 20:32	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/01/16 16:20	12/06/16 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*66*		*39 - 135*	*12/01/16 16:20*	*12/06/16 20:32*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		12/05/16 10:22	12/05/16 14:27	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		12/05/16 10:22	12/05/16 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*12/05/16 10:22*	*12/05/16 14:27*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 14:27*	*1*

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.8**		0.80	0.42	mg/L			11/29/16 14:32	1
Nitrate as N	**3.0**		0.20	0.039	mg/L			11/29/16 14:32	1
Nitrite as N	ND		0.20	0.069	mg/L			11/29/16 14:32	1
Sulfate	**9.5**		0.50	0.13	mg/L			11/29/16 14:32	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8	0.33	pg/L		12/02/16 11:20	12/06/16 18:32	1
2,3,7,8-TCDF	ND		9.8	0.18	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,7,8-PeCDD	ND		49	0.34	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,7,8-PeCDF	ND		49	0.22	pg/L		12/02/16 11:20	12/06/16 18:32	1
2,3,4,7,8-PeCDF	ND		49	0.22	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,4,7,8-HxCDD	ND		49	0.19	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,6,7,8-HxCDD	ND		49	0.20	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,7,8,9-HxCDD	ND		49	0.16	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,4,7,8-HxCDF	ND		49	0.29	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,6,7,8-HxCDF	ND		49	0.27	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,7,8,9-HxCDF	ND		49	0.30	pg/L		12/02/16 11:20	12/06/16 18:32	1
2,3,4,6,7,8-HxCDF	ND		49	0.29	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,4,6,7,8-HpCDD	**0.98**	**J q B**	49	0.20	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,4,6,7,8-HpCDF	**1.6**	**J B**	49	0.19	pg/L		12/02/16 11:20	12/06/16 18:32	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.22	pg/L		12/02/16 11:20	12/06/16 18:32	1
OCDD	**4.8**	**J B**	98	0.18	pg/L		12/02/16 11:20	12/06/16 18:32	1
OCDF	**4.1**	**J q B**	98	0.35	pg/L		12/02/16 11:20	12/06/16 18:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*90*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-2,3,7,8-TCDF	*86*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-1,2,3,7,8-PeCDD	*92*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-1,2,3,7,8-PeCDF	*96*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-1,2,3,4,7,8-HxCDF	*95*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*
13C-OCDD	*87*		*40 - 135*	*12/02/16 11:20*	*12/06/16 18:32*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		12/09/16 11:50	12/09/16 17:30	1
Antimony	**0.00010**	**J**	0.00040	0.000080	mg/L		12/09/16 11:50	12/09/16 17:30	1
Barium	**0.077**		0.0012	0.000054	mg/L		12/09/16 11:50	12/09/16 17:30	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 11:50	12/09/16 17:30	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 11:50	12/09/16 17:30	1
Chromium	**0.00042**		0.00040	0.00014	mg/L		12/09/16 11:50	12/09/16 17:30	1
Copper	ND		0.0020	0.00060	mg/L		12/09/16 11:50	12/09/16 17:30	1
Iron	ND		0.040	0.0058	mg/L		12/09/16 11:50	12/09/16 17:30	1
Lead	ND		0.00040	0.000034	mg/L		12/09/16 11:50	12/09/16 17:30	1
Manganese	ND		0.0020	0.00035	mg/L		12/09/16 11:50	12/09/16 17:30	1
Nickel	ND		0.0030	0.00040	mg/L		12/09/16 11:50	12/09/16 17:30	1
Selenium	**0.00035**	**J**	0.0010	0.00030	mg/L		12/09/16 11:50	12/09/16 17:30	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 11:50	12/09/16 17:30	1

Client Sample ID: MW-11A:112816

Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 11:50	12/09/16 17:30	1
Vanadium	**0.0029**	**J**	0.0040	0.00098	mg/L		12/09/16 11:50	12/09/16 17:30	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 11:50	12/09/16 17:30	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 21:21	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 21:21	1
Barium	**0.080**	**B**	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 21:21	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 21:21	1
Cadmium	ND		0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 21:21	1
Chromium	**0.00042**		0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 21:21	1
Copper	ND		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 21:21	1
Iron	ND		0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 21:21	1
Lead	ND		0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 21:21	1
Manganese	ND		0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 21:21	1
Nickel	ND		0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 21:21	1
Selenium	**0.00063**	**J B**	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 21:21	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 21:21	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 21:21	1
Vanadium	**0.0027**	**J**	0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 21:21	1
Zinc	**0.0022**	**J**	0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 21:21	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000051**	**J B**	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:47	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	*	0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 20:28	1
Ammonia (as N)	**0.10**		0.10	0.060	mg/L		12/01/16 10:41	12/05/16 13:31	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/08/16 21:29	1
Total Organic Carbon	**0.64**	**J**	1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			11/30/16 12:00	1
Escherichia coli	**0.00**				MPN/100mL			11/30/16 12:00	1

Client Sample ID: MW-4A:112816

Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 22:18	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 22:18	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 22:18	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 22:18	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 22:18	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 22:18	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 22:18	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 22:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 22:18	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 22:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 22:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 22:18	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 22:18	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 22:18	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 22:18	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 22:18	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 22:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 22:18	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 22:18	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 22:18	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 22:18	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 22:18	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 22:18	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 22:18	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 22:18	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 22:18	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 22:18	1
Acetone	ND		25	4.1	ug/L			12/02/16 22:18	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 22:18	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 22:18	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 22:18	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 22:18	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 22:18	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 22:18	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 22:18	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 22:18	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 22:18	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 22:18	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 22:18	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 22:18	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 22:18	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 22:18	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 22:18	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 22:18	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 22:18	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 22:18	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 22:18	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 22:18	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 22:18	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 22:18	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 22:18	1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 22:18	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 22:18	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 22:18	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 22:18	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 22:18	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 22:18	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 22:18	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 22:18	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 22:18	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 22:18	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 22:18	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 22:18	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 22:18	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 22:18	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 22:18	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 22:18	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 22:18	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 125*		*12/02/16 22:18*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*12/02/16 22:18*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*12/02/16 22:18*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/02/16 22:18*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	23	J B	100	18	ug/L			12/02/16 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/02/16 22:18*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 21:48	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/07/16 21:48	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/07/16 21:48	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzoic acid	**0.85**	**J**	2.9	0.57	ug/L		12/05/16 16:00	12/07/16 21:48	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/07/16 21:48	1
Butyl benzyl phthalate	**0.20**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/07/16 21:48	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 21:48	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Di-n-butyl phthalate	**0.18**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/07/16 21:48	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 21:48	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/07/16 21:48	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 21:48	1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 21:48	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*57 - 132*	*12/05/16 16:00*	*12/07/16 21:48*	*1*
2-Fluorobiphenyl	*75*		*50 - 120*	*12/05/16 16:00*	*12/07/16 21:48*	*1*
2-Fluorophenol	*82*		*50 - 113*	*12/05/16 16:00*	*12/07/16 21:48*	*1*
Nitrobenzene-d5	*85*		*59 - 120*	*12/05/16 16:00*	*12/07/16 21:48*	*1*
Phenol-d5	*81*		*52 - 120*	*12/05/16 16:00*	*12/07/16 21:48*	*1*
Terphenyl-d14	*95*		*72 - 140*	*12/05/16 16:00*	*12/07/16 21:48*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 14:25	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0057	ug/L		12/03/16 15:20	12/07/16 01:26	1
4,4'-DDE	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:26	1
4,4'-DDT	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 01:26	1
Aldrin	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 01:26	1
alpha-BHC	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 01:26	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:26	1
beta-BHC	ND		0.047	0.011	ug/L		12/03/16 15:20	12/07/16 01:26	1
delta-BHC	ND		0.047	0.0094	ug/L		12/03/16 15:20	12/07/16 01:26	1
Dieldrin	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 01:26	1
Endosulfan I	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:26	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 01:26	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 01:26	1
Endrin	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:26	1
Endrin aldehyde	ND		0.19	0.032	ug/L		12/03/16 15:20	12/07/16 01:26	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 01:26	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 01:26	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:26	1
Heptachlor	ND		0.019	0.0038	ug/L		12/03/16 15:20	12/07/16 01:26	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:26	1
Methoxychlor	ND		0.094	0.0019	ug/L		12/03/16 15:20	12/07/16 01:26	1
Toxaphene	ND		0.94	0.21	ug/L		12/03/16 15:20	12/07/16 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*81*		*22 - 150*	*12/03/16 15:20*	*12/07/16 01:26*	*1*
Tetrachloro-m-xylene	*70*		*40 - 113*	*12/03/16 15:20*	*12/07/16 01:26*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:54	1
PCB-1221	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:54	1
PCB-1232	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:54	1
PCB-1242	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:54	1
PCB-1248	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:54	1
PCB-1254	ND		0.093	0.058	ug/L		11/30/16 09:36	11/30/16 17:54	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.093	0.040	ug/L		11/30/16 09:36	11/30/16 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*20 - 120*	*11/30/16 09:36*	*11/30/16 17:54*	*1*
DCB Decachlorobiphenyl (Surr)	*107*		*36 - 138*	*11/30/16 09:36*	*11/30/16 17:54*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/12/16 22:28	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/12/16 22:28	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 09:51	12/12/16 22:28	1
Chlorpyrifos	ND		1.5	0.35	ug/L		12/05/16 09:51	12/12/16 22:28	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 09:51	12/12/16 22:28	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/12/16 22:28	1
Diazinon	ND		0.49	0.14	ug/L		12/05/16 09:51	12/12/16 22:28	1
Dichlorvos	ND	*	0.49	0.16	ug/L		12/05/16 09:51	12/12/16 22:28	1
Dimethoate	ND		1.5	0.44	ug/L		12/05/16 09:51	12/12/16 22:28	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 09:51	12/12/16 22:28	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/12/16 22:28	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 09:51	12/12/16 22:28	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 09:51	12/12/16 22:28	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/12/16 22:28	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/12/16 22:28	1
Merphos	ND		4.9	0.17	ug/L		12/05/16 09:51	12/12/16 22:28	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/12/16 22:28	1
Mevinphos	ND	*	6.0	0.45	ug/L		12/05/16 09:51	12/12/16 22:28	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 09:51	12/12/16 22:28	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 22:28	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 09:51	12/12/16 22:28	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 09:51	12/12/16 22:28	1
Sulfotepp	ND		1.5	0.16	ug/L		12/05/16 09:51	12/12/16 22:28	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 09:51	12/12/16 22:28	1
Tokuthion	ND		1.6	0.12	ug/L		12/05/16 09:51	12/12/16 22:28	1
Trichloronate	ND		1.5	0.23	ug/L		12/05/16 09:51	12/12/16 22:28	1
Ethoprop	ND		1.5	0.17	ug/L		12/05/16 09:51	12/12/16 22:28	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/12/16 22:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*17*	*X*	*49 - 171*	*12/05/16 09:51*	*12/12/16 22:28*	*1*
Triphenylphosphate	*85*		*60 - 154*	*12/05/16 09:51*	*12/12/16 22:28*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/01/16 16:20	12/06/16 20:54	1
2,4-D	ND		3.8	0.20	ug/L		12/01/16 16:20	12/06/16 20:54	1
2,4-DB	ND		3.8	0.34	ug/L		12/01/16 16:20	12/06/16 20:54	1
Dalapon	ND		1.9	0.86	ug/L		12/01/16 16:20	12/06/16 20:54	1
Dicamba	ND		1.9	0.14	ug/L		12/01/16 16:20	12/06/16 20:54	1
Dichlorprop	ND		3.8	0.62	ug/L		12/01/16 16:20	12/06/16 20:54	1
MCPA	ND		380	16	ug/L		12/01/16 16:20	12/06/16 20:54	1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		380	31	ug/L		12/01/16 16:20	12/06/16 20:54	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/01/16 16:20	12/06/16 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*	*12/01/16 16:20*	*12/06/16 20:54*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 14:45	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 14:45*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/05/16 10:22*	*12/05/16 14:45*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23**		0.80	0.42	mg/L			11/29/16 14:54	1
Nitrate as N	**1.7**		0.20	0.039	mg/L			11/29/16 14:54	1
Nitrite as N	ND		0.20	0.069	mg/L			11/29/16 14:54	1
Sulfate	**15**		0.50	0.13	mg/L			11/29/16 14:54	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.33	pg/L		12/02/16 11:20	12/06/16 19:19	1
2,3,7,8-TCDF	ND		9.5	0.24	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,7,8-PeCDD	ND		48	0.34	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,7,8-PeCDF	ND		48	0.25	pg/L		12/02/16 11:20	12/06/16 19:19	1
2,3,4,7,8-PeCDF	ND		48	0.26	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,4,7,8-HxCDD	ND		48	0.18	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,6,7,8-HxCDD	ND		48	0.18	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,7,8,9-HxCDD	ND		48	0.15	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,4,7,8-HxCDF	ND		48	0.32	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,6,7,8-HxCDF	ND		48	0.31	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,7,8,9-HxCDF	ND		48	0.34	pg/L		12/02/16 11:20	12/06/16 19:19	1
2,3,4,6,7,8-HxCDF	ND		48	0.33	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,4,6,7,8-HpCDD	**0.85**	**J q B**	48	0.21	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,4,6,7,8-HpCDF	**1.6**	**J B**	48	0.22	pg/L		12/02/16 11:20	12/06/16 19:19	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.26	pg/L		12/02/16 11:20	12/06/16 19:19	1
OCDD	**4.1**	**J B**	95	0.21	pg/L		12/02/16 11:20	12/06/16 19:19	1
OCDF	**4.1**	**J B**	95	0.36	pg/L		12/02/16 11:20	12/06/16 19:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-2,3,7,8-TCDF	*74*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-1,2,3,7,8-PeCDD	*84*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-1,2,3,7,8-PeCDF	*82*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*84*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*88*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*

Client Sample ID: MW-4A:112816

Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDF	*83*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*
13C-OCDD	*74*		*40 - 135*	*12/02/16 11:20*	*12/06/16 19:19*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0024**		0.0010	0.00027	mg/L		12/09/16 11:50	12/09/16 17:34	1
Antimony	**0.00011**	**J**	0.00040	0.000080	mg/L		12/09/16 11:50	12/09/16 17:34	1
Barium	**0.028**		0.0012	0.000054	mg/L		12/09/16 11:50	12/09/16 17:34	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 11:50	12/09/16 17:34	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 11:50	12/09/16 17:34	1
Chromium	ND		0.00040	0.00014	mg/L		12/09/16 11:50	12/09/16 17:34	1
Copper	**0.0031**		0.0020	0.00060	mg/L		12/09/16 11:50	12/09/16 17:34	1
Iron	**0.0062**	**J**	0.040	0.0058	mg/L		12/09/16 11:50	12/09/16 17:34	1
Lead	**0.000042**	**J**	0.00040	0.000034	mg/L		12/09/16 11:50	12/09/16 17:34	1
Manganese	**0.0032**		0.0020	0.00035	mg/L		12/09/16 11:50	12/09/16 17:34	1
Nickel	**0.00058**	**J**	0.0030	0.00040	mg/L		12/09/16 11:50	12/09/16 17:34	1
Selenium	**0.00047**	**J**	0.0010	0.00030	mg/L		12/09/16 11:50	12/09/16 17:34	1
Silver	**0.000030**	**J B**	0.00040	0.000030	mg/L		12/09/16 11:50	12/09/16 17:34	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 11:50	12/09/16 17:34	1
Vanadium	**0.0073**		0.0040	0.00098	mg/L		12/09/16 11:50	12/09/16 17:34	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 11:50	12/09/16 17:34	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 21:25	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 21:25	1
Barium	**0.029**	**B**	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 21:25	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 21:25	1
Cadmium	ND		0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 21:25	1
Chromium	ND		0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 21:25	1
Copper	**0.0033**		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 21:25	1
Iron	ND		0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 21:25	1
Lead	**0.000042**	**J**	0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 21:25	1
Manganese	**0.0017**	**J**	0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 21:25	1
Nickel	**0.00065**	**J**	0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 21:25	1
Selenium	**0.00084**	**J B**	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 21:25	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 21:25	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 21:25	1
Vanadium	**0.0073**		0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 21:25	1
Zinc	**0.0020**	**J**	0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 21:25	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:49	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:45	1

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-4A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	*	0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 21:25	1
Ammonia (as N)	**0.11**		0.10	0.060	mg/L		12/01/16 10:41	12/05/16 13:32	1
Chemical Oxygen Demand	**7.4**	**J**	20	4.0	mg/L			12/08/16 21:29	1
Total Organic Carbon	**2.6**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**2.0**				MPN/100mL			11/30/16 12:00	1
Escherichia coli	**0.00**				MPN/100mL			11/30/16 12:00	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-9880/4
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 17:37	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 17:37	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 17:37	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 17:37	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 17:37	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 17:37	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 17:37	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 17:37	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 17:37	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 17:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 17:37	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 17:37	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 17:37	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 17:37	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 17:37	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 17:37	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 17:37	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 17:37	1
Acetone	ND		25	4.1	ug/L			12/02/16 17:37	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 17:37	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 17:37	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 17:37	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 17:37	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 17:37	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 17:37	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 17:37	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 17:37	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 17:37	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 17:37	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 17:37	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 17:37	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 17:37	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 17:37	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 17:37	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 17:37	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 17:37	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 17:37	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 17:37	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 17:37	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-9880/4
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/02/16 17:37	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 17:37	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 17:37	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 17:37	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 17:37	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 17:37	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 17:37	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 17:37	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 17:37	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 17:37	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 17:37	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 17:37	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 17:37	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 17:37	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 17:37	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 17:37	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 17:37	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 17:37	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 17:37	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/02/16 17:37*	*1*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*12/02/16 17:37*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/02/16 17:37*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/02/16 17:37*	*1*

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	20.0		ug/L		100	75 - 124
1,1,1-Trichloroethane	20.0	20.7		ug/L		103	71 - 130
1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	66 - 122
1,1,2-Trichloroethane	20.0	20.3		ug/L		102	76 - 120
1,1,2-Trichlorotrifluoroethane	20.0	21.6		ug/L		108	70 - 127
1,1-Dichloroethane	20.0	19.7		ug/L		98	79 - 121
1,1-Dichloroethene	20.0	20.0		ug/L		100	69 - 127
1,1-Dichloropropene	20.0	20.5		ug/L		103	76 - 125
1,2,3-Trichlorobenzene	20.0	21.3		ug/L		106	60 - 125
1,2,3-Trichloropropane	20.0	19.8		ug/L		99	60 - 124
1,2,4-Trichlorobenzene	20.0	22.0		ug/L		110	66 - 124
1,2,4-Trimethylbenzene	20.0	20.9		ug/L		105	77 - 120
1,2-Dibromo-3-Chloropropane	20.0	20.1		ug/L		101	36 - 140
1,2-Dichlorobenzene	20.0	21.1		ug/L		105	78 - 120
1,2-Dichloroethane	20.0	20.4		ug/L		102	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	20.0	19.9		ug/L		99	76 - 121
1,3,5-Trimethylbenzene	20.0	21.5		ug/L		107	75 - 122
1,3-Dichlorobenzene	20.0	20.1		ug/L		101	77 - 120
1,3-Dichloropropane	20.0	19.1		ug/L		96	75 - 120
1,4-Dichlorobenzene	20.0	21.1		ug/L		105	77 - 121
2,2-Dichloropropane	20.0	22.5		ug/L		113	49 - 147
2-Butanone (MEK)	100	102		ug/L		102	40 - 150
2-Chlorotoluene	20.0	20.7		ug/L		104	75 - 121
2-Hexanone	100	103		ug/L		103	46 - 146
4-Chlorotoluene	20.0	21.0		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	60 - 127
Acetone	100	89.0		ug/L		89	20 - 150
Benzene	20.0	19.2		ug/L		96	80 - 120
Bromobenzene	20.0	20.6		ug/L		103	74 - 121
Bromochloromethane	20.0	19.4		ug/L		97	70 - 126
Bromodichloromethane	20.0	20.3		ug/L		102	67 - 125
Bromoform	20.0	19.0		ug/L		95	60 - 122
Bromomethane	20.0	19.4		ug/L		97	45 - 150
Carbon disulfide	20.0	19.1		ug/L		95	67 - 129
Carbon tetrachloride	20.0	19.9		ug/L		99	68 - 134
Chlorobenzene	20.0	20.1		ug/L		100	79 - 125
Chloroethane	20.0	18.5		ug/L		93	48 - 150
Chloroform	20.0	20.1		ug/L		101	73 - 126
Chloromethane	20.0	20.1		ug/L		101	51 - 150
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	76 - 121
cis-1,3-Dichloropropene	20.0	21.0		ug/L		105	72 - 120
Dibromochloromethane	20.0	21.1		ug/L		106	72 - 120
Dibromomethane	20.0	19.8		ug/L		99	71 - 120
Dichlorodifluoromethane	20.0	17.5		ug/L		87	32 - 150
Dichlorofluoromethane	20.0	21.2		ug/L		106	60 - 140
Ethylbenzene	20.0	20.3		ug/L		102	80 - 120
Hexachlorobutadiene	20.0	21.2		ug/L		106	62 - 132
Hexane	20.0	21.2		ug/L		106	68 - 125
Isopropylbenzene	20.0	20.5		ug/L		103	77 - 123
m,p-Xylene	20.0	20.2		ug/L		101	80 - 120
Methyl tert-butyl ether	20.0	20.4		ug/L		102	71 - 128
Methylene Chloride	20.0	20.6		ug/L		103	20 - 150
Naphthalene	20.0	20.8		ug/L		104	63 - 124
n-Butylbenzene	20.0	21.7		ug/L		109	71 - 120
N-Propylbenzene	20.0	20.7		ug/L		104	76 - 120
o-Xylene	20.0	20.5		ug/L		102	80 - 120
p-Isopropyltoluene	20.0	21.7		ug/L		108	77 - 120
sec-Butylbenzene	20.0	21.4		ug/L		107	74 - 121
Styrene	20.0	20.4		ug/L		102	73 - 120
tert-Butylbenzene	20.0	21.5		ug/L		108	79 - 120
Tetrachloroethene	20.0	20.7		ug/L		104	71 - 132
Toluene	20.0	19.7		ug/L		99	80 - 123
trans-1,2-Dichloroethene	20.0	19.9		ug/L		100	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	20.0	21.2		ug/L		106	70 - 121
Trichloroethene	20.0	18.6		ug/L		93	75 - 129
Trichlorofluoromethane	20.0	20.8		ug/L		104	60 - 140
Vinyl chloride	20.0	19.0		ug/L		95	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-9881/4
Matrix: Water
Analysis Batch: 9881

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	20.8	J	100	18	ug/L			12/02/16 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*		*12/02/16 17:37*	*1*

Lab Sample ID: LCS 590-9881/1003
Matrix: Water
Analysis Batch: 9881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	1070		ug/L		107	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitrophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/05/16 16:00	12/07/16 18:08	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitrophenol	ND		3.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthene	ND		0.10	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Anthracene	0.0104	J	0.040	0.010	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzoic acid	ND		3.0	0.60	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		12/05/16 16:00	12/07/16 18:08	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		12/05/16 16:00	12/07/16 18:08	1
Carbazole	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Chrysene	ND		0.040	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Diethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluoranthene	ND		0.050	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluorene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Isophorone	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Naphthalene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pentachlorophenol	ND		0.70	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenanthrene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pyrene	ND		0.060	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*78*		*57 - 132*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorophenol	*74*		*50 - 113*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Phenol-d5	*85*		*52 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Terphenyl-d14	*93*		*72 - 140*	*12/05/16 16:00*	*12/07/16 18:08*	*1*

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	40 - 115
1,2-Dichlorobenzene	2.00	1.55		ug/L		77	44 - 119
1,3-Dichlorobenzene	2.00	1.49		ug/L		74	34 - 116
1,4-Dichlorobenzene	2.00	1.41		ug/L		70	40 - 118
1-Methylnaphthalene	2.00	1.90		ug/L		95	54 - 119
2,4,5-Trichlorophenol	2.00	2.28		ug/L		114	56 - 122
2,4,6-Trichlorophenol	2.00	2.36		ug/L		118	55 - 134
2,4-Dichlorophenol	2.00	2.17		ug/L		108	50 - 125
2,4-Dimethylphenol	2.00	1.96	J	ug/L		98	20 - 106
2,4-Dinitrophenol	4.00	3.65	J	ug/L		91	24 - 139
2,4-Dinitrotoluene	2.00	2.60		ug/L		130	40 - 143
2,6-Dinitrotoluene	2.00	2.37		ug/L		118	45 - 134
2-Chloronaphthalene	2.00	2.05		ug/L		102	55 - 125
2-Chlorophenol	2.00	1.88		ug/L		94	57 - 125
2-Methylnaphthalene	2.00	1.84		ug/L		92	56 - 117
2-Methylphenol	2.00	1.99		ug/L		99	53 - 118
2-Nitroaniline	2.00	2.40		ug/L		120	58 - 124
2-Nitrophenol	2.00	1.88		ug/L		94	20 - 150
3 & 4 Methylphenol	2.00	1.94		ug/L		97	54 - 112
3,3'-Dichlorobenzidine	4.00	3.35		ug/L		84	20 - 121
3-Nitroaniline	2.00	2.20		ug/L		110	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.55	J	ug/L		89	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	2.06		ug/L		103	62 - 132
4-Chloro-3-methylphenol	2.00	2.43		ug/L		121	56 - 133
4-Chloroaniline	2.00	1.49		ug/L		74	20 - 110
4-Chlorophenyl phenyl ether	2.00	2.11		ug/L		105	59 - 125
4-Nitroaniline	2.00	2.30		ug/L		115	40 - 118
4-Nitrophenol	4.00	4.79		ug/L		120	20 - 150
Acenaphthene	2.00	2.19		ug/L		109	55 - 113
Acenaphthylene	2.00	2.16		ug/L		108	24 - 135
Anthracene	2.00	1.79		ug/L		90	20 - 125
Benzo[a]anthracene	2.00	1.98		ug/L		99	49 - 115
Benzo[a]pyrene	2.00	1.70		ug/L		85	20 - 115
Benzo[b]fluoranthene	2.00	2.25		ug/L		112	63 - 129
Benzo[g,h,i]perylene	2.00	2.08		ug/L		104	58 - 127
Benzo[k]fluoranthene	2.00	1.97		ug/L		98	60 - 134
Benzoic acid	4.00	2.96	J	ug/L		74	20 - 150
Benzyl alcohol	2.00	1.63		ug/L		81	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.81		ug/L		90	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.90		ug/L		95	59 - 125
Bis(2-chloroethyl)ether	2.00	1.85		ug/L		93	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.19	J	ug/L		110	22 - 150
Butyl benzyl phthalate	2.00	2.43		ug/L		121	46 - 150
Carbazole	2.00	2.43		ug/L		122	68 - 142
Chrysene	2.00	2.04		ug/L		102	57 - 131
Dibenz(a,h)anthracene	2.00	2.16		ug/L		108	56 - 124
Dibenzofuran	2.00	2.25		ug/L		113	60 - 125
Diethyl phthalate	2.00	2.56		ug/L		128	60 - 134
Dimethyl phthalate	2.00	2.42		ug/L		121	65 - 134
Di-n-butyl phthalate	2.00	2.39		ug/L		120	67 - 140
Di-n-octyl phthalate	2.00	2.27		ug/L		113	55 - 150
Fluoranthene	2.00	2.16		ug/L		108	70 - 135
Fluorene	2.00	2.29		ug/L		115	57 - 125
Hexachlorobenzene	2.00	2.09		ug/L		104	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.640	J	ug/L		32	20 - 110
Hexachloroethane	2.00	1.11		ug/L		55	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.41		ug/L		121	54 - 124
Isophorone	2.00	2.00		ug/L		100	64 - 125
Naphthalene	2.00	1.91		ug/L		96	56 - 119
Nitrobenzene	2.00	1.98		ug/L		99	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.88		ug/L		94	54 - 120
N-Nitrosodiphenylamine	2.00	1.75		ug/L		87	40 - 124
Pentachlorophenol	4.00	3.86		ug/L		96	30 - 122
Phenanthrene	2.00	2.06		ug/L		103	57 - 125
Phenol	2.00	1.97		ug/L		99	53 - 113
Pyrene	2.00	2.12		ug/L		106	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*102*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*85*		*50 - 120*
2-Fluorophenol	*83*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*83*		*52 - 120*
Terphenyl-d14	*96*		*72 - 140*

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.56		ug/L		78	40 - 115	8	20
1,2-Dichlorobenzene			2.00	1.72		ug/L		86	44 - 119	11	20
1,3-Dichlorobenzene			2.00	1.66		ug/L		83	34 - 116	11	29
1,4-Dichlorobenzene			2.00	1.55		ug/L		77	40 - 118	9	20
1-Methylnaphthalene			2.00	2.06		ug/L		103	54 - 119	8	20
2,4,5-Trichlorophenol			2.00	2.32		ug/L		116	56 - 122	2	20
2,4,6-Trichlorophenol			2.00	2.21		ug/L		111	55 - 134	7	20
2,4-Dichlorophenol			2.00	2.11		ug/L		106	50 - 125	3	26
2,4-Dimethylphenol			2.00	1.81	J	ug/L		90	20 - 106	8	35
2,4-Dinitrophenol			4.00	3.79	J	ug/L		95	24 - 139	4	35
2,4-Dinitrotoluene			2.00	2.65		ug/L		133	40 - 143	2	29
2,6-Dinitrotoluene			2.00	2.35		ug/L		118	45 - 134	1	31
2-Chloronaphthalene			2.00	2.08		ug/L		104	55 - 125	2	20
2-Chlorophenol			2.00	2.11		ug/L		105	57 - 125	11	20
2-Methylnaphthalene			2.00	2.02		ug/L		101	56 - 117	9	20
2-Methylphenol			2.00	2.13		ug/L		106	53 - 118	7	33
2-Nitroaniline			2.00	2.47		ug/L		124	58 - 124	3	20
2-Nitrophenol			2.00	1.91		ug/L		95	20 - 150	2	35
3 & 4 Methylphenol			2.00	2.10		ug/L		105	54 - 112	8	20
3,3'-Dichlorobenzidine			4.00	2.88		ug/L		72	20 - 121	15	35
3-Nitroaniline			2.00	2.22		ug/L		111	22 - 124	1	35
4,6-Dinitro-2-methylphenol			4.00	3.85	J	ug/L		96	20 - 150	8	30
4-Bromophenyl phenyl ether			2.00	2.01		ug/L		101	62 - 132	2	20
4-Chloro-3-methylphenol			2.00	2.42		ug/L		121	56 - 133	0	20
4-Chloroaniline			2.00	1.35		ug/L		68	20 - 110	9	35
4-Chlorophenyl phenyl ether			2.00	2.16		ug/L		108	59 - 125	3	20
4-Nitroaniline			2.00	2.19		ug/L		110	40 - 118	5	20
4-Nitrophenol			4.00	5.45		ug/L		136	20 - 150	13	29
Acenaphthene			2.00	2.20		ug/L		110	55 - 113	1	20
Acenaphthylene			2.00	2.13		ug/L		106	24 - 135	2	20
Anthracene			2.00	1.74		ug/L		87	20 - 125	3	26
Benzo[a]anthracene			2.00	1.95		ug/L		98	49 - 115	1	20
Benzo[a]pyrene			2.00	1.65		ug/L		83	20 - 115	3	35
Benzo[b]fluoranthene			2.00	2.35		ug/L		117	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	2.21		ug/L		110	58 - 127	6	20
Benzo[k]fluoranthene			2.00	2.09		ug/L		104	60 - 134	6	20
Benzoic acid			4.00	3.19		ug/L		80	20 - 150	8	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	1.86		ug/L		93	52 - 124	14	20
bis (2-chloroisopropyl) ether	2.00	1.93		ug/L		97	44 - 123	7	20
Bis(2-chloroethoxy)methane	2.00	2.09		ug/L		104	59 - 125	9	20
Bis(2-chloroethyl)ether	2.00	2.14		ug/L		107	55 - 125	14	20
Bis(2-ethylhexyl) phthalate	2.00	2.13	J	ug/L		107	22 - 150	3	20
Butyl benzyl phthalate	2.00	2.43		ug/L		121	46 - 150	0	20
Carbazole	2.00	2.49		ug/L		124	68 - 142	2	20
Chrysene	2.00	2.01		ug/L		100	57 - 131	2	20
Dibenz(a,h)anthracene	2.00	2.26		ug/L		113	56 - 124	5	20
Dibenzofuran	2.00	2.31		ug/L		115	60 - 125	2	20
Diethyl phthalate	2.00	2.46		ug/L		123	60 - 134	4	20
Dimethyl phthalate	2.00	2.44		ug/L		122	65 - 134	1	20
Di-n-butyl phthalate	2.00	2.38		ug/L		119	67 - 140	1	20
Di-n-octyl phthalate	2.00	2.40		ug/L		120	55 - 150	6	20
Fluoranthene	2.00	2.18		ug/L		109	70 - 135	1	20
Fluorene	2.00	2.39		ug/L		120	57 - 125	4	20
Hexachlorobenzene	2.00	2.09		ug/L		104	55 - 135	0	20
Hexachlorobutadiene	2.00	1.15		ug/L		58	25 - 125	13	31
Hexachlorocyclopentadiene	2.00	0.668	J	ug/L		33	20 - 110	4	35
Hexachloroethane	2.00	1.21		ug/L		60	24 - 125	9	35
Indeno[1,2,3-cd]pyrene	2.00	2.29		ug/L		114	54 - 124	5	20
Isophorone	2.00	2.17		ug/L		109	64 - 125	8	20
Naphthalene	2.00	2.04		ug/L		102	56 - 119	7	20
Nitrobenzene	2.00	2.16		ug/L		108	62 - 125	9	20
N-Nitrosodi-n-propylamine	2.00	2.13		ug/L		106	54 - 120	12	20
N-Nitrosodiphenylamine	2.00	1.83		ug/L		92	40 - 124	5	20
Pentachlorophenol	4.00	3.85		ug/L		96	30 - 122	0	35
Phenanthrene	2.00	2.10		ug/L		105	57 - 125	2	20
Phenol	2.00	2.01		ug/L		101	53 - 113	2	20
Pyrene	2.00	2.18		ug/L		109	64 - 128	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*57 - 132*
2-Fluorobiphenyl	*88*		*50 - 120*
2-Fluorophenol	*90*		*50 - 113*
Nitrobenzene-d5	*96*		*59 - 120*
Phenol-d5	*91*		*52 - 120*
Terphenyl-d14	*98*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-9920/2-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9920

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 12:07	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-9920/3-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.130		ug/L		104	60 - 140

Lab Sample ID: LCSD 590-9920/4-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.129		ug/L		103	60 - 140	1	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-233792/1-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233792

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		12/03/16 15:20	12/06/16 23:33	1
4,4'-DDE	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
4,4'-DDT	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
Aldrin	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/06/16 23:33	1
alpha-BHC	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/06/16 23:33	1
alpha-Chlordane	0.00970	J	0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
beta-BHC	ND		0.050	0.012	ug/L		12/03/16 15:20	12/06/16 23:33	1
delta-BHC	ND		0.050	0.010	ug/L		12/03/16 15:20	12/06/16 23:33	1
Dieldrin	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan I	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin aldehyde	ND		0.20	0.034	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
gamma-Chlordane	0.00508	J	0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Heptachlor	ND		0.020	0.0040	ug/L		12/03/16 15:20	12/06/16 23:33	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Methoxychlor	ND		0.10	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Toxaphene	ND		1.0	0.22	ug/L		12/03/16 15:20	12/06/16 23:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*12/03/16 15:20*	*12/06/16 23:33*	*1*
Tetrachloro-m-xylene	*66*		*40 - 113*	*12/03/16 15:20*	*12/06/16 23:33*	*1*

Lab Sample ID: LCS 580-233792/2-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233792

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.160		ug/L		80	32 - 133

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-233792/2-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233792

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDE	0.200	0.147		ug/L		74	30 - 138
4,4'-DDT	0.200	0.189		ug/L		95	34 - 131
Aldrin	0.200	0.131		ug/L		66	35 - 124
alpha-BHC	0.200	0.148		ug/L		74	39 - 126
alpha-Chlordane	0.200	0.160		ug/L		80	37 - 133
beta-BHC	0.200	0.150		ug/L		75	38 - 114
delta-BHC	0.200	0.156		ug/L		78	20 - 138
Dieldrin	0.200	0.148		ug/L		74	39 - 140
Endosulfan I	0.200	0.144		ug/L		72	23 - 142
Endosulfan II	0.200	0.150		ug/L		75	20 - 150
Endosulfan sulfate	0.200	0.148		ug/L		74	36 - 130
Endrin	0.200	0.168		ug/L		84	32 - 130
Endrin aldehyde	0.200	0.166	J	ug/L		83	37 - 139
Endrin ketone	0.200	0.159		ug/L		80	32 - 136
gamma-BHC (Lindane)	0.200	0.145		ug/L		72	40 - 121
gamma-Chlordane	0.200	0.159		ug/L		79	38 - 136
Heptachlor	0.200	0.153		ug/L		76	39 - 129
Heptachlor epoxide	0.200	0.147		ug/L		74	34 - 135
Methoxychlor	0.200	0.189		ug/L		94	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*81*		*22 - 150*
Tetrachloro-m-xylene	*67*		*40 - 113*

Lab Sample ID: LCSD 580-233792/3-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233792

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.171		ug/L		86	32 - 133	7	35
4,4'-DDE	0.200	0.162		ug/L		81	30 - 138	9	35
4,4'-DDT	0.200	0.203		ug/L		101	34 - 131	7	35
Aldrin	0.200	0.144		ug/L		72	35 - 124	9	35
alpha-BHC	0.200	0.163		ug/L		82	39 - 126	10	35
alpha-Chlordane	0.200	0.160		ug/L		80	37 - 133	0	35
beta-BHC	0.200	0.164		ug/L		82	38 - 114	9	35
delta-BHC	0.200	0.171		ug/L		85	20 - 138	9	35
Dieldrin	0.200	0.162		ug/L		81	39 - 140	9	35
Endosulfan I	0.200	0.160		ug/L		80	23 - 142	11	35
Endosulfan II	0.200	0.164		ug/L		82	20 - 150	9	35
Endosulfan sulfate	0.200	0.162		ug/L		81	36 - 130	9	35
Endrin	0.200	0.180		ug/L		90	32 - 130	7	35
Endrin aldehyde	0.200	0.187	J	ug/L		93	37 - 139	12	35
Endrin ketone	0.200	0.176		ug/L		88	32 - 136	10	35
gamma-BHC (Lindane)	0.200	0.158		ug/L		79	40 - 121	9	35
gamma-Chlordane	0.200	0.160		ug/L		80	38 - 136	1	35
Heptachlor	0.200	0.164		ug/L		82	39 - 129	7	35
Heptachlor epoxide	0.200	0.161		ug/L		81	34 - 135	9	35

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-233792/3-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233792

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methoxychlor			0.200	0.203		ug/L		101	33 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*88*		*22 - 150*
Tetrachloro-m-xylene	*71*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-9796/1-A
Matrix: Water
Analysis Batch: 9799

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9796

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		11/30/16 09:36	11/30/16 15:50	1
PCB-1221	ND		0.10	0.062	ug/L		11/30/16 09:36	11/30/16 15:50	1
PCB-1232	ND		0.10	0.062	ug/L		11/30/16 09:36	11/30/16 15:50	1
PCB-1242	ND		0.10	0.062	ug/L		11/30/16 09:36	11/30/16 15:50	1
PCB-1248	ND		0.10	0.062	ug/L		11/30/16 09:36	11/30/16 15:50	1
PCB-1254	ND		0.10	0.062	ug/L		11/30/16 09:36	11/30/16 15:50	1
PCB-1260	ND		0.10	0.043	ug/L		11/30/16 09:36	11/30/16 15:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*20 - 120*	*11/30/16 09:36*	*11/30/16 15:50*	*1*
DCB Decachlorobiphenyl (Surr)	*80*		*36 - 138*	*11/30/16 09:36*	*11/30/16 15:50*	*1*

Lab Sample ID: LCS 590-9796/2-A
Matrix: Water
Analysis Batch: 9799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9796

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016			1.60	1.30		ug/L		81	23 - 140
PCB-1260			1.60	1.29		ug/L		81	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*64*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*97*		*36 - 138*

Lab Sample ID: LCSD 590-9796/3-A
Matrix: Water
Analysis Batch: 9799

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9796

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.20		ug/L		75	23 - 140	8	35
PCB-1260			1.60	1.20		ug/L		75	22 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*44*		*20 - 120*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 590-9796/3-A
Matrix: Water
Analysis Batch: 9799

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9796

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	91		36 - 138

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-354183/1-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		12/05/16 09:51	12/12/16 17:45	1
Azinphos-methyl	ND		2.5	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Bolstar	ND		1.0	0.31	ug/L		12/05/16 09:51	12/12/16 17:45	1
Chlorpyrifos	ND		1.5	0.36	ug/L		12/05/16 09:51	12/12/16 17:45	1
Coumaphos	ND		1.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Demeton, Total	ND		3.0	0.21	ug/L		12/05/16 09:51	12/12/16 17:45	1
Diazinon	ND		0.50	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Dichlorvos	ND		0.50	0.16	ug/L		12/05/16 09:51	12/12/16 17:45	1
Dimethoate	ND		1.5	0.45	ug/L		12/05/16 09:51	12/12/16 17:45	1
Disulfoton	ND		1.0	0.32	ug/L		12/05/16 09:51	12/12/16 17:45	1
EPN	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Famphur	ND		1.0	0.18	ug/L		12/05/16 09:51	12/12/16 17:45	1
Fensulfothion	ND		2.5	0.54	ug/L		12/05/16 09:51	12/12/16 17:45	1
Fenthion	ND		2.5	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Malathion	ND		2.0	0.13	ug/L		12/05/16 09:51	12/12/16 17:45	1
Merphos	ND		5.0	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Methyl parathion	ND		4.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Mevinphos	ND		6.2	0.46	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ethyl Parathion	ND		1.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ronnel	ND		10	0.12	ug/L		12/05/16 09:51	12/12/16 17:45	1
Simazine	ND		10	0.22	ug/L		12/05/16 09:51	12/12/16 17:45	1
Sulfotepp	ND		1.5	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Thionazin	ND		1.0	0.31	ug/L		12/05/16 09:51	12/12/16 17:45	1
Tokuthion	ND		1.6	0.12	ug/L		12/05/16 09:51	12/12/16 17:45	1
Trichloronate	ND		1.5	0.24	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ethoprop	ND		1.5	0.18	ug/L		12/05/16 09:51	12/12/16 17:45	1
Propazine	ND		10	0.29	ug/L		12/05/16 09:51	12/12/16 17:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	71		49 - 171	12/05/16 09:51	12/12/16 17:45	1
Triphenylphosphate	86		60 - 154	12/05/16 09:51	12/12/16 17:45	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-354183/2-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.72	J	ug/L		68	52 - 115
Azinphos-methyl	4.00	4.58		ug/L		114	59 - 115
Chlorpyrifos	4.00	4.25		ug/L		106	54 - 115
Coumaphos	4.00	4.75	*	ug/L		119	63 - 118
Demeton, Total	4.00	3.34		ug/L		84	44 - 115
Diazinon	4.00	3.25		ug/L		81	47 - 115
Dichlorvos	4.00	5.42	*	ug/L		135	53 - 128
Dimethoate	4.00	2.59		ug/L		65	42 - 115
Disulfoton	4.00	3.17		ug/L		79	45 - 115
EPN	4.00	4.12		ug/L		103	56 - 115
Famphur	4.00	3.85		ug/L		96	62 - 115
Fensulfothion	4.00	4.38		ug/L		110	50 - 115
Fenthion	4.00	4.02		ug/L		101	55 - 115
Malathion	4.00	3.46		ug/L		86	52 - 115
Merphos	4.00	2.91	J	ug/L		73	31 - 115
Methyl parathion	4.00	4.44		ug/L		111	58 - 115
Mevinphos	4.00	3.23	J	ug/L		81	42 - 115
Ethyl Parathion	4.00	4.17		ug/L		104	55 - 115
Phorate	4.00	2.89		ug/L		72	40 - 115
Ronnel	4.00	4.09	J	ug/L		102	55 - 115
Simazine	4.00	3.08	J	ug/L		77	39 - 115
Sulfotepp	4.00	3.57		ug/L		89	53 - 115
Thionazin	4.00	3.48		ug/L		87	54 - 115
Trichloronate	4.00	3.97		ug/L		99	48 - 115
Ethoprop	4.00	3.60		ug/L		90	50 - 115
BolstarFamphur	8.00	7.93		ug/L		99	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*86*		*49 - 171*
Triphenylphosphate	*92*		*60 - 154*

Lab Sample ID: LCSD 280-354183/3-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	2.35	J	ug/L		59	52 - 115	15	45
Azinphos-methyl	4.00	4.87	*	ug/L		122	59 - 115	6	20
Chlorpyrifos	4.00	4.19		ug/L		105	54 - 115	1	24
Coumaphos	4.00	5.20	*	ug/L		130	63 - 118	9	20
Demeton, Total	4.00	2.77	J	ug/L		69	44 - 115	19	38
Diazinon	4.00	3.49		ug/L		87	47 - 115	7	37
Dichlorvos	4.00	0.997	*	ug/L		25	53 - 128	138	37
Dimethoate	4.00	2.04		ug/L		51	42 - 115	24	38
Disulfoton	4.00	3.29		ug/L		82	45 - 115	4	31
EPN	4.00	4.39		ug/L		110	56 - 115	6	20

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCSD 280-354183/3-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354183

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Famphur			4.00	4.14		ug/L		104	62 - 115	7	20
Fensulfothion			4.00	3.76		ug/L		94	50 - 115	15	27
Fenthion			4.00	3.92		ug/L		98	55 - 115	3	22
Malathion			4.00	3.43		ug/L		86	52 - 115	1	20
Merphos			4.00	2.95	J	ug/L		74	31 - 115	1	25
Methyl parathion			4.00	4.14		ug/L		103	58 - 115	7	20
Mevinphos			4.00	1.92	J *	ug/L		48	42 - 115	51	27
Ethyl Parathion			4.00	4.12		ug/L		103	55 - 115	1	20
Phorate			4.00	2.58		ug/L		65	40 - 115	11	32
Ronnel			4.00	3.74	J	ug/L		93	55 - 115	9	28
Simazine			4.00	1.89	J	ug/L		47	39 - 115	48	53
Sulfotepp			4.00	3.36		ug/L		84	53 - 115	6	27
Thionazin			4.00	2.86		ug/L		71	54 - 115	20	27
Trichloronate			4.00	3.87		ug/L		97	48 - 115	3	26
Ethoprop			4.00	3.22		ug/L		81	50 - 115	11	29
BolstarFamphur			8.00	8.27		ug/L		103		4	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*37*	*X*	*49 - 171*
Triphenylphosphate	*99*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-353896/1-A
Matrix: Water
Analysis Batch: 354373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 353896

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		12/01/16 16:20	12/06/16 17:30	1
2,4-D	ND		4.0	0.21	ug/L		12/01/16 16:20	12/06/16 17:30	1
2,4-DB	ND		4.0	0.36	ug/L		12/01/16 16:20	12/06/16 17:30	1
Dalapon	ND		2.0	0.91	ug/L		12/01/16 16:20	12/06/16 17:30	1
Dicamba	ND		2.0	0.15	ug/L		12/01/16 16:20	12/06/16 17:30	1
Dichlorprop	ND		4.0	0.65	ug/L		12/01/16 16:20	12/06/16 17:30	1
MCPA	ND		400	17	ug/L		12/01/16 16:20	12/06/16 17:30	1
MCPP	ND		400	33	ug/L		12/01/16 16:20	12/06/16 17:30	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		12/01/16 16:20	12/06/16 17:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*93*		*39 - 135*	*12/01/16 16:20*	*12/06/16 17:30*	*1*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-353896/2-A
Matrix: Water
Analysis Batch: 354373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 353896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.78		ug/L		76	45 - 135
2,4-D	5.00	3.66	J	ug/L		73	46 - 126
2,4-DB	5.00	4.60		ug/L		92	18 - 135
Dalapon	5.00	3.31		ug/L		66	52 - 119
Dicamba	5.00	3.46		ug/L		69	50 - 128
Dichlorprop	5.00	3.38	J	ug/L		68	44 - 121
MCPA	500	337	J	ug/L		67	43 - 118
MCPP	500	353	J	ug/L		71	45 - 121
Silvex (2,4,5-TP)	5.00	3.80		ug/L		76	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*75*		*39 - 135*

Lab Sample ID: LCSD 280-353896/3-A
Matrix: Water
Analysis Batch: 354373

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 353896

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	4.24		ug/L		85	45 - 135	12	30
2,4-D	5.00	4.05		ug/L		81	46 - 126	10	30
2,4-DB	5.00	5.09		ug/L		102	18 - 135	10	30
Dalapon	5.00	3.85		ug/L		77	52 - 119	15	30
Dicamba	5.00	3.95		ug/L		79	50 - 128	13	30
Dichlorprop	5.00	3.83	J	ug/L		77	44 - 121	13	30
MCPA	500	381	J	ug/L		76	43 - 118	12	30
MCPP	500	402		ug/L		80	45 - 121	13	30
Silvex (2,4,5-TP)	5.00	4.28		ug/L		86	48 - 127	12	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*88*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-9886/1-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.0407	J	0.12	0.040	mg/L		12/05/16 10:22	12/05/16 11:46	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*12/05/16 10:22*	*12/05/16 11:46*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/05/16 10:22*	*12/05/16 11:46*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-9886/2-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			1.61	1.38		mg/L		85	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.53		mg/L		96	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*89*		*50 - 150*
n-Triacontane-d62	*90*		*50 - 150*

Lab Sample ID: LCSD 590-9886/3-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.61	1.32		mg/L		82	50 - 150	4	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.51		mg/L		94	50 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*86*		*50 - 150*
n-Triacontane-d62	*94*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-9784/1012
Matrix: Water
Analysis Batch: 9784

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			11/29/16 15:16	1
Sulfate	ND		0.50	0.13	mg/L			11/29/16 15:16	1

Lab Sample ID: LCS 590-9784/1011
Matrix: Water
Analysis Batch: 9784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			12.5	12.0		mg/L		96	90 - 110		
Sulfate			12.5	12.5		mg/L		100	90 - 110		

Lab Sample ID: 590-5079-1 MS
Matrix: Water
Analysis Batch: 9784

Client Sample ID: MW-8A:112816
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.6		11.4	18.8		mg/L		99	80 - 120
Sulfate	9.3		11.4	20.7		mg/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5079-1 MSD — **Client Sample ID: MW-8A:112816**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9784

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7.6		11.4	18.8		mg/L		99	80 - 120	0	10
Sulfate	9.3		11.4	20.4		mg/L		98	80 - 120	2	10

Lab Sample ID: 590-5079-1 DU — **Client Sample ID: MW-8A:112816**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9784

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	7.6		7.59		mg/L		0.4	18.8
Sulfate	9.3		9.38		mg/L		0.7	15.7

Lab Sample ID: MB 590-9785/1012 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9785

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			11/29/16 15:16	1
Nitrite as N	ND		0.20	0.069	mg/L			11/29/16 15:16	1

Lab Sample ID: LCS 590-9785/1011 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9785

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.93		mg/L		99	90 - 110
Nitrite as N	5.00	4.84		mg/L		97	90 - 110

Lab Sample ID: 590-5079-1 MS — **Client Sample ID: MW-8A:112816**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9785

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.2		4.55	6.13		mg/L		108	80 - 120
Nitrite as N	ND		4.55	4.70		mg/L		103	80 - 120

Lab Sample ID: 590-5079-1 MSD — **Client Sample ID: MW-8A:112816**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9785

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.2		4.55	5.87		mg/L		102	80 - 120	4	12.1
Nitrite as N	ND		4.55	4.60		mg/L		101	80 - 120	2	10

Lab Sample ID: 590-5079-1 DU — **Client Sample ID: MW-8A:112816**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9785

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.2		1.19		mg/L		2	13.1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5079-1 DU
Matrix: Water
Analysis Batch: 9785

Client Sample ID: MW-8A:112816
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	ND			ND		mg/L				NC	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-140334/1-A
Matrix: Water
Analysis Batch: 140912

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140334

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.33	pg/L		12/02/16 11:20	12/06/16 13:09	1
2,3,7,8-TCDF	0.803	J	10	0.27	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,7,8-PeCDD	ND		50	0.47	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,7,8-PeCDF	ND		50	0.33	pg/L		12/02/16 11:20	12/06/16 13:09	1
2,3,4,7,8-PeCDF	ND		50	0.34	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,4,7,8-HxCDD	ND		50	0.23	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,6,7,8-HxCDD	ND		50	0.23	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,7,8,9-HxCDD	0.575	J q	50	0.19	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,4,7,8-HxCDF	ND		50	0.47	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,6,7,8-HxCDF	ND		50	0.45	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,7,8,9-HxCDF	ND		50	0.49	pg/L		12/02/16 11:20	12/06/16 13:09	1
2,3,4,6,7,8-HxCDF	0.628	J q	50	0.47	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,4,6,7,8-HpCDD	3.70	J	50	0.20	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,4,6,7,8-HpCDF	5.84	J	50	0.19	pg/L		12/02/16 11:20	12/06/16 13:09	1
1,2,3,4,7,8,9-HpCDF	1.83	J	50	0.23	pg/L		12/02/16 11:20	12/06/16 13:09	1
OCDD	13.8	J	100	0.24	pg/L		12/02/16 11:20	12/06/16 13:09	1
OCDF	17.1	J	100	0.35	pg/L		12/02/16 11:20	12/06/16 13:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-2,3,7,8-TCDF	*88*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-1,2,3,7,8-PeCDD	*102*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-1,2,3,7,8-PeCDF	*95*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-1,2,3,6,7,8-HxCDD	*96*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-1,2,3,4,7,8-HxCDF	*91*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*102*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*95*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*
13C-OCDD	*89*		*40 - 135*	*12/02/16 11:20*	*12/06/16 13:09*	*1*

Lab Sample ID: LCS 320-140334/2-A
Matrix: Water
Analysis Batch: 140912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140334

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD			200	206		pg/L		103	64 - 142		
2,3,7,8-TCDF			200	214		pg/L		107	71 - 142		
1,2,3,7,8-PeCDD			1000	1080		pg/L		108	71 - 140		
1,2,3,7,8-PeCDF			1000	1050		pg/L		105	76 - 135		
2,3,4,7,8-PeCDF			1000	1060		pg/L		106	74 - 137		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-140334/2-A
Matrix: Water
Analysis Batch: 140912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140334

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	978		pg/L		98	56 - 146		
1,2,3,6,7,8-HxCDD			1000	1060		pg/L		106	73 - 144		
1,2,3,7,8,9-HxCDD			1000	969		pg/L		97	71 - 151		
1,2,3,4,7,8-HxCDF			1000	992		pg/L		99	75 - 131		
1,2,3,6,7,8-HxCDF			1000	1020		pg/L		102	76 - 133		
1,2,3,7,8,9-HxCDF			1000	995		pg/L		100	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1040		pg/L		104	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	1010		pg/L		101	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	1010		pg/L		101	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	997		pg/L		100	83 - 130		
OCDD			2000	1950		pg/L		97	80 - 132		
OCDF			2000	1930		pg/L		97	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*91*		*40 - 135*
13C-2,3,7,8-TCDF	*85*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*101*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*98*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*91*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*101*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*96*		*40 - 135*
13C-OCDD	*89*		*40 - 135*

Lab Sample ID: LCSD 320-140334/3-A
Matrix: Water
Analysis Batch: 140912

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 140334

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	206		pg/L		103	64 - 142	0	20
2,3,7,8-TCDF			200	212		pg/L		106	71 - 142	1	20
1,2,3,7,8-PeCDD			1000	1100		pg/L		110	71 - 140	2	20
1,2,3,7,8-PeCDF			1000	1070		pg/L		107	76 - 135	2	20
2,3,4,7,8-PeCDF			1000	1070		pg/L		107	74 - 137	2	20
1,2,3,4,7,8-HxCDD			1000	1080		pg/L		108	56 - 146	10	20
1,2,3,6,7,8-HxCDD			1000	1090		pg/L		109	73 - 144	3	20
1,2,3,7,8,9-HxCDD			1000	1040		pg/L		104	71 - 151	7	20
1,2,3,4,7,8-HxCDF			1000	1000		pg/L		100	75 - 131	1	20
1,2,3,6,7,8-HxCDF			1000	1040		pg/L		104	76 - 133	2	20
1,2,3,7,8,9-HxCDF			1000	1020		pg/L		102	77 - 142	2	20
2,3,4,6,7,8-HxCDF			1000	1040		pg/L		104	80 - 137	0	20
1,2,3,4,6,7,8-HpCDD			1000	1030		pg/L		103	78 - 139	2	20
1,2,3,4,6,7,8-HpCDF			1000	1050		pg/L		105	79 - 133	5	20
1,2,3,4,7,8,9-HpCDF			1000	1040		pg/L		104	83 - 130	4	20
OCDD			2000	2060		pg/L		103	80 - 132	6	20
OCDF			2000	2020		pg/L		101	72 - 140	5	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	87		40 - 135
13C-2,3,7,8-TCDF	83		40 - 135
13C-1,2,3,7,8-PeCDD	95		40 - 135
13C-1,2,3,7,8-PeCDF	93		40 - 135
13C-1,2,3,6,7,8-HxCDD	88		40 - 135
13C-1,2,3,4,7,8-HxCDF	89		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135
13C-OCDD	86		40 - 135

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-234077/11-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234077

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 20:18	1
Antimony	ND		0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 20:18	1
Barium	0.00109	J	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 20:18	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 20:18	1
Cadmium	ND		0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 20:18	1
Chromium	ND		0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 20:18	1
Copper	ND		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 20:18	1
Iron	0.0144	J	0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 20:18	1
Lead	ND		0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 20:18	1
Manganese	ND		0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 20:18	1
Nickel	ND		0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 20:18	1
Selenium	0.000452	J	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 20:18	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 20:18	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 20:18	1
Vanadium	ND		0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 20:18	1
Zinc	ND		0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 20:18	1

Lab Sample ID: LCS 580-234077/12-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.102		mg/L		102	85 - 115
Antimony	0.100	0.103		mg/L		103	85 - 115
Barium	0.100	0.104		mg/L		104	85 - 115
Beryllium	0.100	0.101		mg/L		101	85 - 115
Cadmium	0.100	0.105		mg/L		105	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.101		mg/L		101	85 - 115
Iron	10.0	10.2		mg/L		102	85 - 115
Lead	0.100	0.105		mg/L		105	85 - 115
Manganese	0.100	0.103		mg/L		103	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.102		mg/L		102	85 - 115
Silver	0.100	0.105		mg/L		105	85 - 115
Thallium	0.100	0.105		mg/L		105	85 - 115
Vanadium	0.100	0.101		mg/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-234077/12-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.100	0.104		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-234077/13-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.102		mg/L		102	85 - 115	0	20
Antimony	0.100	0.104		mg/L		104	85 - 115	1	20
Barium	0.100	0.105		mg/L		105	85 - 115	1	20
Beryllium	0.100	0.0999		mg/L		100	85 - 115	1	20
Cadmium	0.100	0.104		mg/L		104	85 - 115	1	20
Chromium	0.100	0.0998		mg/L		100	85 - 115	1	20
Copper	0.100	0.100		mg/L		100	85 - 115	0	20
Iron	10.0	10.1		mg/L		101	85 - 115	2	20
Lead	0.100	0.106		mg/L		106	85 - 115	1	20
Manganese	0.100	0.103		mg/L		103	85 - 115	0	20
Nickel	0.100	0.100		mg/L		100	85 - 115	0	20
Selenium	0.100	0.101		mg/L		101	85 - 115	1	20
Silver	0.100	0.104		mg/L		104	85 - 115	0	20
Thallium	0.100	0.104		mg/L		104	85 - 115	1	20
Vanadium	0.100	0.101		mg/L		101	85 - 115	1	20
Zinc	0.100	0.103		mg/L		103	85 - 115	1	20

Lab Sample ID: MB 580-234179/14-A
Matrix: Water
Analysis Batch: 234276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234179

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/09/16 11:50	12/09/16 16:14	1
Antimony	ND		0.00040	0.000080	mg/L		12/09/16 11:50	12/09/16 16:14	1
Barium	ND		0.0012	0.000054	mg/L		12/09/16 11:50	12/09/16 16:14	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 11:50	12/09/16 16:14	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 11:50	12/09/16 16:14	1
Chromium	ND		0.00040	0.00014	mg/L		12/09/16 11:50	12/09/16 16:14	1
Copper	ND		0.0020	0.00060	mg/L		12/09/16 11:50	12/09/16 16:14	1
Iron	ND		0.040	0.0058	mg/L		12/09/16 11:50	12/09/16 16:14	1
Lead	ND		0.00040	0.000034	mg/L		12/09/16 11:50	12/09/16 16:14	1
Manganese	ND		0.0020	0.00035	mg/L		12/09/16 11:50	12/09/16 16:14	1
Nickel	ND		0.0030	0.00040	mg/L		12/09/16 11:50	12/09/16 16:14	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 11:50	12/09/16 16:14	1
Silver	0.0000329	J	0.00040	0.000030	mg/L		12/09/16 11:50	12/09/16 16:14	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 11:50	12/09/16 16:14	1
Vanadium	ND		0.0040	0.00098	mg/L		12/09/16 11:50	12/09/16 16:14	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 11:50	12/09/16 16:14	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-234179/15-A
Matrix: Water
Analysis Batch: 234276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234179

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	85 - 115
Antimony	0.100	0.0977		mg/L		98	85 - 115
Barium	0.100	0.101		mg/L		101	85 - 115
Beryllium	0.100	0.0999		mg/L		100	85 - 115
Cadmium	0.100	0.103		mg/L		103	85 - 115
Chromium	0.100	0.0961		mg/L		96	85 - 115
Copper	0.100	0.0977		mg/L		98	85 - 115
Iron	10.0	9.65		mg/L		97	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0984		mg/L		98	85 - 115
Nickel	0.100	0.0983		mg/L		98	85 - 115
Selenium	0.100	0.106		mg/L		106	85 - 115
Silver	0.100	0.101		mg/L		101	85 - 115
Thallium	0.100	0.106		mg/L		106	85 - 115
Vanadium	0.100	0.0980		mg/L		98	85 - 115
Zinc	0.100	0.0984		mg/L		98	85 - 115

Lab Sample ID: LCSD 580-234179/16-A
Matrix: Water
Analysis Batch: 234276

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234179

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.101		mg/L		101	85 - 115	1	20
Antimony	0.100	0.0973		mg/L		97	85 - 115	0	20
Barium	0.100	0.0998		mg/L		100	85 - 115	1	20
Beryllium	0.100	0.101		mg/L		101	85 - 115	1	20
Cadmium	0.100	0.102		mg/L		102	85 - 115	1	20
Chromium	0.100	0.0972		mg/L		97	85 - 115	1	20
Copper	0.100	0.0983		mg/L		98	85 - 115	1	20
Iron	10.0	9.92		mg/L		99	85 - 115	3	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0999		mg/L		100	85 - 115	2	20
Nickel	0.100	0.0987		mg/L		99	85 - 115	0	20
Selenium	0.100	0.106		mg/L		106	85 - 115	0	20
Silver	0.100	0.101		mg/L		101	85 - 115	0	20
Thallium	0.100	0.104		mg/L		104	85 - 115	2	20
Vanadium	0.100	0.0989		mg/L		99	85 - 115	1	20
Zinc	0.100	0.0994		mg/L		99	85 - 115	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-233896/21-A
Matrix: Water
Analysis Batch: 233951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233896

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000513	J	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 11:51	1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-233896/22-A
Matrix: Water
Analysis Batch: 233951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00228		mg/L		114	85 - 115

Lab Sample ID: LCSD 580-233896/23-A
Matrix: Water
Analysis Batch: 233951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233896

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00217		mg/L		109	85 - 115	5	20

Lab Sample ID: LCS 580-234386/19-A
Matrix: Water
Analysis Batch: 234490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00207		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-234386/20-A
Matrix: Water
Analysis Batch: 234490

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234386

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00198		mg/L		99	85 - 115	4	20

Lab Sample ID: MB 580-233779/15-B
Matrix: Water
Analysis Batch: 234490

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 234386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:25	1

Lab Sample ID: 590-5079-1 MS
Matrix: Water
Analysis Batch: 234490

Client Sample ID: MW-8A:112816
Prep Type: Dissolved
Prep Batch: 234386

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00217		mg/L		108	70 - 130

Lab Sample ID: 590-5079-1 MSD
Matrix: Water
Analysis Batch: 234490

Client Sample ID: MW-8A:112816
Prep Type: Dissolved
Prep Batch: 234386

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00209		mg/L		104	70 - 130	4	20

Lab Sample ID: 590-5079-1 DU
Matrix: Water
Analysis Batch: 234490

Client Sample ID: MW-8A:112816
Prep Type: Dissolved
Prep Batch: 234386

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-391174/1-A
Matrix: Water
Analysis Batch: 391486

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 391174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 20:19	1
Cyanide, Total	ND		0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 20:19	1
Cyanide, Total	ND		0.010	0.0070	mg/L		12/01/16 18:00	12/01/16 20:19	1

Lab Sample ID: LCS 490-391174/2-A
Matrix: Water
Analysis Batch: 391486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391174

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.153	*	mg/L		153	90 - 110
Cyanide, Total	0.100	0.152	*	mg/L		152	90 - 110
Cyanide, Total	0.100	0.160	*	mg/L		160	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-391020/1-A
Matrix: Water
Analysis Batch: 391917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 391020

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		12/01/16 10:41	12/05/16 13:11	1

Lab Sample ID: LCS 490-391020/2-A
Matrix: Water
Analysis Batch: 391917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391020

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.31		mg/L		106	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-392994/3
Matrix: Water
Analysis Batch: 392994

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/08/16 21:29	1

Lab Sample ID: LCS 490-392994/4
Matrix: Water
Analysis Batch: 392994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.5		mg/L		97	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-392994/5
Matrix: Water
Analysis Batch: 392994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	48.7		mg/L		97	90 - 110	0	20

Lab Sample ID: 590-5079-4 DU
Matrix: Water
Analysis Batch: 392994

Client Sample ID: MW-4A:112816
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chemical Oxygen Demand	7.4	J		7.60	J	mg/L				3	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-392868/1
Matrix: Water
Analysis Batch: 392868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			12/08/16 07:38	1

Lab Sample ID: LCS 490-392868/4
Matrix: Water
Analysis Batch: 392868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.2		mg/L		102	90 - 110		
TOC Result 1			10.0	10.2		mg/L		102	90 - 110		
TOC Result 2			10.0	10.1		mg/L		101	90 - 110		

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-8A:112816

Date Collected: 11/28/16 10:42
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 20:52	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 20:52	MRS	TAL SPK
Total/NA	Prep	3520C			1051 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 20:35	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 13:16	NMI	TAL SPK
Total/NA	Prep	3510C			270.4 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 00:29	JDR	TAL SEA
Total/NA	Prep	3510C			265.1 mL	2 mL	9796	11/30/16 09:36	EAF	TAL SPK
Total/NA	Analysis	8082A		1			9799	11/30/16 16:52	NMI	TAL SPK
Total/NA	Prep	3510C			1038.9 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/12/16 20:54	TEM	TAL DEN
Total/NA	Prep	8151A			1050.9 mL	10 mL	353896	12/01/16 16:20	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354373	12/06/16 19:46	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			251.8 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 13:51	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9784	11/29/16 13:47	CBW	TAL SPK
Total/NA	Analysis	300.0		1			9785	11/29/16 13:47	CBW	TAL SPK
Total/NA	Prep	8290			1051.5 mL	20 uL	140334	12/02/16 11:20	DXD	TAL SAC
Total/NA	Analysis	8290A		1			140912	12/06/16 17:00	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234077	12/07/16 19:34	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234155	12/08/16 21:12	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234179	12/09/16 11:50	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234276	12/09/16 17:21	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 14:31	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:38	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	391174	12/01/16 18:00	SDL	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	391486	12/01/16 20:26	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391020	12/01/16 10:41	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	391917	12/05/16 13:29	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	392994	12/08/16 21:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9791	11/30/16 12:00	SJK	TAL SPK

Client Sample ID: MW-8B:112816
Date Collected: 11/28/16 12:20
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 21:35	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 21:35	MRS	TAL SPK
Total/NA	Prep	3520C			1053.9 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 20:59	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 13:39	NMI	TAL SPK
Total/NA	Prep	3510C			257.9 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 00:48	JDR	TAL SEA
Total/NA	Prep	3510C			269 mL	2 mL	9796	11/30/16 09:36	EAF	TAL SPK
Total/NA	Analysis	8082A		1			9799	11/30/16 17:13	NMI	TAL SPK
Total/NA	Prep	3510C			1045.8 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/12/16 21:25	TEM	TAL DEN
Total/NA	Prep	8151A			1050.9 mL	10 mL	353896	12/01/16 16:20	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354373	12/06/16 20:09	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			252.5 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 14:09	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9784	11/29/16 14:21	CBW	TAL SPK
Total/NA	Analysis	300.0		1			9785	11/29/16 14:21	CBW	TAL SPK
Total/NA	Prep	8290			1047.9 mL	20 uL	140334	12/02/16 11:20	DXD	TAL SAC
Total/NA	Analysis	8290A		1			140912	12/06/16 17:46	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234077	12/07/16 19:34	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234155	12/08/16 21:16	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234179	12/09/16 11:50	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234276	12/09/16 17:25	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 14:40	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:44	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	391174	12/01/16 18:00	SDL	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	391486	12/01/16 20:29	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391020	12/01/16 10:41	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	391917	12/05/16 13:30	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	392994	12/08/16 21:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9791	11/30/16 12:00	SJK	TAL SPK

Client Sample ID: MW-11A:112816
Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 21:56	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 21:56	MRS	TAL SPK
Total/NA	Prep	3520C			1058.7 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 21:24	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 14:02	NMI	TAL SPK
Total/NA	Prep	3510C			231.3 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 01:07	JDR	TAL SEA
Total/NA	Prep	3510C			243.9 mL	2 mL	9796	11/30/16 09:36	EAF	TAL SPK
Total/NA	Analysis	8082A		1			9799	11/30/16 17:34	NMI	TAL SPK
Total/NA	Prep	3510C			1034.3 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/12/16 21:57	TEM	TAL DEN
Total/NA	Prep	8151A			1046.1 mL	10 mL	353896	12/01/16 16:20	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354373	12/06/16 20:32	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			243.7 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 14:27	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9784	11/29/16 14:32	CBW	TAL SPK
Total/NA	Analysis	300.0		1			9785	11/29/16 14:32	CBW	TAL SPK
Total/NA	Prep	8290			1021.5 mL	20 uL	140334	12/02/16 11:20	DXD	TAL SAC
Total/NA	Analysis	8290A		1			140912	12/06/16 18:32	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234077	12/07/16 19:34	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234155	12/08/16 21:21	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234179	12/09/16 11:50	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234276	12/09/16 17:30	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 14:43	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:47	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	391174	12/01/16 18:00	SDL	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	391486	12/01/16 20:28	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391020	12/01/16 10:41	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	391917	12/05/16 13:31	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	392994	12/08/16 21:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9791	11/30/16 12:00	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Client Sample ID: MW-4A:112816

Date Collected: 11/28/16 15:00
Date Received: 11/29/16 08:30

Lab Sample ID: 590-5079-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 22:18	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 22:18	MRS	TAL SPK
Total/NA	Prep	3520C			1051.9 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 21:48	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 14:25	NMI	TAL SPK
Total/NA	Prep	3510C			265 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 01:26	JDR	TAL SEA
Total/NA	Prep	3510C			268.3 mL	2 mL	9796	11/30/16 09:36	EAF	TAL SPK
Total/NA	Analysis	8082A		1			9799	11/30/16 17:54	NMI	TAL SPK
Total/NA	Prep	3510C			1030.6 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/12/16 22:28	TEM	TAL DEN
Total/NA	Prep	8151A			1052.9 mL	10 mL	353896	12/01/16 16:20	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354373	12/06/16 20:54	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			251.6 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 14:45	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9784	11/29/16 14:54	CBW	TAL SPK
Total/NA	Analysis	300.0		1			9785	11/29/16 14:54	CBW	TAL SPK
Total/NA	Prep	8290			1050.6 mL	20 uL	140334	12/02/16 11:20	DXD	TAL SAC
Total/NA	Analysis	8290A		1			140912	12/06/16 19:19	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234077	12/07/16 19:34	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234155	12/08/16 21:25	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234179	12/09/16 11:50	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234276	12/09/16 17:34	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 14:45	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:49	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	391174	12/01/16 18:00	SDL	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	391487	12/01/16 21:25	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391020	12/01/16 10:41	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	391917	12/05/16 13:32	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	392994	12/08/16 21:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9791	11/30/16 12:00	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / MJP	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.3
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 6 of 7
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-8A: 112816	11/28/16	1042	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	
MW-8B: 112816		1220		Water	N																
MW-11A: 112816		1500		Water	N																
MW-4A: 112816		1500		Water	N																
				Water																	
				Water																	
				Water																	

590-5079 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: JML JM Josh Lee	11/29/2016 0800	GEI	Sheila Grady	11/29/16 830	TA Spdc
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.8C IR-CC3

12/21/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / MJP	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Land fill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
MW-8A:112816	11/28/16	1042	G	Water	N		X	X	X		
MW-8B:112816		1220		Water							
MW-11A:112816		1500		Water							
MW-4A:112816		1500		Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Josh Lee	11/29/2016 0800	GEI	Shawn Brady	11/29/16 830	TA Spok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.8°C IR063

12/21/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2306.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5079-1
Address: 4955 Yarrow Street,	Due Date Requested: 12/9/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-8A:112816 (590-5079-1)	11/28/16	10:42 Pacific		Water			X	X	4	
MW-8B:112816 (590-5079-2)	11/28/16	12:20 Pacific		Water			X	X	4	
MW-11A:112816 (590-5079-3)	11/28/16	15:00 Pacific		Water			X	X	4	
MW-4A:112816 (590-5079-4)	11/28/16	15:00 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Trask	11/29/16 1430	TA Spok	Reed Pitt	11-30-16 1010	TAO
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.1, 0.4 IR#5 - 0.2 RP 11-30-16

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2305.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5079-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/13/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8A:112816 (590-5079-1)	11/28/16	10:42 Pacific		Water			X	2	
MW-8B:112816 (590-5079-2)	11/28/16	12:20 Pacific		Water			X	2	
MW-11A:112816 (590-5079-3)	11/28/16	15:00 Pacific		Water			X	2	
MW-4A:112816 (590-5079-4)	11/28/16	15:00 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kraly	11/29/16 1415	TA Spok	[illegible]	11/30/16 0930	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2

12/21/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-5079 Chain of Custody

Cooler Received/Opened On 11-30-16 @ 0925

Time Samples Removed From Cooler 1600 Time Samples Placed In Storage 1610 (2 Hour Window)

1. Tracking # 1967 (last 4 digits, FedEx) Courier: _ FedEx ____ _

IR Gun ID 31470368 pH Strip Lot NA _ Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 1.3 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) PN

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) SH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) SH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) SH

I certify that I attached a label with the unique LIMS number to each container (intial) SH

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# _____

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-5079

estAmerica
THE LEADER IN ENVIRONMENTAL TESTING

12/21/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		C No: 0-2309.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-5079-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/9/2016			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-8A:112816 (590-5079-1)	11/28/16	10:42 Pacific		Water			X	X	X	X	3	
MW-8B:112816 (590-5079-2)	11/28/16	12:20 Pacific		Water			X	X	X	X	3	
MW-11A:112816 (590-5079-3)	11/28/16	15:00 Pacific		Water			X	X	X	X	3	
MW-4A:112816 (590-5079-4)	11/28/16	15:00 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Shreela Prathy	Date/Time: 11/29/16 1510	Company TAS PDX	Received by:	Date/Time: 11/30/16 0925	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2307.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5079-1
Address: 5755 8th Street East,	Due Date Requested: 12/9/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-8A:112816 (590-5079-1)	11/28/16	10:42 Pacific		Water			X	X	X	X	X	X	6	
MW-8B:112816 (590-5079-2)	11/28/16	12:20 Pacific		Water			X	X	X	X	X	X	6	
MW-11A:112816 (590-5079-3)	11/28/16	15:00 Pacific		Water			X	X	X	X	X	X	6	
MW-4A:112816 (590-5079-4)	11/28/16	15:00 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Trad	11/29/16 1500	TA Spok	Tom Hunt	11/30/16 0900	TA-Spo
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR2 1.2/1.3 IR2 2.0/2.1

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5079-1

Login Number: 5079
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	Refer to Job Narrative for details.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5079-1

Login Number: 5079
List Number: 4
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 11/30/16 06:29 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	False	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5079-1

Login Number: 5079
List Number: 3
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 11/30/16 04:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5079-1

Login Number: 5079
List Number: 2
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 11/30/16 01:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	217561
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5079-1

Login Number: 5079
List Number: 5
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 12/01/16 05:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2°, 2.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5079-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5079-1	MW-8A:112816	91	87	95	94	99	98	111	103
590-5079-2	MW-8B:112816	89	85	93	96	96	94	100	100
590-5079-3	MW-11A:112816	90	86	92	96	97	95	99	94
590-5079-4	MW-4A:112816	79	74	84	82	84	85	88	83
LCS 320-140334/2-A	Lab Control Sample	91	85	101	98	95	91	101	96
LCSD 320-140334/3-A	Lab Control Sample Dup	87	83	95	93	88	89	99	92
MB 320-140334/1-A	Method Blank	89	88	102	95	96	91	102	95

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5079-1	MW-8A:112816	98
590-5079-2	MW-8B:112816	87
590-5079-3	MW-11A:112816	87
590-5079-4	MW-4A:112816	74
LCS 320-140334/2-A	Lab Control Sample	89
LCSD 320-140334/3-A	Lab Control Sample Dup	86
MB 320-140334/1-A	Method Blank	89

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5100-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/21/2016 9:26:30 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5100-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 11/30/2016 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 4.6º C, 4.7º C and 5.1º C.

Receipt Exceptions
Method 8290A: Sample containers for the following samples were delayed by federal express and were to arrive on Friday the 2nd, 2016 but did not arrive till Monday the 5th, 2016: MW-15:113016 (590-5100-3) and MW-DUP:113016 (590-5100-7). The samples were received out of temperature at 7.4 degrees Celsius. Due to this the containers were removed from circulation and additional volume was shipped and received within temperature specifications on 12/09/2016.

GC/MS VOA
Method NWTPH-Gx: The method blank for analytical batch 590-9881 contained Gasoline above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-234074 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The method blank for preparation batch 580-233897 and analytical batch 580-234074 contained Anthracene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) associated with batch 280-354926 recovered above the upper control limit for 2,4-D, 2,4-Dichlorophenylacetic acid, Dalapon, Dicamba, Dichlorprop, MCPA, and MCPP. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The surrogate is in control on both columns for the associated samples: MW-14:113016 (590-5100-1), MW-12A:113016 (590-5100-2), MW-15:113016 (590-5100-3), MW-16:113016 (590-5100-4), MW-16A:113016 (590-5100-5), MW-9A:113016 (590-5100-6), MW-DUP:113016 (590-5100-7), (CCV 280-354926/24), (CCV 280-354926/35), (CCVRT 280-354926/8), (LCS 280-354292/2-A), (LCSD 280-354292/3-A) and (MB 280-354292/1-A).

Method 8141B: The surrogate chlormefos recovered below the lower control limit on both columns: MW-14:113016 (590-5100-1), MW-15:113016 (590-5100-3), MW-16:113016 (590-5100-4), MW-16A:113016 (590-5100-5), MW-9A:113016 (590-5100-6) and MW-DUP:113016 (590-5100-7). There is no obvious matrix interference.

Method 8141B: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-354183 and analytical batch 280-355174 recovered outside control limits for the following analytes: Chlormefos, Coumaphos, Dichlorvos, and Azinphos-methyl. Azinphos-methyl was biased high in the LCSD and was not detected in the associated samples. Coumaphos was biased high in the LCS and LCSD and was not detected in the associated samples. Dichlorvos was biased high in the LCS and biased low in the LCSD. The surrogate, chlormefos, was low in the LCSD.

Method 8141B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 280-354183 recovered outside control limits for the following analytes: Mevinphos.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-355174 recovered outside acceptance criteria, low biased, for Atrazine, Simazine and Propazine. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8081B: The method blank for preparation batch 580-233792 and analytical batch 580-234067 contained gamma-Chlordane and alpha-Chlordane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore,

Job ID: 590-5100-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

re-extraction and/or re-analysis of samples was not performed.

Method 8081B: The closing continuing calibration verification (CCV) associated with batch 580-234067 recovered above the upper control limit for Methoxychlor on the confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported: MW-14:113016 (590-5100-1), MW-12A:113016 (590-5100-2), MW-15:113016 (590-5100-3), MW-16:113016 (590-5100-4), MW-16A:113016 (590-5100-5), MW-9A:113016 (590-5100-6), MW-DUP:113016 (590-5100-7) and (CCV 580-234067/56).

Method NWTPH-Dx: The method blank for preparation batch 590-9886 and analytical batch 590-9885 contained Diesel Range Organics (DRO) (C10-C25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 350.1: The matrix spike (MS) recovery for preparation batch 490-391760 and analytical batch 490-392495 was outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 410.4: The matrix spike (MS) recovery for analytical batch 490-393685 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8141B_3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-354183.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-354292.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5100-1	MW-14:113016	Water	11/30/16 11:16	11/30/16 16:50
590-5100-2	MW-12A:113016	Water	11/30/16 12:21	11/30/16 16:50
590-5100-3	MW-15:113016	Water	11/30/16 14:35	11/30/16 16:50
590-5100-4	MW-16:113016	Water	11/30/16 12:27	11/30/16 16:50
590-5100-5	MW-16A:113016	Water	11/30/16 10:24	11/30/16 16:50
590-5100-6	MW-9A:113016	Water	11/30/16 14:26	11/30/16 16:50
590-5100-7	MW-DUP:113016	Water	11/30/16 08:00	11/30/16 16:50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 22:39	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 22:39	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 22:39	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 22:39	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 22:39	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 22:39	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 22:39	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 22:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 22:39	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 22:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 22:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 22:39	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 22:39	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 22:39	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 22:39	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 22:39	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 22:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 22:39	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 22:39	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 22:39	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 22:39	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 22:39	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 22:39	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 22:39	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 22:39	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 22:39	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 22:39	1
Acetone	ND		25	4.1	ug/L			12/02/16 22:39	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 22:39	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 22:39	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 22:39	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 22:39	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 22:39	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 22:39	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 22:39	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 22:39	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 22:39	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 22:39	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 22:39	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 22:39	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 22:39	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 22:39	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 22:39	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 22:39	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 22:39	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 22:39	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 22:39	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 22:39	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 22:39	1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 22:39	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 22:39	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 22:39	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 22:39	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 22:39	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 22:39	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 22:39	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 22:39	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 22:39	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 22:39	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 22:39	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 22:39	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 22:39	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 22:39	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 22:39	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 22:39	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 22:39	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 22:39	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 22:39	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 125*		*12/02/16 22:39*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*12/02/16 22:39*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/02/16 22:39*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/02/16 22:39*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**21**	**J B**	100	18	ug/L			12/02/16 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/02/16 22:39*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 22:12	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/07/16 22:12	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/07/16 22:12	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzoic acid	ND		2.9	0.57	ug/L		12/05/16 16:00	12/07/16 22:12	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/07/16 22:12	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		12/05/16 16:00	12/07/16 22:12	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 22:12	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Di-n-butyl phthalate	**0.16**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/07/16 22:12	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 22:12	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/07/16 22:12	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 22:12	1
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 22:12	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*88*		*57 - 132*	*12/05/16 16:00*	*12/07/16 22:12*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/07/16 22:12*	*1*
2-Fluorophenol	*76*		*50 - 113*	*12/05/16 16:00*	*12/07/16 22:12*	*1*
Nitrobenzene-d5	*86*		*59 - 120*	*12/05/16 16:00*	*12/07/16 22:12*	*1*
Phenol-d5	*82*		*52 - 120*	*12/05/16 16:00*	*12/07/16 22:12*	*1*
Terphenyl-d14	*91*		*72 - 140*	*12/05/16 16:00*	*12/07/16 22:12*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 14:47	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0056	ug/L		12/03/16 15:20	12/07/16 01:45	1
4,4'-DDE	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:45	1
4,4'-DDT	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 01:45	1
Aldrin	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 01:45	1
alpha-BHC	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 01:45	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:45	1
beta-BHC	ND		0.047	0.011	ug/L		12/03/16 15:20	12/07/16 01:45	1
delta-BHC	ND		0.047	0.0094	ug/L		12/03/16 15:20	12/07/16 01:45	1
Dieldrin	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 01:45	1
Endosulfan I	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:45	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 01:45	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 01:45	1
Endrin	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:45	1
Endrin aldehyde	ND		0.19	0.032	ug/L		12/03/16 15:20	12/07/16 01:45	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 01:45	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 01:45	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:45	1
Heptachlor	ND		0.019	0.0038	ug/L		12/03/16 15:20	12/07/16 01:45	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 01:45	1
Methoxychlor	ND		0.094	0.0019	ug/L		12/03/16 15:20	12/07/16 01:45	1
Toxaphene	ND		0.94	0.21	ug/L		12/03/16 15:20	12/07/16 01:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*89*		*22 - 150*	*12/03/16 15:20*	*12/07/16 01:45*	*1*
Tetrachloro-m-xylene	*77*		*40 - 113*	*12/03/16 15:20*	*12/07/16 01:45*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.11	0.071	ug/L		12/08/16 10:51	12/08/16 14:11	1
PCB-1221	ND		0.11	0.071	ug/L		12/08/16 10:51	12/08/16 14:11	1
PCB-1232	ND		0.11	0.071	ug/L		12/08/16 10:51	12/08/16 14:11	1
PCB-1242	ND		0.11	0.071	ug/L		12/08/16 10:51	12/08/16 14:11	1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.11	0.071	ug/L		12/08/16 10:51	12/08/16 14:11	1
PCB-1254	ND		0.11	0.071	ug/L		12/08/16 10:51	12/08/16 14:11	1
PCB-1260	ND		0.11	0.050	ug/L		12/08/16 10:51	12/08/16 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*20 - 120*	*12/08/16 10:51*	*12/08/16 14:11*	*1*
DCB Decachlorobiphenyl (Surr)	*75*		*36 - 138*	*12/08/16 10:51*	*12/08/16 14:11*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 02:40	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 02:40	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 02:40	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/13/16 02:40	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 09:51	12/13/16 02:40	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 02:40	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 02:40	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 02:40	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/13/16 02:40	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 09:51	12/13/16 02:40	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 02:40	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 09:51	12/13/16 02:40	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 09:51	12/13/16 02:40	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 02:40	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 02:40	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 02:40	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/13/16 02:40	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 02:40	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 09:51	12/13/16 02:40	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 02:40	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 09:51	12/13/16 02:40	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 09:51	12/13/16 02:40	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/13/16 02:40	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 02:40	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 02:40	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/13/16 02:40	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/13/16 02:40	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 02:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*0.06*	*X*	*49 - 171*	*12/05/16 09:51*	*12/13/16 02:40*	*1*
Triphenylphosphate	*106*		*60 - 154*	*12/05/16 09:51*	*12/13/16 02:40*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		12/05/16 15:38	12/09/16 06:32	1
2,4-D	ND		3.9	0.20	ug/L		12/05/16 15:38	12/09/16 06:32	1
2,4-DB	ND		3.9	0.35	ug/L		12/05/16 15:38	12/09/16 06:32	1
Dalapon	ND		1.9	0.88	ug/L		12/05/16 15:38	12/09/16 06:32	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 06:32	1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.9	0.63	ug/L		12/05/16 15:38	12/09/16 06:32	1
MCPA	ND		390	16	ug/L		12/05/16 15:38	12/09/16 06:32	1
MCPP	ND		390	32	ug/L		12/05/16 15:38	12/09/16 06:32	1
Silvex (2,4,5-TP)	ND		0.97	0.16	ug/L		12/05/16 15:38	12/09/16 06:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*12/05/16 15:38*	*12/09/16 06:32*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		12/05/16 10:22	12/05/16 15:02	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		12/05/16 10:22	12/05/16 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:02*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:02*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.1**		0.80	0.42	mg/L			12/01/16 11:02	1
Nitrate as N	**4.7**		0.20	0.039	mg/L			12/01/16 11:02	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 11:02	1
Sulfate	**10**		0.50	0.13	mg/L			12/01/16 11:02	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.28	pg/L		12/06/16 13:53	12/09/16 04:35	1
2,3,7,8-TCDF	**2.1**	**J**	10	0.20	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,7,8-PeCDD	ND		50	0.44	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,7,8-PeCDF	**0.85**	**J q B**	50	0.45	pg/L		12/06/16 13:53	12/09/16 04:35	1
2,3,4,7,8-PeCDF	**1.8**	**J**	50	0.49	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,4,7,8-HxCDD	ND		50	0.30	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,6,7,8-HxCDD	**1.3**	**J q**	50	0.28	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,7,8,9-HxCDD	**1.5**	**J**	50	0.23	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,4,7,8-HxCDF	**5.4**	**J**	50	0.53	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,6,7,8-HxCDF	**1.8**	**J q**	50	0.48	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,7,8,9-HxCDF	ND		50	0.50	pg/L		12/06/16 13:53	12/09/16 04:35	1
2,3,4,6,7,8-HxCDF	**3.4**	**J B**	50	0.52	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,4,6,7,8-HpCDD	**17**	**J B**	50	0.40	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,4,6,7,8-HpCDF	**24**	**J B**	50	0.41	pg/L		12/06/16 13:53	12/09/16 04:35	1
1,2,3,4,7,8,9-HpCDF	**4.8**	**J**	50	0.46	pg/L		12/06/16 13:53	12/09/16 04:35	1
OCDD	**80**	**J B**	100	0.42	pg/L		12/06/16 13:53	12/09/16 04:35	1
OCDF	**68**	**J**	100	0.37	pg/L		12/06/16 13:53	12/09/16 04:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*82*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-1,2,3,7,8-PeCDD	*88*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*

Client Sample ID: MW-14:113016

Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*101*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*
13C-OCDD	*112*		*40 - 135*	*12/06/16 13:53*	*12/09/16 04:35*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 14:45	1
Antimony	**0.00010**	**J**	0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 14:45	1
Barium	**0.051**		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 14:45	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 14:45	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 14:45	1
Chromium	**0.00027**	**J**	0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 14:45	1
Copper	**0.00061**	**J**	0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 14:45	1
Iron	**0.039**	**J**	0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 14:45	1
Lead	ND		0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 14:45	1
Manganese	ND		0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 14:45	1
Nickel	ND		0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 14:45	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 14:45	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 14:45	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 14:45	1
Vanadium	**0.0027**	**J**	0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 14:45	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 14:45	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 13:40	1
Antimony	**0.000097**	**J**	0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 13:40	1
Barium	**0.052**		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 13:40	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 13:40	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 13:40	1
Chromium	**0.00026**	**J**	0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 13:40	1
Copper	ND		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 13:40	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 13:40	1
Lead	**0.000049**	**J**	0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 13:40	1
Manganese	ND		0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 13:40	1
Nickel	ND		0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 13:40	1
Selenium	ND		0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 13:40	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 13:40	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 13:40	1
Vanadium	**0.0029**	**J**	0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 13:40	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 13:40	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000056**	**J B**	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:09	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:58	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-14:113016

Lab Sample ID: 590-5100-1

Date Collected: 11/30/16 11:16

Matrix: Water

Date Received: 11/30/16 16:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:07	1
Ammonia (as N)	**0.088**	**J**	0.10	0.060	mg/L		12/05/16 10:35	12/07/16 11:57	1
Chemical Oxygen Demand	ND	F1	20	4.0	mg/L			12/12/16 14:26	1
Total Organic Carbon	**0.98**	**J**	1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 10:45	1

Client Sample ID: MW-12A:113016

Lab Sample ID: 590-5100-2

Date Collected: 11/30/16 12:21

Matrix: Water

Date Received: 11/30/16 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 23:22	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 23:22	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 23:22	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 23:22	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 23:22	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 23:22	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 23:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 23:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 23:22	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 23:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 23:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 23:22	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 23:22	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 23:22	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 23:22	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 23:22	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 23:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 23:22	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 23:22	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 23:22	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 23:22	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 23:22	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 23:22	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 23:22	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 23:22	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 23:22	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 23:22	1
Acetone	ND		25	4.1	ug/L			12/02/16 23:22	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 23:22	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 23:22	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 23:22	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 23:22	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 23:22	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 23:22	1

Client Sample ID: MW-12A:113016
Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 23:22	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 23:22	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 23:22	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 23:22	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 23:22	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 23:22	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 23:22	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 23:22	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 23:22	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 23:22	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 23:22	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 23:22	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 23:22	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 23:22	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 23:22	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 23:22	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 23:22	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 23:22	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 23:22	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 23:22	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 23:22	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 23:22	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 23:22	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 23:22	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 23:22	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 23:22	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 23:22	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 23:22	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 23:22	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 23:22	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 23:22	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 23:22	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 23:22	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 23:22	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 125*		*12/02/16 23:22*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/02/16 23:22*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/02/16 23:22*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/02/16 23:22*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	22	J B	100	18	ug/L			12/02/16 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/02/16 23:22*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-12A:113016
Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
1,2-Dichlorobenzene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
1,3-Dichlorobenzene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
1,4-Dichlorobenzene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,4,5-Trichlorophenol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,4-Dichlorophenol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,4-Dinitrotoluene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2,6-Dinitrotoluene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
2-Chlorophenol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
2-Methylphenol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2-Nitroaniline	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
2-Nitrophenol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
3-Nitroaniline	ND		0.39	0.12	ug/L		12/05/16 16:00	12/07/16 22:37	1
4,6-Dinitro-2-methylphenol	ND		3.9	0.96	ug/L		12/05/16 16:00	12/07/16 22:37	1
4-Bromophenyl phenyl ether	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
4-Chloro-3-methylphenol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
4-Chloroaniline	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
4-Chlorophenyl phenyl ether	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/05/16 16:00	12/07/16 22:37	1
Acenaphthene	ND		0.096	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Anthracene	ND		0.039	0.0096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzoic acid	**0.89**	**J**	2.9	0.58	ug/L		12/05/16 16:00	12/07/16 22:37	1
Benzyl alcohol	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
bis (2-chloroisopropyl) ether	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Bis(2-chloroethoxy)methane	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Bis(2-chloroethyl)ether	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/07/16 22:37	1
Butyl benzyl phthalate	**0.22**	**J**	0.58	0.19	ug/L		12/05/16 16:00	12/07/16 22:37	1
Carbazole	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Chrysene	ND		0.039	0.013	ug/L		12/05/16 16:00	12/07/16 22:37	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Dibenzofuran	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Diethyl phthalate	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Dimethyl phthalate	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-12A:113016
Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.16**	**J**	0.39	0.13	ug/L		12/05/16 16:00	12/07/16 22:37	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		12/05/16 16:00	12/07/16 22:37	1
Fluoranthene	ND		0.048	0.013	ug/L		12/05/16 16:00	12/07/16 22:37	1
Fluorene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Hexachlorobenzene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Isophorone	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Naphthalene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Nitrobenzene	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
N-Nitrosodi-n-propylamine	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
N-Nitrosodiphenylamine	ND		0.39	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Phenanthrene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/07/16 22:37	1
Phenol	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 22:37	1
Pyrene	ND		0.058	0.013	ug/L		12/05/16 16:00	12/07/16 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*57 - 132*	*12/05/16 16:00*	*12/07/16 22:37*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/07/16 22:37*	*1*
2-Fluorophenol	*87*		*50 - 113*	*12/05/16 16:00*	*12/07/16 22:37*	*1*
Nitrobenzene-d5	*86*		*59 - 120*	*12/05/16 16:00*	*12/07/16 22:37*	*1*
Phenol-d5	*89*		*52 - 120*	*12/05/16 16:00*	*12/07/16 22:37*	*1*
Terphenyl-d14	*85*		*72 - 140*	*12/05/16 16:00*	*12/07/16 22:37*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 15:10	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.032	0.0063	ug/L		12/03/16 15:20	12/07/16 02:04	1
4,4'-DDE	ND		0.021	0.0032	ug/L		12/03/16 15:20	12/07/16 02:04	1
4,4'-DDT	ND		0.032	0.0053	ug/L		12/03/16 15:20	12/07/16 02:04	1
Aldrin	ND		0.032	0.0074	ug/L		12/03/16 15:20	12/07/16 02:04	1
alpha-BHC	ND		0.032	0.0074	ug/L		12/03/16 15:20	12/07/16 02:04	1
alpha-Chlordane	ND		0.021	0.0032	ug/L		12/03/16 15:20	12/07/16 02:04	1
beta-BHC	ND		0.053	0.013	ug/L		12/03/16 15:20	12/07/16 02:04	1
delta-BHC	ND		0.053	0.011	ug/L		12/03/16 15:20	12/07/16 02:04	1
Dieldrin	ND		0.032	0.0053	ug/L		12/03/16 15:20	12/07/16 02:04	1
Endosulfan I	ND		0.021	0.0032	ug/L		12/03/16 15:20	12/07/16 02:04	1
Endosulfan II	ND		0.021	0.0021	ug/L		12/03/16 15:20	12/07/16 02:04	1
Endosulfan sulfate	ND		0.021	0.0021	ug/L		12/03/16 15:20	12/07/16 02:04	1
Endrin	ND		0.021	0.0032	ug/L		12/03/16 15:20	12/07/16 02:04	1
Endrin aldehyde	ND		0.21	0.036	ug/L		12/03/16 15:20	12/07/16 02:04	1
Endrin ketone	ND		0.021	0.0021	ug/L		12/03/16 15:20	12/07/16 02:04	1
gamma-BHC (Lindane)	ND		0.032	0.0053	ug/L		12/03/16 15:20	12/07/16 02:04	1
gamma-Chlordane	ND		0.021	0.0032	ug/L		12/03/16 15:20	12/07/16 02:04	1

Client Sample ID: MW-12A:113016
Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.021	0.0042	ug/L		12/03/16 15:20	12/07/16 02:04	1
Heptachlor epoxide	ND		0.021	0.0032	ug/L		12/03/16 15:20	12/07/16 02:04	1
Methoxychlor	ND		0.11	0.0021	ug/L		12/03/16 15:20	12/07/16 02:04	1
Toxaphene	ND		1.1	0.23	ug/L		12/03/16 15:20	12/07/16 02:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*22 - 150*	*12/03/16 15:20*	*12/07/16 02:04*	*1*
Tetrachloro-m-xylene	*75*		*40 - 113*	*12/03/16 15:20*	*12/07/16 02:04*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		12/08/16 10:51	12/08/16 14:32	1
PCB-1221	ND		0.10	0.063	ug/L		12/08/16 10:51	12/08/16 14:32	1
PCB-1232	ND		0.10	0.063	ug/L		12/08/16 10:51	12/08/16 14:32	1
PCB-1242	ND		0.10	0.063	ug/L		12/08/16 10:51	12/08/16 14:32	1
PCB-1248	ND		0.10	0.063	ug/L		12/08/16 10:51	12/08/16 14:32	1
PCB-1254	ND		0.10	0.063	ug/L		12/08/16 10:51	12/08/16 14:32	1
PCB-1260	ND		0.10	0.044	ug/L		12/08/16 10:51	12/08/16 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*48*		*20 - 120*	*12/08/16 10:51*	*12/08/16 14:32*	*1*
DCB Decachlorobiphenyl (Surr)	*73*		*36 - 138*	*12/08/16 10:51*	*12/08/16 14:32*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 03:11	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 03:11	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 03:11	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/13/16 03:11	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 09:51	12/13/16 03:11	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 03:11	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 03:11	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 03:11	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/13/16 03:11	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 09:51	12/13/16 03:11	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 03:11	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 09:51	12/13/16 03:11	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 09:51	12/13/16 03:11	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 03:11	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 03:11	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 03:11	1
Methyl parathion	ND		3.8	0.14	ug/L		12/05/16 09:51	12/13/16 03:11	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 03:11	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 09:51	12/13/16 03:11	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 03:11	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 09:51	12/13/16 03:11	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 09:51	12/13/16 03:11	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/13/16 03:11	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 03:11	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 03:11	1

Client Sample ID: MW-12A:113016

Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2

Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/13/16 03:11	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/13/16 03:11	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*12/05/16 09:51*	*12/13/16 03:11*	*1*
Triphenylphosphate	*90*		*60 - 154*	*12/05/16 09:51*	*12/13/16 03:11*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/05/16 15:38	12/09/16 06:55	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 06:55	1
2,4-DB	ND		3.8	0.35	ug/L		12/05/16 15:38	12/09/16 06:55	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 06:55	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 06:55	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 06:55	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 06:55	1
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 06:55	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/05/16 15:38	12/09/16 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*78*		*39 - 135*	*12/05/16 15:38*	*12/09/16 06:55*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.043	mg/L		12/05/16 10:22	12/05/16 15:20	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.064	mg/L		12/05/16 10:22	12/05/16 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:20*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:20*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.5**		0.80	0.42	mg/L			12/01/16 11:24	1
Nitrate as N	**3.6**		0.20	0.039	mg/L			12/01/16 11:24	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 11:24	1
Sulfate	**24**		0.50	0.13	mg/L			12/01/16 11:24	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.25	pg/L		12/06/16 13:53	12/09/16 05:21	1
2,3,7,8-TCDF	**0.37**	**J q**	10	0.18	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,7,8-PeCDD	ND		51	0.41	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,7,8-PeCDF	ND		51	0.30	pg/L		12/06/16 13:53	12/09/16 05:21	1
2,3,4,7,8-PeCDF	ND		51	0.32	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,4,7,8-HxCDD	ND		51	0.33	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,6,7,8-HxCDD	ND		51	0.30	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,7,8,9-HxCDD	ND		51	0.25	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,4,7,8-HxCDF	ND		51	0.42	pg/L		12/06/16 13:53	12/09/16 05:21	1

Client Sample ID: MW-12A:113016
Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		51	0.38	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,7,8,9-HxCDF	ND		51	0.40	pg/L		12/06/16 13:53	12/09/16 05:21	1
2,3,4,6,7,8-HxCDF	ND		51	0.41	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,4,6,7,8-HpCDD	**1.6**	**J B**	51	0.27	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,4,6,7,8-HpCDF	**1.8**	**J B q**	51	0.31	pg/L		12/06/16 13:53	12/09/16 05:21	1
1,2,3,4,7,8,9-HpCDF	ND		51	0.35	pg/L		12/06/16 13:53	12/09/16 05:21	1
OCDD	**5.1**	**J B**	100	0.37	pg/L		12/06/16 13:53	12/09/16 05:21	1
OCDF	**4.5**	**J**	100	0.48	pg/L		12/06/16 13:53	12/09/16 05:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*78*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-2,3,7,8-TCDF	*72*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-1,2,3,7,8-PeCDD	*84*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-1,2,3,7,8-PeCDF	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-1,2,3,6,7,8-HxCDD	*89*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*92*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*
13C-OCDD	*100*		*40 - 135*	*12/06/16 13:53*	*12/09/16 05:21*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0011**		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 14:49	1
Antimony	ND		0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 14:49	1
Barium	**0.0084**		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 14:49	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 14:49	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 14:49	1
Chromium	**0.00053**		0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 14:49	1
Copper	**0.0010**	**J**	0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 14:49	1
Iron	**0.71**		0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 14:49	1
Lead	**0.00079**		0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 14:49	1
Manganese	**0.013**		0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 14:49	1
Nickel	**0.00049**	**J**	0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 14:49	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 14:49	1
Silver	**0.00027**	**J**	0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 14:49	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 14:49	1
Vanadium	**0.0093**		0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 14:49	1
Zinc	**0.0075**		0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 14:49	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00097**	**J**	0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 13:44	1
Antimony	ND		0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 13:44	1
Barium	**0.0065**		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 13:44	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 13:44	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 13:44	1
Chromium	**0.00015**	**J**	0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 13:44	1
Copper	ND		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 13:44	1
Iron	**0.0070**	**J**	0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 13:44	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 13:44	1
Manganese	**0.00075**	**J**	0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 13:44	1

Client Sample ID: MW-12A:113016

Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 13:44	1
Selenium	ND		0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 13:44	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 13:44	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 13:44	1
Vanadium	**0.0090**		0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 13:44	1
Zinc	**0.0021**	**J**	0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 13:44	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000045**	**J B**	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:11	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 15:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:07	1
Ammonia (as N)	**0.11**		0.10	0.060	mg/L		12/05/16 10:35	12/07/16 11:58	1
Chemical Oxygen Demand	**8.4**	**J**	20	4.0	mg/L			12/12/16 14:29	1
Total Organic Carbon	**2.3**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 10:45	1

Client Sample ID: MW-15:113016

Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 23:44	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 23:44	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 23:44	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 23:44	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 23:44	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 23:44	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 23:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 23:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 23:44	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 23:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 23:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 23:44	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 23:44	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 23:44	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 23:44	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 23:44	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 23:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 23:44	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-15:113016
Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 23:44	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 23:44	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 23:44	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 23:44	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 23:44	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 23:44	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 23:44	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 23:44	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 23:44	1
Acetone	ND		25	4.1	ug/L			12/02/16 23:44	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 23:44	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 23:44	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 23:44	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 23:44	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 23:44	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 23:44	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 23:44	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 23:44	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 23:44	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 23:44	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 23:44	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 23:44	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 23:44	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 23:44	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 23:44	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 23:44	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 23:44	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 23:44	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 23:44	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 23:44	1
Hexane	ND		1.0	0.084	ug/L			12/02/16 23:44	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 23:44	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 23:44	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 23:44	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 23:44	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 23:44	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 23:44	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 23:44	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 23:44	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 23:44	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 23:44	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 23:44	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 23:44	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 23:44	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 23:44	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 23:44	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 23:44	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 23:44	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 23:44	1

Client Sample ID: MW-15:113016
Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 23:44	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*12/02/16 23:44*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/02/16 23:44*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/02/16 23:44*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/02/16 23:44*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	22	J B	100	18	ug/L			12/02/16 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*		*12/02/16 23:44*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
3-Nitroaniline	ND		0.38	0.12	ug/L		12/05/16 16:00	12/07/16 23:01	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		12/05/16 16:00	12/07/16 23:01	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
4-Chloroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/05/16 16:00	12/07/16 23:01	1
Acenaphthene	ND		0.096	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Anthracene	ND		0.038	0.0096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1

Client Sample ID: MW-15:113016
Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Benzoic acid	**0.78**	**J**	2.9	0.58	ug/L		12/05/16 16:00	12/07/16 23:01	1
Benzyl alcohol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/07/16 23:01	1
Butyl benzyl phthalate	**0.22**	**J**	0.58	0.19	ug/L		12/05/16 16:00	12/07/16 23:01	1
Carbazole	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 23:01	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Di-n-butyl phthalate	**0.14**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/07/16 23:01	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 23:01	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/07/16 23:01	1
Fluorene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Isophorone	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Naphthalene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Phenanthrene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/07/16 23:01	1
Phenol	ND		0.58	0.096	ug/L		12/05/16 16:00	12/07/16 23:01	1
Pyrene	ND		0.058	0.012	ug/L		12/05/16 16:00	12/07/16 23:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*57 - 132*	*12/05/16 16:00*	*12/07/16 23:01*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/05/16 16:00*	*12/07/16 23:01*	*1*
2-Fluorophenol	*84*		*50 - 113*	*12/05/16 16:00*	*12/07/16 23:01*	*1*
Nitrobenzene-d5	*89*		*59 - 120*	*12/05/16 16:00*	*12/07/16 23:01*	*1*
Phenol-d5	*88*		*52 - 120*	*12/05/16 16:00*	*12/07/16 23:01*	*1*
Terphenyl-d14	*91*		*72 - 140*	*12/05/16 16:00*	*12/07/16 23:01*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 15:33	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-15:113016
Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		12/03/16 15:20	12/07/16 02:22	1
4,4'-DDE	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/07/16 02:22	1
4,4'-DDT	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/07/16 02:22	1
Aldrin	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/07/16 02:22	1
alpha-BHC	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/07/16 02:22	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/07/16 02:22	1
beta-BHC	ND		0.050	0.012	ug/L		12/03/16 15:20	12/07/16 02:22	1
delta-BHC	ND		0.050	0.010	ug/L		12/03/16 15:20	12/07/16 02:22	1
Dieldrin	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/07/16 02:22	1
Endosulfan I	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/07/16 02:22	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/07/16 02:22	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/07/16 02:22	1
Endrin	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/07/16 02:22	1
Endrin aldehyde	ND		0.20	0.034	ug/L		12/03/16 15:20	12/07/16 02:22	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/07/16 02:22	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/07/16 02:22	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/07/16 02:22	1
Heptachlor	ND		0.020	0.0040	ug/L		12/03/16 15:20	12/07/16 02:22	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/07/16 02:22	1
Methoxychlor	ND		0.10	0.0020	ug/L		12/03/16 15:20	12/07/16 02:22	1
Toxaphene	ND		1.0	0.22	ug/L		12/03/16 15:20	12/07/16 02:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*22 - 150*	*12/03/16 15:20*	*12/07/16 02:22*	*1*
Tetrachloro-m-xylene	*61*		*40 - 113*	*12/03/16 15:20*	*12/07/16 02:22*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.11	0.066	ug/L		12/08/16 10:51	12/08/16 14:52	1
PCB-1221	ND		0.11	0.066	ug/L		12/08/16 10:51	12/08/16 14:52	1
PCB-1232	ND		0.11	0.066	ug/L		12/08/16 10:51	12/08/16 14:52	1
PCB-1242	ND		0.11	0.066	ug/L		12/08/16 10:51	12/08/16 14:52	1
PCB-1248	ND		0.11	0.066	ug/L		12/08/16 10:51	12/08/16 14:52	1
PCB-1254	ND		0.11	0.066	ug/L		12/08/16 10:51	12/08/16 14:52	1
PCB-1260	ND		0.11	0.046	ug/L		12/08/16 10:51	12/08/16 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*47*		*20 - 120*	*12/08/16 10:51*	*12/08/16 14:52*	*1*
DCB Decachlorobiphenyl (Surr)	*80*		*36 - 138*	*12/08/16 10:51*	*12/08/16 14:52*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 03:42	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 03:42	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 03:42	1
Chlorpyrifos	ND		1.5	0.35	ug/L		12/05/16 09:51	12/13/16 03:42	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 09:51	12/13/16 03:42	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 03:42	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 03:42	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 03:42	1

Client Sample ID: MW-15:113016
Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.43	ug/L		12/05/16 09:51	12/13/16 03:42	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 09:51	12/13/16 03:42	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 03:42	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 09:51	12/13/16 03:42	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 09:51	12/13/16 03:42	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 03:42	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 03:42	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 03:42	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/13/16 03:42	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 03:42	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 09:51	12/13/16 03:42	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 03:42	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 09:51	12/13/16 03:42	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 09:51	12/13/16 03:42	1
Sulfotepp	ND		1.5	0.16	ug/L		12/05/16 09:51	12/13/16 03:42	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 03:42	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 03:42	1
Trichloronate	ND		1.5	0.23	ug/L		12/05/16 09:51	12/13/16 03:42	1
Ethoprop	ND		1.5	0.17	ug/L		12/05/16 09:51	12/13/16 03:42	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*2*	*X*	*49 - 171*	*12/05/16 09:51*	*12/13/16 03:42*	*1*
Triphenylphosphate	*84*		*60 - 154*	*12/05/16 09:51*	*12/13/16 03:42*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/05/16 15:38	12/09/16 07:18	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 07:18	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 07:18	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 07:18	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 07:18	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 07:18	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 07:18	1
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 07:18	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/05/16 15:38	12/09/16 07:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*	*12/05/16 15:38*	*12/09/16 07:18*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.043	mg/L		12/05/16 10:22	12/05/16 15:38	1
Residual Range Organics (RRO) (C25-C36)	ND		0.22	0.065	mg/L		12/05/16 10:22	12/05/16 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:38*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:38*	*1*

Client Sample ID: MW-15:113016

Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40**		0.80	0.42	mg/L			12/01/16 11:46	1
Nitrate as N	**0.31**		0.20	0.039	mg/L			12/01/16 11:46	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 11:46	1
Sulfate	**20**		0.50	0.13	mg/L			12/01/16 11:46	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.17	pg/L		12/12/16 14:18	12/14/16 02:26	1
2,3,7,8-TCDF	ND		9.6	0.098	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,7,8-PeCDD	ND		48	0.17	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,7,8-PeCDF	ND		48	0.14	pg/L		12/12/16 14:18	12/14/16 02:26	1
2,3,4,7,8-PeCDF	ND		48	0.15	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,4,7,8-HxCDD	ND		48	0.13	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,6,7,8-HxCDD	ND		48	0.12	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,7,8,9-HxCDD	ND		48	0.099	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,4,7,8-HxCDF	ND		48	0.21	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,6,7,8-HxCDF	ND		48	0.19	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,7,8,9-HxCDF	ND		48	0.20	pg/L		12/12/16 14:18	12/14/16 02:26	1
2,3,4,6,7,8-HxCDF	ND		48	0.21	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,4,6,7,8-HpCDD	**0.70**	**J B**	48	0.13	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,4,6,7,8-HpCDF	**0.48**	**J q B**	48	0.15	pg/L		12/12/16 14:18	12/14/16 02:26	1
1,2,3,4,7,8,9-HpCDF	**0.38**	**J q**	48	0.17	pg/L		12/12/16 14:18	12/14/16 02:26	1
OCDD	**2.6**	**J B**	96	0.18	pg/L		12/12/16 14:18	12/14/16 02:26	1
OCDF	**1.2**	**J B**	96	0.16	pg/L		12/12/16 14:18	12/14/16 02:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*91*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-2,3,7,8-TCDF	*84*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-1,2,3,7,8-PeCDD	*102*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-1,2,3,7,8-PeCDF	*93*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-1,2,3,6,7,8-HxCDD	*94*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*
13C-OCDD	*100*		*40 - 135*	*12/12/16 14:18*	*12/14/16 02:26*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 14:54	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 14:54	1
Barium	**0.036**		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 14:54	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 14:54	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 14:54	1
Chromium	**0.00032**	**J**	0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 14:54	1
Copper	**0.0046**		0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 14:54	1
Iron	**0.15**		0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 14:54	1
Lead	**0.000082**	**J**	0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 14:54	1
Manganese	**0.0019**	**J**	0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 14:54	1
Nickel	**0.0011**	**J**	0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 14:54	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 14:54	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 14:54	1

Client Sample ID: MW-15:113016

Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 14:54	1
Vanadium	**0.0024**	**J**	0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 14:54	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 14:54	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 13:49	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 13:49	1
Barium	**0.037**		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 13:49	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 13:49	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 13:49	1
Chromium	**0.00017**	**J**	0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 13:49	1
Copper	**0.0045**		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 13:49	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 13:49	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 13:49	1
Manganese	**0.00078**	**J**	0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 13:49	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 13:49	1
Selenium	ND		0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 13:49	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 13:49	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 13:49	1
Vanadium	**0.0024**	**J**	0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 13:49	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 13:49	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000043**	**J B**	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:18	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:08	1
Ammonia (as N)	**0.072**	**J**	0.10	0.060	mg/L		12/05/16 10:35	12/07/16 11:59	1
Chemical Oxygen Demand	**6.8**	**J**	20	4.0	mg/L			12/12/16 14:29	1
Total Organic Carbon	**3.9**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 10:45	1

Client Sample ID: MW-16:113016

Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 00:05	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 00:05	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 00:05	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 00:05	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 00:05	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 00:05	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 00:05	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 00:05	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 00:05	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 00:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 00:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 00:05	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 00:05	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 00:05	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 00:05	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 00:05	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 00:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 00:05	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 00:05	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 00:05	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 00:05	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 00:05	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 00:05	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 00:05	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 00:05	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 00:05	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 00:05	1
Acetone	ND		25	4.1	ug/L			12/03/16 00:05	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 00:05	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 00:05	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 00:05	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 00:05	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 00:05	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 00:05	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 00:05	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 00:05	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 00:05	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 00:05	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 00:05	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 00:05	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 00:05	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 00:05	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 00:05	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 00:05	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 00:05	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 00:05	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 00:05	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 00:05	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 00:05	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 00:05	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 00:05	1

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 00:05	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 00:05	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 00:05	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 00:05	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 00:05	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 00:05	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 00:05	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 00:05	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 00:05	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 00:05	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 00:05	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 00:05	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 00:05	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 00:05	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 00:05	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 00:05	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 00:05	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*12/03/16 00:05*	*1*
4-Bromofluorobenzene (Surr)	*105*		*69 - 120*		*12/03/16 00:05*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*12/03/16 00:05*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*12/03/16 00:05*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	23	J B	100	18	ug/L			12/03/16 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*12/03/16 00:05*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 23:25	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/07/16 23:25	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/07/16 23:25	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzoic acid	**0.81**	**J**	2.9	0.57	ug/L		12/05/16 16:00	12/07/16 23:25	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/07/16 23:25	1
Butyl benzyl phthalate	**0.23**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/07/16 23:25	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 23:25	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Di-n-butyl phthalate	**0.17**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/07/16 23:25	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 23:25	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/07/16 23:25	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 23:25	1

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:25	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*102*		*57 - 132*	*12/05/16 16:00*	*12/07/16 23:25*	*1*
2-Fluorobiphenyl	*78*		*50 - 120*	*12/05/16 16:00*	*12/07/16 23:25*	*1*
2-Fluorophenol	*82*		*50 - 113*	*12/05/16 16:00*	*12/07/16 23:25*	*1*
Nitrobenzene-d5	*84*		*59 - 120*	*12/05/16 16:00*	*12/07/16 23:25*	*1*
Phenol-d5	*85*		*52 - 120*	*12/05/16 16:00*	*12/07/16 23:25*	*1*
Terphenyl-d14	*90*		*72 - 140*	*12/05/16 16:00*	*12/07/16 23:25*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 16:19	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0056	ug/L		12/03/16 15:20	12/07/16 02:41	1
4,4'-DDE	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 02:41	1
4,4'-DDT	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 02:41	1
Aldrin	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 02:41	1
alpha-BHC	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 02:41	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 02:41	1
beta-BHC	ND		0.047	0.011	ug/L		12/03/16 15:20	12/07/16 02:41	1
delta-BHC	ND		0.047	0.0094	ug/L		12/03/16 15:20	12/07/16 02:41	1
Dieldrin	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 02:41	1
Endosulfan I	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 02:41	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 02:41	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 02:41	1
Endrin	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 02:41	1
Endrin aldehyde	ND		0.19	0.032	ug/L		12/03/16 15:20	12/07/16 02:41	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 02:41	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 02:41	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 02:41	1
Heptachlor	ND		0.019	0.0037	ug/L		12/03/16 15:20	12/07/16 02:41	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 02:41	1
Methoxychlor	ND		0.094	0.0019	ug/L		12/03/16 15:20	12/07/16 02:41	1
Toxaphene	ND		0.94	0.21	ug/L		12/03/16 15:20	12/07/16 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*70*		*22 - 150*	*12/03/16 15:20*	*12/07/16 02:41*	*1*
Tetrachloro-m-xylene	*68*		*40 - 113*	*12/03/16 15:20*	*12/07/16 02:41*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.094	0.058	ug/L		12/08/16 10:51	12/08/16 15:13	1
PCB-1221	ND		0.094	0.058	ug/L		12/08/16 10:51	12/08/16 15:13	1
PCB-1232	ND		0.094	0.058	ug/L		12/08/16 10:51	12/08/16 15:13	1
PCB-1242	ND		0.094	0.058	ug/L		12/08/16 10:51	12/08/16 15:13	1
PCB-1248	ND		0.094	0.058	ug/L		12/08/16 10:51	12/08/16 15:13	1
PCB-1254	ND		0.094	0.058	ug/L		12/08/16 10:51	12/08/16 15:13	1

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.094	0.041	ug/L		12/08/16 10:51	12/08/16 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*34*		*20 - 120*	*12/08/16 10:51*	*12/08/16 15:13*	*1*
DCB Decachlorobiphenyl (Surr)	*69*		*36 - 138*	*12/08/16 10:51*	*12/08/16 15:13*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 04:14	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 04:14	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 04:14	1
Chlorpyrifos	ND		1.5	0.35	ug/L		12/05/16 09:51	12/13/16 04:14	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 09:51	12/13/16 04:14	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 04:14	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 04:14	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 04:14	1
Dimethoate	ND		1.5	0.43	ug/L		12/05/16 09:51	12/13/16 04:14	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 09:51	12/13/16 04:14	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 04:14	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 09:51	12/13/16 04:14	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 09:51	12/13/16 04:14	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 04:14	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 04:14	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 04:14	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/13/16 04:14	1
Mevinphos	ND	*	6.0	0.45	ug/L		12/05/16 09:51	12/13/16 04:14	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 09:51	12/13/16 04:14	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 04:14	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 09:51	12/13/16 04:14	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 09:51	12/13/16 04:14	1
Sulfotepp	ND		1.5	0.16	ug/L		12/05/16 09:51	12/13/16 04:14	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 04:14	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 04:14	1
Trichloronate	ND		1.5	0.23	ug/L		12/05/16 09:51	12/13/16 04:14	1
Ethoprop	ND		1.5	0.17	ug/L		12/05/16 09:51	12/13/16 04:14	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*4*	*X*	*49 - 171*	*12/05/16 09:51*	*12/13/16 04:14*	*1*
Triphenylphosphate	*84*		*60 - 154*	*12/05/16 09:51*	*12/13/16 04:14*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/05/16 15:38	12/09/16 07:41	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 07:41	1
2,4-DB	ND		3.8	0.35	ug/L		12/05/16 15:38	12/09/16 07:41	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 07:41	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 07:41	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 07:41	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 07:41	1

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 07:41	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/05/16 15:38	12/09/16 07:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*84*		*39 - 135*	*12/05/16 15:38*	*12/09/16 07:41*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 15:56	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:56*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 15:56*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42**		0.80	0.42	mg/L			12/01/16 11:57	1
Nitrate as N	**0.48**		0.20	0.039	mg/L			12/01/16 11:57	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 11:57	1
Sulfate	**15**		0.50	0.13	mg/L			12/01/16 11:57	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.24	pg/L		12/06/16 13:53	12/09/16 06:07	1
2,3,7,8-TCDF	**0.41**	**J**	9.5	0.19	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,7,8-PeCDD	ND		47	0.33	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,7,8-PeCDF	ND		47	0.25	pg/L		12/06/16 13:53	12/09/16 06:07	1
2,3,4,7,8-PeCDF	ND		47	0.27	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,4,7,8-HxCDD	ND		47	0.25	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,6,7,8-HxCDD	ND		47	0.23	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,7,8,9-HxCDD	ND		47	0.19	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,4,7,8-HxCDF	ND		47	0.25	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,6,7,8-HxCDF	ND		47	0.23	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,7,8,9-HxCDF	ND		47	0.24	pg/L		12/06/16 13:53	12/09/16 06:07	1
2,3,4,6,7,8-HxCDF	ND		47	0.25	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,4,6,7,8-HpCDD	**0.77**	**J B q**	47	0.27	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,4,6,7,8-HpCDF	**1.1**	**J B**	47	0.23	pg/L		12/06/16 13:53	12/09/16 06:07	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.26	pg/L		12/06/16 13:53	12/09/16 06:07	1
OCDD	**3.5**	**J B**	95	0.40	pg/L		12/06/16 13:53	12/09/16 06:07	1
OCDF	**2.2**	**J**	95	0.29	pg/L		12/06/16 13:53	12/09/16 06:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*
13C-2,3,7,8-TCDF	*70*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*
13C-1,2,3,4,7,8-HxCDF	*75*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*92*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:07*	*1*

Client Sample ID: MW-16:113016
Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135	12/06/16 13:53	12/09/16 06:07	1
13C-OCDD	100		40 - 135	12/06/16 13:53	12/09/16 06:07	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0021		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 14:58	1
Antimony	0.00016	J	0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 14:58	1
Barium	0.060		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 14:58	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 14:58	1
Cadmium	0.000039	J	0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 14:58	1
Chromium	0.00076		0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 14:58	1
Copper	0.0044		0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 14:58	1
Iron	0.33		0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 14:58	1
Lead	0.00063		0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 14:58	1
Manganese	0.012		0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 14:58	1
Nickel	0.0014	J	0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 14:58	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 14:58	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 14:58	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 14:58	1
Vanadium	0.0043		0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 14:58	1
Zinc	0.0034	J	0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 14:58	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 13:53	1
Antimony	0.00013	J	0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 13:53	1
Barium	0.056		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 13:53	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 13:53	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 13:53	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 13:53	1
Copper	0.0038		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 13:53	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 13:53	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 13:53	1
Manganese	0.0016	J	0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 13:53	1
Nickel	0.0011	J	0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 13:53	1
Selenium	0.00032	J	0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 13:53	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 13:53	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 13:53	1
Vanadium	0.0041		0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 13:53	1
Zinc	0.0023	J	0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 13:53	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000074	J B	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:20	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 15:05	1

Client Sample ID: MW-16:113016

Lab Sample ID: 590-5100-4

Date Collected: 11/30/16 12:27

Matrix: Water

Date Received: 11/30/16 16:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:09	1
Ammonia (as N)	**0.089**	**J**	0.10	0.060	mg/L		12/05/16 10:35	12/07/16 12:00	1
Chemical Oxygen Demand	**8.3**	**J**	20	4.0	mg/L			12/12/16 14:29	1
Total Organic Carbon	**3.8**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**340**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 10:45	1

Client Sample ID: MW-16A:113016

Lab Sample ID: 590-5100-5

Date Collected: 11/30/16 10:24

Matrix: Water

Date Received: 11/30/16 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 00:27	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 00:27	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 00:27	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 00:27	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 00:27	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 00:27	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 00:27	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 00:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 00:27	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 00:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 00:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 00:27	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 00:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 00:27	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 00:27	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 00:27	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 00:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 00:27	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 00:27	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 00:27	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 00:27	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 00:27	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 00:27	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 00:27	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 00:27	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 00:27	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 00:27	1
Acetone	ND		25	4.1	ug/L			12/03/16 00:27	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 00:27	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 00:27	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 00:27	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 00:27	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 00:27	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 00:27	1

Client Sample ID: MW-16A:113016
Date Collected: 11/30/16 10:24
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 00:27	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 00:27	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 00:27	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 00:27	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 00:27	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 00:27	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 00:27	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 00:27	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 00:27	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 00:27	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 00:27	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 00:27	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 00:27	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 00:27	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 00:27	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 00:27	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 00:27	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 00:27	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 00:27	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 00:27	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 00:27	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 00:27	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 00:27	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 00:27	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 00:27	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 00:27	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 00:27	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 00:27	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 00:27	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 00:27	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 00:27	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 00:27	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 00:27	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 00:27	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 125*		*12/03/16 00:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/03/16 00:27*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*12/03/16 00:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/03/16 00:27*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**23**	**J B**	100	18	ug/L			12/03/16 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/03/16 00:27*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-16A:113016
Date Collected: 11/30/16 10:24
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/07/16 23:49	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/07/16 23:49	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/07/16 23:49	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzoic acid	ND		2.9	0.57	ug/L		12/05/16 16:00	12/07/16 23:49	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Bis(2-ethylhexyl) phthalate	**2.8**	**J**	2.9	1.1	ug/L		12/05/16 16:00	12/07/16 23:49	1
Butyl benzyl phthalate	**0.44**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/07/16 23:49	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/07/16 23:49	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-16A:113016
Date Collected: 11/30/16 10:24
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Lab Sample ID: 590-5100-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.21**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/07/16 23:49	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/07/16 23:49	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/07/16 23:49	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/07/16 23:49	1
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/07/16 23:49	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/07/16 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*98*		*57 - 132*	*12/05/16 16:00*	*12/07/16 23:49*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/05/16 16:00*	*12/07/16 23:49*	*1*
2-Fluorophenol	*83*		*50 - 113*	*12/05/16 16:00*	*12/07/16 23:49*	*1*
Nitrobenzene-d5	*87*		*59 - 120*	*12/05/16 16:00*	*12/07/16 23:49*	*1*
Phenol-d5	*90*		*52 - 120*	*12/05/16 16:00*	*12/07/16 23:49*	*1*
Terphenyl-d14	*94*		*72 - 140*	*12/05/16 16:00*	*12/07/16 23:49*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 16:42	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		12/03/16 15:20	12/07/16 03:00	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:00	1
4,4'-DDT	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 03:00	1
Aldrin	ND		0.029	0.0067	ug/L		12/03/16 15:20	12/07/16 03:00	1
alpha-BHC	ND		0.029	0.0067	ug/L		12/03/16 15:20	12/07/16 03:00	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:00	1
beta-BHC	ND		0.048	0.012	ug/L		12/03/16 15:20	12/07/16 03:00	1
delta-BHC	ND		0.048	0.0096	ug/L		12/03/16 15:20	12/07/16 03:00	1
Dieldrin	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 03:00	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:00	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:00	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:00	1
Endrin	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:00	1
Endrin aldehyde	ND		0.19	0.033	ug/L		12/03/16 15:20	12/07/16 03:00	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:00	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 03:00	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:00	1

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Lab Sample ID: 590-5100-5
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0039	ug/L		12/03/16 15:20	12/07/16 03:00	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:00	1
Methoxychlor	ND		0.096	0.0019	ug/L		12/03/16 15:20	12/07/16 03:00	1
Toxaphene	ND		0.96	0.21	ug/L		12/03/16 15:20	12/07/16 03:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*22 - 150*	*12/03/16 15:20*	*12/07/16 03:00*	*1*
Tetrachloro-m-xylene	*76*		*40 - 113*	*12/03/16 15:20*	*12/07/16 03:00*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 15:34	1
PCB-1221	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 15:34	1
PCB-1232	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 15:34	1
PCB-1242	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 15:34	1
PCB-1248	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 15:34	1
PCB-1254	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 15:34	1
PCB-1260	ND		0.095	0.041	ug/L		12/08/16 10:51	12/08/16 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*44*		*20 - 120*	*12/08/16 10:51*	*12/08/16 15:34*	*1*
DCB Decachlorobiphenyl (Surr)	*74*		*36 - 138*	*12/08/16 10:51*	*12/08/16 15:34*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 04:45	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 04:45	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 04:45	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/13/16 04:45	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 09:51	12/13/16 04:45	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 04:45	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 04:45	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 04:45	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/13/16 04:45	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 09:51	12/13/16 04:45	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 04:45	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 09:51	12/13/16 04:45	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 09:51	12/13/16 04:45	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 04:45	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 04:45	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 04:45	1
Methyl parathion	ND		3.8	0.14	ug/L		12/05/16 09:51	12/13/16 04:45	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 04:45	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 09:51	12/13/16 04:45	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 04:45	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 09:51	12/13/16 04:45	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 09:51	12/13/16 04:45	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/13/16 04:45	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 04:45	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 04:45	1

Client Sample ID: MW-16A:113016
Date Collected: 11/30/16 10:24
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Lab Sample ID: 590-5100-5
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/13/16 04:45	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/13/16 04:45	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 04:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*12*	*X*	*49 - 171*	*12/05/16 09:51*	*12/13/16 04:45*	*1*
Triphenylphosphate	*81*		*60 - 154*	*12/05/16 09:51*	*12/13/16 04:45*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/05/16 15:38	12/09/16 08:04	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 08:04	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 08:04	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 08:04	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 08:04	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 08:04	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 08:04	1
MCPP	ND		380	31	ug/L		12/05/16 15:38	12/09/16 08:04	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/05/16 15:38	12/09/16 08:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*12/05/16 15:38*	*12/09/16 08:04*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 16:13	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*12/05/16 10:22*	*12/05/16 16:13*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*12/05/16 10:22*	*12/05/16 16:13*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43**		0.80	0.42	mg/L			12/01/16 12:09	1
Nitrate as N	**1.1**		0.20	0.039	mg/L			12/01/16 12:09	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 12:09	1
Sulfate	**18**		0.50	0.13	mg/L			12/01/16 12:09	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.28	pg/L		12/06/16 13:53	12/09/16 06:53	1
2,3,7,8-TCDF	**0.26**	**J q**	9.5	0.14	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,7,8-PeCDD	ND		48	0.38	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,7,8-PeCDF	ND		48	0.29	pg/L		12/06/16 13:53	12/09/16 06:53	1
2,3,4,7,8-PeCDF	ND		48	0.32	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,4,7,8-HxCDD	ND		48	0.26	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,6,7,8-HxCDD	ND		48	0.23	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,7,8,9-HxCDD	ND		48	0.20	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,4,7,8-HxCDF	ND		48	0.29	pg/L		12/06/16 13:53	12/09/16 06:53	1

Client Sample ID: MW-16A:113016

Date Collected: 11/30/16 10:24
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-5

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		48	0.26	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,7,8,9-HxCDF	ND		48	0.27	pg/L		12/06/16 13:53	12/09/16 06:53	1
2,3,4,6,7,8-HxCDF	ND		48	0.28	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,4,6,7,8-HpCDD	**0.63**	**J B q**	48	0.24	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,4,6,7,8-HpCDF	**0.66**	**J B q**	48	0.23	pg/L		12/06/16 13:53	12/09/16 06:53	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.27	pg/L		12/06/16 13:53	12/09/16 06:53	1
OCDD	**2.9**	**J B**	95	0.41	pg/L		12/06/16 13:53	12/09/16 06:53	1
OCDF	**1.6**	**J**	95	0.31	pg/L		12/06/16 13:53	12/09/16 06:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-2,3,7,8-TCDF	*73*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-1,2,3,7,8-PeCDD	*86*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*95*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*
13C-OCDD	*101*		*40 - 135*	*12/06/16 13:53*	*12/09/16 06:53*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 15:02	1
Antimony	**0.00012**	**J**	0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 15:02	1
Barium	**0.038**		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 15:02	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 15:02	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 15:02	1
Chromium	**0.00061**		0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 15:02	1
Copper	**0.0038**		0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 15:02	1
Iron	**0.025**	**J**	0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 15:02	1
Lead	**0.000039**	**J**	0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 15:02	1
Manganese	**0.0013**	**J**	0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 15:02	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 15:02	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 15:02	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 15:02	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 15:02	1
Vanadium	**0.0069**		0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 15:02	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 15:02	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0024**		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 12:50	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 12:50	1
Barium	**0.039**		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 12:50	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 12:50	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 12:50	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 12:50	1
Copper	**0.0037**		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 12:50	1
Iron	**0.0099**	**J**	0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 12:50	1
Lead	**0.000046**	**J**	0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 12:50	1
Manganese	**0.0013**	**J**	0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 12:50	1

Client Sample ID: MW-16A:113016

Lab Sample ID: 590-5100-5

Date Collected: 11/30/16 10:24

Matrix: Water

Date Received: 11/30/16 16:50

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0015**	**J**	0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 12:50	1
Selenium	ND		0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 12:50	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 12:50	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 12:50	1
Vanadium	**0.0072**		0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 12:50	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 12:50	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000041**	**J B**	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:22	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**0.0090**	**J**	0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:10	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/05/16 10:35	12/07/16 12:01	1
Chemical Oxygen Demand	**14**	**J**	20	4.0	mg/L			12/12/16 14:29	1
Total Organic Carbon	**4.1**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**1.0**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 10:45	1

Client Sample ID: MW-9A:113016

Lab Sample ID: 590-5100-6

Date Collected: 11/30/16 14:26

Matrix: Water

Date Received: 11/30/16 16:50

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 00:48	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 00:48	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 00:48	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 00:48	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 00:48	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 00:48	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 00:48	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 00:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 00:48	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 00:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 00:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 00:48	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 00:48	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 00:48	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 00:48	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 00:48	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 00:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 00:48	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-9A:113016
Date Collected: 11/30/16 14:26
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 00:48	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 00:48	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 00:48	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 00:48	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 00:48	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 00:48	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 00:48	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 00:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 00:48	1
Acetone	ND		25	4.1	ug/L			12/03/16 00:48	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 00:48	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 00:48	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 00:48	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 00:48	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 00:48	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 00:48	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 00:48	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 00:48	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 00:48	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 00:48	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 00:48	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 00:48	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 00:48	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 00:48	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 00:48	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 00:48	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 00:48	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 00:48	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 00:48	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 00:48	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 00:48	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 00:48	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 00:48	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 00:48	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 00:48	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 00:48	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 00:48	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 00:48	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 00:48	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 00:48	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 00:48	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 00:48	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 00:48	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 00:48	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 00:48	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 00:48	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 00:48	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 00:48	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 00:48	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-9A:113016
Date Collected: 11/30/16 14:26
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 00:48	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*		*12/03/16 00:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/03/16 00:48*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*12/03/16 00:48*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/03/16 00:48*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	22	J B	100	18	ug/L			12/03/16 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/03/16 00:48*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,4,6-Trichlorophenol	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
3 & 4 Methylphenol	ND		0.76	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/08/16 00:14	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		12/05/16 16:00	12/08/16 00:14	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
4-Chloroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
4-Nitroaniline	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/05/16 16:00	12/08/16 00:14	1
Acenaphthene	ND		0.096	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Anthracene	ND		0.038	0.0096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1

Client Sample ID: MW-9A:113016
Date Collected: 11/30/16 14:26
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Benzoic acid	**0.78**	**J**	2.9	0.57	ug/L		12/05/16 16:00	12/08/16 00:14	1
Benzyl alcohol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/08/16 00:14	1
Butyl benzyl phthalate	**0.34**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/08/16 00:14	1
Carbazole	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/08/16 00:14	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Di-n-butyl phthalate	**0.21**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/08/16 00:14	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/08/16 00:14	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/08/16 00:14	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Hexachlorobutadiene	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Hexachloroethane	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Isophorone	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Naphthalene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 00:14	1
Phenol	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 00:14	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/08/16 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*95*		*57 - 132*	*12/05/16 16:00*	*12/08/16 00:14*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/05/16 16:00*	*12/08/16 00:14*	*1*
2-Fluorophenol	*87*		*50 - 113*	*12/05/16 16:00*	*12/08/16 00:14*	*1*
Nitrobenzene-d5	*89*		*59 - 120*	*12/05/16 16:00*	*12/08/16 00:14*	*1*
Phenol-d5	*89*		*52 - 120*	*12/05/16 16:00*	*12/08/16 00:14*	*1*
Terphenyl-d14	*89*		*72 - 140*	*12/05/16 16:00*	*12/08/16 00:14*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 17:05	1

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Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0056	ug/L		12/03/16 15:20	12/07/16 03:19	1
4,4'-DDE	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 03:19	1
4,4'-DDT	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 03:19	1
Aldrin	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 03:19	1
alpha-BHC	ND		0.028	0.0066	ug/L		12/03/16 15:20	12/07/16 03:19	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 03:19	1
beta-BHC	ND		0.047	0.011	ug/L		12/03/16 15:20	12/07/16 03:19	1
delta-BHC	ND		0.047	0.0094	ug/L		12/03/16 15:20	12/07/16 03:19	1
Dieldrin	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 03:19	1
Endosulfan I	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 03:19	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:19	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:19	1
Endrin	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 03:19	1
Endrin aldehyde	ND		0.19	0.032	ug/L		12/03/16 15:20	12/07/16 03:19	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:19	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		12/03/16 15:20	12/07/16 03:19	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 03:19	1
Heptachlor	ND		0.019	0.0038	ug/L		12/03/16 15:20	12/07/16 03:19	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		12/03/16 15:20	12/07/16 03:19	1
Methoxychlor	ND		0.094	0.0019	ug/L		12/03/16 15:20	12/07/16 03:19	1
Toxaphene	ND		0.94	0.21	ug/L		12/03/16 15:20	12/07/16 03:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*77*		*22 - 150*	*12/03/16 15:20*	*12/07/16 03:19*	*1*
Tetrachloro-m-xylene	*74*		*40 - 113*	*12/03/16 15:20*	*12/07/16 03:19*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.093	0.058	ug/L		12/08/16 10:51	12/08/16 15:54	1
PCB-1221	ND		0.093	0.058	ug/L		12/08/16 10:51	12/08/16 15:54	1
PCB-1232	ND		0.093	0.058	ug/L		12/08/16 10:51	12/08/16 15:54	1
PCB-1242	ND		0.093	0.058	ug/L		12/08/16 10:51	12/08/16 15:54	1
PCB-1248	ND		0.093	0.058	ug/L		12/08/16 10:51	12/08/16 15:54	1
PCB-1254	ND		0.093	0.058	ug/L		12/08/16 10:51	12/08/16 15:54	1
PCB-1260	ND		0.093	0.040	ug/L		12/08/16 10:51	12/08/16 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*20 - 120*	*12/08/16 10:51*	*12/08/16 15:54*	*1*
DCB Decachlorobiphenyl (Surr)	*89*		*36 - 138*	*12/08/16 10:51*	*12/08/16 15:54*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 05:17	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 05:17	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 05:17	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/13/16 05:17	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 09:51	12/13/16 05:17	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 05:17	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 05:17	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 05:17	1

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Lab Sample ID: 590-5100-6
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/13/16 05:17	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 09:51	12/13/16 05:17	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 05:17	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 09:51	12/13/16 05:17	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 09:51	12/13/16 05:17	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 05:17	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 05:17	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 05:17	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/13/16 05:17	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 05:17	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 09:51	12/13/16 05:17	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 05:17	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 09:51	12/13/16 05:17	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 09:51	12/13/16 05:17	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/13/16 05:17	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 05:17	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 05:17	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/13/16 05:17	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/13/16 05:17	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 05:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*3*	*X*	*49 - 171*	*12/05/16 09:51*	*12/13/16 05:17*	*1*
Triphenylphosphate	*127*		*60 - 154*	*12/05/16 09:51*	*12/13/16 05:17*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/05/16 15:38	12/09/16 08:27	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 08:27	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 08:27	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 08:27	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 08:27	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 08:27	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 08:27	1
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 08:27	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/05/16 15:38	12/09/16 08:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*12/05/16 15:38*	*12/09/16 08:27*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 16:31	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*12/05/16 10:22*	*12/05/16 16:31*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*12/05/16 10:22*	*12/05/16 16:31*	*1*

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Lab Sample ID: 590-5100-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**48**		0.80	0.42	mg/L			12/01/16 12:31	1
Nitrate as N	**1.6**		0.20	0.039	mg/L			12/01/16 12:31	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 12:31	1
Sulfate	**21**		0.50	0.13	mg/L			12/01/16 12:31	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.24	pg/L		12/06/16 13:53	12/09/16 07:40	1
2,3,7,8-TCDF	**0.41**	**J**	9.6	0.18	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,7,8-PeCDD	ND		48	0.45	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,7,8-PeCDF	ND		48	0.25	pg/L		12/06/16 13:53	12/09/16 07:40	1
2,3,4,7,8-PeCDF	ND		48	0.27	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,4,7,8-HxCDD	ND		48	0.31	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,6,7,8-HxCDD	ND		48	0.29	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,7,8,9-HxCDD	ND		48	0.24	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,4,7,8-HxCDF	ND		48	0.31	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,6,7,8-HxCDF	ND		48	0.28	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,7,8,9-HxCDF	ND		48	0.29	pg/L		12/06/16 13:53	12/09/16 07:40	1
2,3,4,6,7,8-HxCDF	ND		48	0.30	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,4,6,7,8-HpCDD	**0.77**	**J B q**	48	0.26	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,4,6,7,8-HpCDF	**1.2**	**J B**	48	0.23	pg/L		12/06/16 13:53	12/09/16 07:40	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.26	pg/L		12/06/16 13:53	12/09/16 07:40	1
OCDD	**2.9**	**J B**	96	0.38	pg/L		12/06/16 13:53	12/09/16 07:40	1
OCDF	**2.2**	**J**	96	0.32	pg/L		12/06/16 13:53	12/09/16 07:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-2,3,7,8-TCDF	*71*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-1,2,3,7,8-PeCDD	*81*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-1,2,3,7,8-PeCDF	*74*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-1,2,3,6,7,8-HxCDD	*92*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*101*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*97*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*
13C-OCDD	*111*		*40 - 135*	*12/06/16 13:53*	*12/09/16 07:40*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0026**		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 15:07	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 15:07	1
Barium	**0.050**		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 15:07	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 15:07	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 15:07	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 15:07	1
Copper	**0.0023**		0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 15:07	1
Iron	**0.019**	**J**	0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 15:07	1
Lead	**0.000054**	**J**	0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 15:07	1
Manganese	ND		0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 15:07	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 15:07	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 15:07	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 15:07	1

Client Sample ID: MW-9A:113016

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Lab Sample ID: 590-5100-6
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 15:07	1
Vanadium	**0.0082**		0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 15:07	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 15:07	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 13:58	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 13:58	1
Barium	**0.051**		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 13:58	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 13:58	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 13:58	1
Chromium	**0.00042**		0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 13:58	1
Copper	**0.0023**		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 13:58	1
Iron	**0.018**	**J**	0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 13:58	1
Lead	**0.000049**	**J**	0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 13:58	1
Manganese	ND		0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 13:58	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 13:58	1
Selenium	**0.00032**	**J**	0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 13:58	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 13:58	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 13:58	1
Vanadium	**0.0085**		0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 13:58	1
Zinc	**0.0021**	**J**	0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 13:58	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:24	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:11	1
Ammonia (as N)	**0.57**	**F1**	0.10	0.060	mg/L		12/05/16 10:35	12/07/16 12:02	1
Chemical Oxygen Demand	**9.5**	**J**	20	4.0	mg/L			12/12/16 14:29	1
Total Organic Carbon	**3.0**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 10:45	1

Client Sample ID: MW-DUP:113016

Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 01:10	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 01:10	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 01:10	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 01:10	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 01:10	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 01:10	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 01:10	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 01:10	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 01:10	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 01:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 01:10	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 01:10	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 01:10	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 01:10	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 01:10	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 01:10	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 01:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 01:10	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 01:10	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 01:10	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 01:10	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 01:10	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 01:10	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 01:10	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 01:10	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 01:10	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 01:10	1
Acetone	ND		25	4.1	ug/L			12/03/16 01:10	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 01:10	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 01:10	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 01:10	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 01:10	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 01:10	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 01:10	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 01:10	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 01:10	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 01:10	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 01:10	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 01:10	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 01:10	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 01:10	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 01:10	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 01:10	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 01:10	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 01:10	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 01:10	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 01:10	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 01:10	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 01:10	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 01:10	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 01:10	1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 01:10	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 01:10	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 01:10	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 01:10	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 01:10	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 01:10	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 01:10	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 01:10	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 01:10	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 01:10	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 01:10	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 01:10	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 01:10	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 01:10	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 01:10	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 01:10	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 01:10	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 125*		*12/03/16 01:10*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*12/03/16 01:10*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*12/03/16 01:10*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/03/16 01:10*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	24	J B	100	18	ug/L			12/03/16 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/03/16 01:10*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
1,2-Dichlorobenzene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
1,3-Dichlorobenzene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
1,4-Dichlorobenzene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
1-Methylnaphthalene	ND		0.064	0.032	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,4,5-Trichlorophenol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,4,6-Trichlorophenol	ND		0.64	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,4-Dichlorophenol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,4-Dimethylphenol	ND		2.1	0.32	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,4-Dinitrophenol	ND		5.3	1.1	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,4-Dinitrotoluene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2,6-Dinitrotoluene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2-Chloronaphthalene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
2-Chlorophenol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2-Methylnaphthalene	ND		0.21	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
2-Methylphenol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
2-Nitrophenol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
3 & 4 Methylphenol	ND		0.85	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
3,3'-Dichlorobenzidine	ND		2.1	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
3-Nitroaniline	ND		0.43	0.13	ug/L		12/05/16 16:00	12/08/16 00:38	1
4,6-Dinitro-2-methylphenol	ND		4.3	1.1	ug/L		12/05/16 16:00	12/08/16 00:38	1
4-Bromophenyl phenyl ether	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
4-Chloro-3-methylphenol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
4-Chloroaniline	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
4-Chlorophenyl phenyl ether	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
4-Nitroaniline	ND		0.64	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
4-Nitrophenol	ND		3.2	1.1	ug/L		12/05/16 16:00	12/08/16 00:38	1
Acenaphthene	ND		0.11	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Acenaphthylene	ND		0.085	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Anthracene	ND		0.043	0.011	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzo[a]anthracene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzo[a]pyrene	ND		0.043	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzo[b]fluoranthene	ND		0.085	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzo[g,h,i]perylene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzo[k]fluoranthene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzoic acid	**1.0**	**J**	3.2	0.64	ug/L		12/05/16 16:00	12/08/16 00:38	1
Benzyl alcohol	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
bis (2-chloroisopropyl) ether	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Bis(2-chloroethoxy)methane	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Bis(2-chloroethyl)ether	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Bis(2-ethylhexyl) phthalate	ND		3.2	1.3	ug/L		12/05/16 16:00	12/08/16 00:38	1
Butyl benzyl phthalate	**0.56**	**J**	0.64	0.21	ug/L		12/05/16 16:00	12/08/16 00:38	1
Carbazole	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Chrysene	ND		0.043	0.014	ug/L		12/05/16 16:00	12/08/16 00:38	1
Dibenz(a,h)anthracene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Dibenzofuran	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Diethyl phthalate	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Dimethyl phthalate	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Di-n-butyl phthalate	**0.29**	**J**	0.43	0.14	ug/L		12/05/16 16:00	12/08/16 00:38	1
Di-n-octyl phthalate	ND		0.43	0.19	ug/L		12/05/16 16:00	12/08/16 00:38	1
Fluoranthene	ND		0.053	0.014	ug/L		12/05/16 16:00	12/08/16 00:38	1
Fluorene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Hexachlorobenzene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Hexachlorobutadiene	ND		0.64	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Hexachlorocyclopentadiene	ND		2.1	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Hexachloroethane	ND		0.64	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Indeno[1,2,3-cd]pyrene	ND		0.064	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1
Isophorone	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Naphthalene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Nitrobenzene	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
N-Nitrosodi-n-propylamine	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
N-Nitrosodiphenylamine	ND		0.43	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Pentachlorophenol	ND		0.75	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Phenanthrene	ND		0.085	0.021	ug/L		12/05/16 16:00	12/08/16 00:38	1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.64	0.11	ug/L		12/05/16 16:00	12/08/16 00:38	1
Pyrene	ND		0.064	0.014	ug/L		12/05/16 16:00	12/08/16 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*108*		*57 - 132*	*12/05/16 16:00*	*12/08/16 00:38*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/05/16 16:00*	*12/08/16 00:38*	*1*
2-Fluorophenol	*86*		*50 - 113*	*12/05/16 16:00*	*12/08/16 00:38*	*1*
Nitrobenzene-d5	*96*		*59 - 120*	*12/05/16 16:00*	*12/08/16 00:38*	*1*
Phenol-d5	*91*		*52 - 120*	*12/05/16 16:00*	*12/08/16 00:38*	*1*
Terphenyl-d14	*97*		*72 - 140*	*12/05/16 16:00*	*12/08/16 00:38*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 17:28	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.031	0.0062	ug/L		12/03/16 15:20	12/07/16 03:38	1
4,4'-DDE	ND		0.021	0.0031	ug/L		12/03/16 15:20	12/07/16 03:38	1
4,4'-DDT	ND		0.031	0.0052	ug/L		12/03/16 15:20	12/07/16 03:38	1
Aldrin	ND		0.031	0.0073	ug/L		12/03/16 15:20	12/07/16 03:38	1
alpha-BHC	ND		0.031	0.0073	ug/L		12/03/16 15:20	12/07/16 03:38	1
alpha-Chlordane	ND		0.021	0.0031	ug/L		12/03/16 15:20	12/07/16 03:38	1
beta-BHC	ND		0.052	0.012	ug/L		12/03/16 15:20	12/07/16 03:38	1
delta-BHC	ND		0.052	0.010	ug/L		12/03/16 15:20	12/07/16 03:38	1
Dieldrin	ND		0.031	0.0052	ug/L		12/03/16 15:20	12/07/16 03:38	1
Endosulfan I	ND		0.021	0.0031	ug/L		12/03/16 15:20	12/07/16 03:38	1
Endosulfan II	ND		0.021	0.0021	ug/L		12/03/16 15:20	12/07/16 03:38	1
Endosulfan sulfate	ND		0.021	0.0021	ug/L		12/03/16 15:20	12/07/16 03:38	1
Endrin	ND		0.021	0.0031	ug/L		12/03/16 15:20	12/07/16 03:38	1
Endrin aldehyde	ND		0.21	0.035	ug/L		12/03/16 15:20	12/07/16 03:38	1
Endrin ketone	ND		0.021	0.0021	ug/L		12/03/16 15:20	12/07/16 03:38	1
gamma-BHC (Lindane)	ND		0.031	0.0052	ug/L		12/03/16 15:20	12/07/16 03:38	1
gamma-Chlordane	ND		0.021	0.0031	ug/L		12/03/16 15:20	12/07/16 03:38	1
Heptachlor	ND		0.021	0.0041	ug/L		12/03/16 15:20	12/07/16 03:38	1
Heptachlor epoxide	ND		0.021	0.0031	ug/L		12/03/16 15:20	12/07/16 03:38	1
Methoxychlor	ND		0.10	0.0021	ug/L		12/03/16 15:20	12/07/16 03:38	1
Toxaphene	ND		1.0	0.23	ug/L		12/03/16 15:20	12/07/16 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*22 - 150*	*12/03/16 15:20*	*12/07/16 03:38*	*1*
Tetrachloro-m-xylene	*77*		*40 - 113*	*12/03/16 15:20*	*12/07/16 03:38*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.064	ug/L		12/08/16 10:51	12/08/16 16:15	1
PCB-1221	ND		0.10	0.064	ug/L		12/08/16 10:51	12/08/16 16:15	1
PCB-1232	ND		0.10	0.064	ug/L		12/08/16 10:51	12/08/16 16:15	1
PCB-1242	ND		0.10	0.064	ug/L		12/08/16 10:51	12/08/16 16:15	1
PCB-1248	ND		0.10	0.064	ug/L		12/08/16 10:51	12/08/16 16:15	1
PCB-1254	ND		0.10	0.064	ug/L		12/08/16 10:51	12/08/16 16:15	1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.10	0.045	ug/L		12/08/16 10:51	12/08/16 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*20 - 120*	*12/08/16 10:51*	*12/08/16 16:15*	*1*
DCB Decachlorobiphenyl (Surr)	*77*		*36 - 138*	*12/08/16 10:51*	*12/08/16 16:15*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 05:48	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 05:48	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 05:48	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/13/16 05:48	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 09:51	12/13/16 05:48	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 05:48	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 05:48	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 05:48	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/13/16 05:48	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 09:51	12/13/16 05:48	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 05:48	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 09:51	12/13/16 05:48	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 09:51	12/13/16 05:48	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 05:48	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 05:48	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 05:48	1
Methyl parathion	ND		3.8	0.14	ug/L		12/05/16 09:51	12/13/16 05:48	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 05:48	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 09:51	12/13/16 05:48	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 05:48	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 09:51	12/13/16 05:48	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 09:51	12/13/16 05:48	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/13/16 05:48	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 09:51	12/13/16 05:48	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 05:48	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/13/16 05:48	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/13/16 05:48	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 09:51	12/13/16 05:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*28*	*X*	*49 - 171*	*12/05/16 09:51*	*12/13/16 05:48*	*1*
Triphenylphosphate	*80*		*60 - 154*	*12/05/16 09:51*	*12/13/16 05:48*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		12/05/16 15:38	12/09/16 08:50	1
2,4-D	ND		4.1	0.21	ug/L		12/05/16 15:38	12/09/16 08:50	1
2,4-DB	ND		4.1	0.37	ug/L		12/05/16 15:38	12/09/16 08:50	1
Dalapon	ND		2.0	0.93	ug/L		12/05/16 15:38	12/09/16 08:50	1
Dicamba	ND		2.0	0.15	ug/L		12/05/16 15:38	12/09/16 08:50	1
Dichlorprop	ND		4.1	0.66	ug/L		12/05/16 15:38	12/09/16 08:50	1
MCPA	ND		410	17	ug/L		12/05/16 15:38	12/09/16 08:50	1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		410	34	ug/L		12/05/16 15:38	12/09/16 08:50	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		12/05/16 15:38	12/09/16 08:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*39 - 135*	*12/05/16 15:38*	*12/09/16 08:50*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		12/05/16 10:22	12/05/16 17:04	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		12/05/16 10:22	12/05/16 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:04*	*1*
n-Triacontane-d62	*99*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:04*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.4**		0.80	0.42	mg/L			12/01/16 12:42	1
Nitrate as N	**3.4**		0.20	0.039	mg/L			12/01/16 12:42	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 12:42	1
Sulfate	**23**		0.50	0.13	mg/L			12/01/16 12:42	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.20	pg/L		12/12/16 14:18	12/14/16 03:12	1
2,3,7,8-TCDF	**1.1**	**J B**	11	0.11	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,7,8-PeCDD	ND		53	0.22	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,7,8-PeCDF	**0.51**	**J q**	53	0.21	pg/L		12/12/16 14:18	12/14/16 03:12	1
2,3,4,7,8-PeCDF	**0.72**	**J q**	53	0.22	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,4,7,8-HxCDD	ND		53	0.18	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,6,7,8-HxCDD	ND		53	0.17	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,7,8,9-HxCDD	ND		53	0.14	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,4,7,8-HxCDF	**1.5**	**J**	53	0.26	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,6,7,8-HxCDF	**0.84**	**J q**	53	0.23	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,7,8,9-HxCDF	ND		53	0.24	pg/L		12/12/16 14:18	12/14/16 03:12	1
2,3,4,6,7,8-HxCDF	**0.94**	**J B**	53	0.25	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,4,6,7,8-HpCDD	**4.9**	**J B**	53	0.21	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,4,6,7,8-HpCDF	**5.8**	**J B**	53	0.32	pg/L		12/12/16 14:18	12/14/16 03:12	1
1,2,3,4,7,8,9-HpCDF	ND		53	0.36	pg/L		12/12/16 14:18	12/14/16 03:12	1
OCDD	**18**	**J B**	110	0.26	pg/L		12/12/16 14:18	12/14/16 03:12	1
OCDF	**14**	**J B**	110	0.21	pg/L		12/12/16 14:18	12/14/16 03:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-1,2,3,7,8-PeCDD	*95*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-1,2,3,7,8-PeCDF	*86*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*92*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*89*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*

Client Sample ID: MW-DUP:113016

Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDF	*88*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*
13C-OCDD	*99*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:12*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0011**		0.0010	0.00027	mg/L		12/10/16 09:49	12/13/16 15:44	1
Antimony	**0.000085**	**J**	0.00040	0.000080	mg/L		12/10/16 09:49	12/13/16 15:44	1
Barium	**0.0087**		0.0012	0.000054	mg/L		12/10/16 09:49	12/13/16 15:44	1
Beryllium	ND		0.00040	0.00010	mg/L		12/10/16 09:49	12/13/16 15:44	1
Cadmium	ND		0.00040	0.000028	mg/L		12/10/16 09:49	12/13/16 15:44	1
Chromium	**0.00029**	**J**	0.00040	0.00014	mg/L		12/10/16 09:49	12/13/16 15:44	1
Copper	**0.00094**	**J**	0.0020	0.00060	mg/L		12/10/16 09:49	12/13/16 15:44	1
Iron	**0.69**		0.040	0.0058	mg/L		12/10/16 09:49	12/13/16 15:44	1
Lead	**0.00062**		0.00040	0.000034	mg/L		12/10/16 09:49	12/13/16 15:44	1
Manganese	**0.013**		0.0020	0.00035	mg/L		12/10/16 09:49	12/13/16 15:44	1
Nickel	ND		0.0030	0.00040	mg/L		12/10/16 09:49	12/13/16 15:44	1
Selenium	**0.00046**	**J B**	0.0010	0.00030	mg/L		12/10/16 09:49	12/13/16 15:44	1
Silver	**0.00030**	**J**	0.00040	0.000030	mg/L		12/10/16 09:49	12/13/16 15:44	1
Thallium	ND		0.0010	0.00014	mg/L		12/10/16 09:49	12/13/16 15:44	1
Vanadium	**0.0097**		0.0040	0.00098	mg/L		12/10/16 09:49	12/13/16 15:44	1
Zinc	**0.0070**		0.0070	0.0019	mg/L		12/10/16 09:49	12/13/16 15:44	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0010**		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 14:02	1
Antimony	ND		0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 14:02	1
Barium	**0.0070**		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 14:02	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 14:02	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 14:02	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 14:02	1
Copper	ND		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 14:02	1
Iron	**0.0070**	**J**	0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 14:02	1
Lead	**0.000040**	**J**	0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 14:02	1
Manganese	**0.00082**	**J**	0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 14:02	1
Nickel	ND		0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 14:02	1
Selenium	**0.00033**	**J**	0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 14:02	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 14:02	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 14:02	1
Vanadium	**0.0093**		0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 14:02	1
Zinc	**0.0025**	**J**	0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 14:02	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 12:27	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 15:12	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0080	J	0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:12	1
Ammonia (as N)	0.19		0.10	0.060	mg/L		12/05/16 10:35	12/07/16 12:04	1
Chemical Oxygen Demand	11	J	20	4.0	mg/L			12/12/16 14:29	1
Total Organic Carbon	2.5		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	0.00				MPN/100mL			12/01/16 10:45	1
Escherichia coli	0.00				MPN/100mL			12/01/16 10:45	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-9880/4
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 17:37	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 17:37	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 17:37	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 17:37	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 17:37	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 17:37	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 17:37	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 17:37	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 17:37	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 17:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 17:37	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 17:37	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 17:37	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 17:37	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 17:37	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 17:37	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 17:37	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 17:37	1
Acetone	ND		25	4.1	ug/L			12/02/16 17:37	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 17:37	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 17:37	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 17:37	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 17:37	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 17:37	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 17:37	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 17:37	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 17:37	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 17:37	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 17:37	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 17:37	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 17:37	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 17:37	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 17:37	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 17:37	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 17:37	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 17:37	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 17:37	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 17:37	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 17:37	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-9880/4
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/02/16 17:37	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 17:37	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 17:37	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 17:37	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 17:37	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 17:37	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 17:37	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 17:37	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 17:37	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 17:37	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 17:37	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 17:37	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 17:37	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 17:37	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 17:37	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 17:37	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 17:37	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 17:37	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 17:37	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/02/16 17:37*	*1*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*12/02/16 17:37*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/02/16 17:37*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/02/16 17:37*	*1*

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	20.0		ug/L		100	75 - 124
1,1,1-Trichloroethane	20.0	20.7		ug/L		103	71 - 130
1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	66 - 122
1,1,2-Trichloroethane	20.0	20.3		ug/L		102	76 - 120
1,1,2-Trichlorotrifluoroethane	20.0	21.6		ug/L		108	70 - 127
1,1-Dichloroethane	20.0	19.7		ug/L		98	79 - 121
1,1-Dichloroethene	20.0	20.0		ug/L		100	69 - 127
1,1-Dichloropropene	20.0	20.5		ug/L		103	76 - 125
1,2,3-Trichlorobenzene	20.0	21.3		ug/L		106	60 - 125
1,2,3-Trichloropropane	20.0	19.8		ug/L		99	60 - 124
1,2,4-Trichlorobenzene	20.0	22.0		ug/L		110	66 - 124
1,2,4-Trimethylbenzene	20.0	20.9		ug/L		105	77 - 120
1,2-Dibromo-3-Chloropropane	20.0	20.1		ug/L		101	36 - 140
1,2-Dichlorobenzene	20.0	21.1		ug/L		105	78 - 120
1,2-Dichloroethane	20.0	20.4		ug/L		102	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	20.0	19.9		ug/L		99	76 - 121
1,3,5-Trimethylbenzene	20.0	21.5		ug/L		107	75 - 122
1,3-Dichlorobenzene	20.0	20.1		ug/L		101	77 - 120
1,3-Dichloropropane	20.0	19.1		ug/L		96	75 - 120
1,4-Dichlorobenzene	20.0	21.1		ug/L		105	77 - 121
2,2-Dichloropropane	20.0	22.5		ug/L		113	49 - 147
2-Butanone (MEK)	100	102		ug/L		102	40 - 150
2-Chlorotoluene	20.0	20.7		ug/L		104	75 - 121
2-Hexanone	100	103		ug/L		103	46 - 146
4-Chlorotoluene	20.0	21.0		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	60 - 127
Acetone	100	89.0		ug/L		89	20 - 150
Benzene	20.0	19.2		ug/L		96	80 - 120
Bromobenzene	20.0	20.6		ug/L		103	74 - 121
Bromochloromethane	20.0	19.4		ug/L		97	70 - 126
Bromodichloromethane	20.0	20.3		ug/L		102	67 - 125
Bromoform	20.0	19.0		ug/L		95	60 - 122
Bromomethane	20.0	19.4		ug/L		97	45 - 150
Carbon disulfide	20.0	19.1		ug/L		95	67 - 129
Carbon tetrachloride	20.0	19.9		ug/L		99	68 - 134
Chlorobenzene	20.0	20.1		ug/L		100	79 - 125
Chloroethane	20.0	18.5		ug/L		93	48 - 150
Chloroform	20.0	20.1		ug/L		101	73 - 126
Chloromethane	20.0	20.1		ug/L		101	51 - 150
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	76 - 121
cis-1,3-Dichloropropene	20.0	21.0		ug/L		105	72 - 120
Dibromochloromethane	20.0	21.1		ug/L		106	72 - 120
Dibromomethane	20.0	19.8		ug/L		99	71 - 120
Dichlorodifluoromethane	20.0	17.5		ug/L		87	32 - 150
Dichlorofluoromethane	20.0	21.2		ug/L		106	60 - 140
Ethylbenzene	20.0	20.3		ug/L		102	80 - 120
Hexachlorobutadiene	20.0	21.2		ug/L		106	62 - 132
Hexane	20.0	21.2		ug/L		106	68 - 125
Isopropylbenzene	20.0	20.5		ug/L		103	77 - 123
m,p-Xylene	20.0	20.2		ug/L		101	80 - 120
Methyl tert-butyl ether	20.0	20.4		ug/L		102	71 - 128
Methylene Chloride	20.0	20.6		ug/L		103	20 - 150
Naphthalene	20.0	20.8		ug/L		104	63 - 124
n-Butylbenzene	20.0	21.7		ug/L		109	71 - 120
N-Propylbenzene	20.0	20.7		ug/L		104	76 - 120
o-Xylene	20.0	20.5		ug/L		102	80 - 120
p-Isopropyltoluene	20.0	21.7		ug/L		108	77 - 120
sec-Butylbenzene	20.0	21.4		ug/L		107	74 - 121
Styrene	20.0	20.4		ug/L		102	73 - 120
tert-Butylbenzene	20.0	21.5		ug/L		108	79 - 120
Tetrachloroethene	20.0	20.7		ug/L		104	71 - 132
Toluene	20.0	19.7		ug/L		99	80 - 123
trans-1,2-Dichloroethene	20.0	19.9		ug/L		100	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	20.0	21.2		ug/L		106	70 - 121
Trichloroethene	20.0	18.6		ug/L		93	75 - 129
Trichlorofluoromethane	20.0	20.8		ug/L		104	60 - 140
Vinyl chloride	20.0	19.0		ug/L		95	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: 590-5100-1 DU
Matrix: Water
Analysis Batch: 9880

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		ND		ug/L		NC	20
1,1,1-Trichloroethane	ND		ND		ug/L		NC	20
1,1,2,2-Tetrachloroethane	ND		ND		ug/L		NC	20
1,1,2-Trichloroethane	ND		ND		ug/L		NC	20
1,1,2-Trichlorotrifluoroethane	ND		ND		ug/L		NC	20
1,1-Dichloroethane	ND		ND		ug/L		NC	20
1,1-Dichloroethene	ND		ND		ug/L		NC	20
1,1-Dichloropropene	ND		ND		ug/L		NC	20
1,2,3-Trichlorobenzene	ND		ND		ug/L		NC	20
1,2,3-Trichloropropane	ND		ND		ug/L		NC	20
1,2,4-Trichlorobenzene	ND		ND		ug/L		NC	20
1,2,4-Trimethylbenzene	ND		ND		ug/L		NC	20
1,2-Dibromo-3-Chloropropane	ND		ND		ug/L		NC	20
1,2-Dibromoethane (EDB)	ND		ND		ug/L		NC	20
1,2-Dichlorobenzene	ND		ND		ug/L		NC	20
1,2-Dichloroethane	ND		ND		ug/L		NC	20
1,2-Dichloropropane	ND		ND		ug/L		NC	20
1,3,5-Trimethylbenzene	ND		ND		ug/L		NC	20
1,3-Dichlorobenzene	ND		ND		ug/L		NC	20
1,3-Dichloropropane	ND		ND		ug/L		NC	20
1,4-Dichlorobenzene	ND		ND		ug/L		NC	20
2,2-Dichloropropane	ND		ND		ug/L		NC	20
2-Butanone (MEK)	ND		ND		ug/L		NC	20
2-Chlorotoluene	ND		ND		ug/L		NC	20
2-Hexanone	ND		ND		ug/L		NC	20
4-Chlorotoluene	ND		ND		ug/L		NC	20
4-Methyl-2-pentanone (MIBK)	ND		ND		ug/L		NC	20
Acetone	ND		ND		ug/L		NC	20
Benzene	ND		ND		ug/L		NC	20
Bromobenzene	ND		ND		ug/L		NC	20
Bromochloromethane	ND		ND		ug/L		NC	20
Bromodichloromethane	ND		ND		ug/L		NC	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 590-5100-1 DU
Matrix: Water
Analysis Batch: 9880

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Bromoform	ND			ND		ug/L				NC	20
Bromomethane	ND			ND		ug/L				NC	20
Carbon disulfide	ND			ND		ug/L				NC	20
Carbon tetrachloride	ND			ND		ug/L				NC	20
Chlorobenzene	ND			ND		ug/L				NC	20
Chloroethane	ND			ND		ug/L				NC	20
Chloroform	ND			ND		ug/L				NC	20
Chloromethane	ND			ND		ug/L				NC	20
cis-1,2-Dichloroethene	ND			ND		ug/L				NC	20
cis-1,3-Dichloropropene	ND			ND		ug/L				NC	20
Dibromochloromethane	ND			ND		ug/L				NC	20
Dibromomethane	ND			ND		ug/L				NC	20
Dichlorodifluoromethane	ND			ND		ug/L				NC	20
Dichlorofluoromethane	ND			ND		ug/L				NC	20
Ethylbenzene	ND			ND		ug/L				NC	20
Hexachlorobutadiene	ND			ND		ug/L				NC	20
Hexane	ND			ND		ug/L				NC	20
Isopropylbenzene	ND			ND		ug/L				NC	20
m,p-Xylene	ND			ND		ug/L				NC	20
Methyl tert-butyl ether	ND			ND		ug/L				NC	20
Methylene Chloride	ND			ND		ug/L				NC	20
Naphthalene	ND			ND		ug/L				NC	20
n-Butylbenzene	ND			ND		ug/L				NC	20
N-Propylbenzene	ND			ND		ug/L				NC	20
o-Xylene	ND			ND		ug/L				NC	20
p-Isopropyltoluene	ND			ND		ug/L				NC	20
sec-Butylbenzene	ND			ND		ug/L				NC	20
Styrene	ND			ND		ug/L				NC	20
tert-Butylbenzene	ND			ND		ug/L				NC	20
Tetrachloroethene	ND			ND		ug/L				NC	20
Toluene	ND			ND		ug/L				NC	20
trans-1,2-Dichloroethene	ND			ND		ug/L				NC	20
trans-1,3-Dichloropropene	ND			ND		ug/L				NC	20
Trichloroethene	ND			ND		ug/L				NC	20
Trichlorofluoromethane	ND			ND		ug/L				NC	20
Vinyl chloride	ND			ND		ug/L				NC	20
Xylenes, Total	ND			ND		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*111*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-9881/4
Matrix: Water
Analysis Batch: 9881

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	20.8	J	100	18	ug/L			12/02/16 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*		*12/02/16 17:37*	*1*

Lab Sample ID: LCS 590-9881/1003
Matrix: Water
Analysis Batch: 9881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	1070		ug/L		107	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*

Lab Sample ID: 590-5100-1 DU
Matrix: Water
Analysis Batch: 9881

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	21	J B		23.4	J	ug/L				9	35

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitrophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/05/16 16:00	12/07/16 18:08	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitrophenol	ND		3.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthene	ND		0.10	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Anthracene	0.0104	J	0.040	0.010	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzoic acid	ND		3.0	0.60	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		12/05/16 16:00	12/07/16 18:08	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		12/05/16 16:00	12/07/16 18:08	1
Carbazole	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Chrysene	ND		0.040	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Diethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluoranthene	ND		0.050	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluorene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Isophorone	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Naphthalene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.70	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenanthrene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pyrene	ND		0.060	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*78*		*57 - 132*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorophenol	*74*		*50 - 113*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Phenol-d5	*85*		*52 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Terphenyl-d14	*93*		*72 - 140*	*12/05/16 16:00*	*12/07/16 18:08*	*1*

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	40 - 115
1,2-Dichlorobenzene	2.00	1.55		ug/L		77	44 - 119
1,3-Dichlorobenzene	2.00	1.49		ug/L		74	34 - 116
1,4-Dichlorobenzene	2.00	1.41		ug/L		70	40 - 118
1-Methylnaphthalene	2.00	1.90		ug/L		95	54 - 119
2,4,5-Trichlorophenol	2.00	2.28		ug/L		114	56 - 122
2,4,6-Trichlorophenol	2.00	2.36		ug/L		118	55 - 134
2,4-Dichlorophenol	2.00	2.17		ug/L		108	50 - 125
2,4-Dimethylphenol	2.00	1.96	J	ug/L		98	20 - 106
2,4-Dinitrophenol	4.00	3.65	J	ug/L		91	24 - 139
2,4-Dinitrotoluene	2.00	2.60		ug/L		130	40 - 143
2,6-Dinitrotoluene	2.00	2.37		ug/L		118	45 - 134
2-Chloronaphthalene	2.00	2.05		ug/L		102	55 - 125
2-Chlorophenol	2.00	1.88		ug/L		94	57 - 125
2-Methylnaphthalene	2.00	1.84		ug/L		92	56 - 117
2-Methylphenol	2.00	1.99		ug/L		99	53 - 118
2-Nitroaniline	2.00	2.40		ug/L		120	58 - 124
2-Nitrophenol	2.00	1.88		ug/L		94	20 - 150
3 & 4 Methylphenol	2.00	1.94		ug/L		97	54 - 112
3,3'-Dichlorobenzidine	4.00	3.35		ug/L		84	20 - 121
3-Nitroaniline	2.00	2.20		ug/L		110	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.55	J	ug/L		89	20 - 150
4-Bromophenyl phenyl ether	2.00	2.06		ug/L		103	62 - 132
4-Chloro-3-methylphenol	2.00	2.43		ug/L		121	56 - 133
4-Chloroaniline	2.00	1.49		ug/L		74	20 - 110
4-Chlorophenyl phenyl ether	2.00	2.11		ug/L		105	59 - 125
4-Nitroaniline	2.00	2.30		ug/L		115	40 - 118
4-Nitrophenol	4.00	4.79		ug/L		120	20 - 150
Acenaphthene	2.00	2.19		ug/L		109	55 - 113
Acenaphthylene	2.00	2.16		ug/L		108	24 - 135

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	2.00	1.79		ug/L		90	20 - 125
Benzo[a]anthracene	2.00	1.98		ug/L		99	49 - 115
Benzo[a]pyrene	2.00	1.70		ug/L		85	20 - 115
Benzo[b]fluoranthene	2.00	2.25		ug/L		112	63 - 129
Benzo[g,h,i]perylene	2.00	2.08		ug/L		104	58 - 127
Benzo[k]fluoranthene	2.00	1.97		ug/L		98	60 - 134
Benzoic acid	4.00	2.96	J	ug/L		74	20 - 150
Benzyl alcohol	2.00	1.63		ug/L		81	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.81		ug/L		90	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.90		ug/L		95	59 - 125
Bis(2-chloroethyl)ether	2.00	1.85		ug/L		93	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.19	J	ug/L		110	22 - 150
Butyl benzyl phthalate	2.00	2.43		ug/L		121	46 - 150
Carbazole	2.00	2.43		ug/L		122	68 - 142
Chrysene	2.00	2.04		ug/L		102	57 - 131
Dibenz(a,h)anthracene	2.00	2.16		ug/L		108	56 - 124
Dibenzofuran	2.00	2.25		ug/L		113	60 - 125
Diethyl phthalate	2.00	2.56		ug/L		128	60 - 134
Dimethyl phthalate	2.00	2.42		ug/L		121	65 - 134
Di-n-butyl phthalate	2.00	2.39		ug/L		120	67 - 140
Di-n-octyl phthalate	2.00	2.27		ug/L		113	55 - 150
Fluoranthene	2.00	2.16		ug/L		108	70 - 135
Fluorene	2.00	2.29		ug/L		115	57 - 125
Hexachlorobenzene	2.00	2.09		ug/L		104	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.640	J	ug/L		32	20 - 110
Hexachloroethane	2.00	1.11		ug/L		55	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.41		ug/L		121	54 - 124
Isophorone	2.00	2.00		ug/L		100	64 - 125
Naphthalene	2.00	1.91		ug/L		96	56 - 119
Nitrobenzene	2.00	1.98		ug/L		99	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.88		ug/L		94	54 - 120
N-Nitrosodiphenylamine	2.00	1.75		ug/L		87	40 - 124
Pentachlorophenol	4.00	3.86		ug/L		96	30 - 122
Phenanthrene	2.00	2.06		ug/L		103	57 - 125
Phenol	2.00	1.97		ug/L		99	53 - 113
Pyrene	2.00	2.12		ug/L		106	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*102*		*57 - 132*
2-Fluorobiphenyl	*85*		*50 - 120*
2-Fluorophenol	*83*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*83*		*52 - 120*
Terphenyl-d14	*96*		*72 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.56		ug/L		78	40 - 115	8	20
1,2-Dichlorobenzene	2.00	1.72		ug/L		86	44 - 119	11	20
1,3-Dichlorobenzene	2.00	1.66		ug/L		83	34 - 116	11	29
1,4-Dichlorobenzene	2.00	1.55		ug/L		77	40 - 118	9	20
1-Methylnaphthalene	2.00	2.06		ug/L		103	54 - 119	8	20
2,4,5-Trichlorophenol	2.00	2.32		ug/L		116	56 - 122	2	20
2,4,6-Trichlorophenol	2.00	2.21		ug/L		111	55 - 134	7	20
2,4-Dichlorophenol	2.00	2.11		ug/L		106	50 - 125	3	26
2,4-Dimethylphenol	2.00	1.81	J	ug/L		90	20 - 106	8	35
2,4-Dinitrophenol	4.00	3.79	J	ug/L		95	24 - 139	4	35
2,4-Dinitrotoluene	2.00	2.65		ug/L		133	40 - 143	2	29
2,6-Dinitrotoluene	2.00	2.35		ug/L		118	45 - 134	1	31
2-Chloronaphthalene	2.00	2.08		ug/L		104	55 - 125	2	20
2-Chlorophenol	2.00	2.11		ug/L		105	57 - 125	11	20
2-Methylnaphthalene	2.00	2.02		ug/L		101	56 - 117	9	20
2-Methylphenol	2.00	2.13		ug/L		106	53 - 118	7	33
2-Nitroaniline	2.00	2.47		ug/L		124	58 - 124	3	20
2-Nitrophenol	2.00	1.91		ug/L		95	20 - 150	2	35
3 & 4 Methylphenol	2.00	2.10		ug/L		105	54 - 112	8	20
3,3'-Dichlorobenzidine	4.00	2.88		ug/L		72	20 - 121	15	35
3-Nitroaniline	2.00	2.22		ug/L		111	22 - 124	1	35
4,6-Dinitro-2-methylphenol	4.00	3.85	J	ug/L		96	20 - 150	8	30
4-Bromophenyl phenyl ether	2.00	2.01		ug/L		101	62 - 132	2	20
4-Chloro-3-methylphenol	2.00	2.42		ug/L		121	56 - 133	0	20
4-Chloroaniline	2.00	1.35		ug/L		68	20 - 110	9	35
4-Chlorophenyl phenyl ether	2.00	2.16		ug/L		108	59 - 125	3	20
4-Nitroaniline	2.00	2.19		ug/L		110	40 - 118	5	20
4-Nitrophenol	4.00	5.45		ug/L		136	20 - 150	13	29
Acenaphthene	2.00	2.20		ug/L		110	55 - 113	1	20
Acenaphthylene	2.00	2.13		ug/L		106	24 - 135	2	20
Anthracene	2.00	1.74		ug/L		87	20 - 125	3	26
Benzo[a]anthracene	2.00	1.95		ug/L		98	49 - 115	1	20
Benzo[a]pyrene	2.00	1.65		ug/L		83	20 - 115	3	35
Benzo[b]fluoranthene	2.00	2.35		ug/L		117	63 - 129	4	20
Benzo[g,h,i]perylene	2.00	2.21		ug/L		110	58 - 127	6	20
Benzo[k]fluoranthene	2.00	2.09		ug/L		104	60 - 134	6	20
Benzoic acid	4.00	3.19		ug/L		80	20 - 150	8	35
Benzyl alcohol	2.00	1.86		ug/L		93	52 - 124	14	20
bis (2-chloroisopropyl) ether	2.00	1.93		ug/L		97	44 - 123	7	20
Bis(2-chloroethoxy)methane	2.00	2.09		ug/L		104	59 - 125	9	20
Bis(2-chloroethyl)ether	2.00	2.14		ug/L		107	55 - 125	14	20
Bis(2-ethylhexyl) phthalate	2.00	2.13	J	ug/L		107	22 - 150	3	20
Butyl benzyl phthalate	2.00	2.43		ug/L		121	46 - 150	0	20
Carbazole	2.00	2.49		ug/L		124	68 - 142	2	20
Chrysene	2.00	2.01		ug/L		100	57 - 131	2	20
Dibenz(a,h)anthracene	2.00	2.26		ug/L		113	56 - 124	5	20
Dibenzofuran	2.00	2.31		ug/L		115	60 - 125	2	20
Diethyl phthalate	2.00	2.46		ug/L		123	60 - 134	4	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dimethyl phthalate			2.00	2.44		ug/L		122	65 - 134	1	20
Di-n-butyl phthalate			2.00	2.38		ug/L		119	67 - 140	1	20
Di-n-octyl phthalate			2.00	2.40		ug/L		120	55 - 150	6	20
Fluoranthene			2.00	2.18		ug/L		109	70 - 135	1	20
Fluorene			2.00	2.39		ug/L		120	57 - 125	4	20
Hexachlorobenzene			2.00	2.09		ug/L		104	55 - 135	0	20
Hexachlorobutadiene			2.00	1.15		ug/L		58	25 - 125	13	31
Hexachlorocyclopentadiene			2.00	0.668	J	ug/L		33	20 - 110	4	35
Hexachloroethane			2.00	1.21		ug/L		60	24 - 125	9	35
Indeno[1,2,3-cd]pyrene			2.00	2.29		ug/L		114	54 - 124	5	20
Isophorone			2.00	2.17		ug/L		109	64 - 125	8	20
Naphthalene			2.00	2.04		ug/L		102	56 - 119	7	20
Nitrobenzene			2.00	2.16		ug/L		108	62 - 125	9	20
N-Nitrosodi-n-propylamine			2.00	2.13		ug/L		106	54 - 120	12	20
N-Nitrosodiphenylamine			2.00	1.83		ug/L		92	40 - 124	5	20
Pentachlorophenol			4.00	3.85		ug/L		96	30 - 122	0	35
Phenanthrene			2.00	2.10		ug/L		105	57 - 125	2	20
Phenol			2.00	2.01		ug/L		101	53 - 113	2	20
Pyrene			2.00	2.18		ug/L		109	64 - 128	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*57 - 132*
2-Fluorobiphenyl	*88*		*50 - 120*
2-Fluorophenol	*90*		*50 - 113*
Nitrobenzene-d5	*96*		*59 - 120*
Phenol-d5	*91*		*52 - 120*
Terphenyl-d14	*98*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-9920/2-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9920

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 12:07	1

Lab Sample ID: LCS 590-9920/3-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9920

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.125	0.130		ug/L		104	60 - 140		

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCSD 590-9920/4-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.129		ug/L		103	60 - 140	1	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-233792/1-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233792

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		12/03/16 15:20	12/06/16 23:33	1
4,4'-DDE	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
4,4'-DDT	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
Aldrin	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/06/16 23:33	1
alpha-BHC	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/06/16 23:33	1
alpha-Chlordane	0.00970	J	0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
beta-BHC	ND		0.050	0.012	ug/L		12/03/16 15:20	12/06/16 23:33	1
delta-BHC	ND		0.050	0.010	ug/L		12/03/16 15:20	12/06/16 23:33	1
Dieldrin	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan I	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin aldehyde	ND		0.20	0.034	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
gamma-Chlordane	0.00508	J	0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Heptachlor	ND		0.020	0.0040	ug/L		12/03/16 15:20	12/06/16 23:33	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Methoxychlor	ND		0.10	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Toxaphene	ND		1.0	0.22	ug/L		12/03/16 15:20	12/06/16 23:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*12/03/16 15:20*	*12/06/16 23:33*	*1*
Tetrachloro-m-xylene	*66*		*40 - 113*	*12/03/16 15:20*	*12/06/16 23:33*	*1*

Lab Sample ID: LCS 580-233792/2-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233792

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.160		ug/L		80	32 - 133
4,4'-DDE	0.200	0.147		ug/L		74	30 - 138
4,4'-DDT	0.200	0.189		ug/L		95	34 - 131
Aldrin	0.200	0.131		ug/L		66	35 - 124
alpha-BHC	0.200	0.148		ug/L		74	39 - 126
alpha-Chlordane	0.200	0.160		ug/L		80	37 - 133
beta-BHC	0.200	0.150		ug/L		75	38 - 114
delta-BHC	0.200	0.156		ug/L		78	20 - 138

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-233792/2-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233792

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	0.200	0.148		ug/L		74	39 - 140
Endosulfan I	0.200	0.144		ug/L		72	23 - 142
Endosulfan II	0.200	0.150		ug/L		75	20 - 150
Endosulfan sulfate	0.200	0.148		ug/L		74	36 - 130
Endrin	0.200	0.168		ug/L		84	32 - 130
Endrin aldehyde	0.200	0.166	J	ug/L		83	37 - 139
Endrin ketone	0.200	0.159		ug/L		80	32 - 136
gamma-BHC (Lindane)	0.200	0.145		ug/L		72	40 - 121
gamma-Chlordane	0.200	0.159		ug/L		79	38 - 136
Heptachlor	0.200	0.153		ug/L		76	39 - 129
Heptachlor epoxide	0.200	0.147		ug/L		74	34 - 135
Methoxychlor	0.200	0.189		ug/L		94	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*81*		*22 - 150*
Tetrachloro-m-xylene	*67*		*40 - 113*

Lab Sample ID: LCSD 580-233792/3-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233792

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.171		ug/L		86	32 - 133	7	35
4,4'-DDE	0.200	0.162		ug/L		81	30 - 138	9	35
4,4'-DDT	0.200	0.203		ug/L		101	34 - 131	7	35
Aldrin	0.200	0.144		ug/L		72	35 - 124	9	35
alpha-BHC	0.200	0.163		ug/L		82	39 - 126	10	35
alpha-Chlordane	0.200	0.160		ug/L		80	37 - 133	0	35
beta-BHC	0.200	0.164		ug/L		82	38 - 114	9	35
delta-BHC	0.200	0.171		ug/L		85	20 - 138	9	35
Dieldrin	0.200	0.162		ug/L		81	39 - 140	9	35
Endosulfan I	0.200	0.160		ug/L		80	23 - 142	11	35
Endosulfan II	0.200	0.164		ug/L		82	20 - 150	9	35
Endosulfan sulfate	0.200	0.162		ug/L		81	36 - 130	9	35
Endrin	0.200	0.180		ug/L		90	32 - 130	7	35
Endrin aldehyde	0.200	0.187	J	ug/L		93	37 - 139	12	35
Endrin ketone	0.200	0.176		ug/L		88	32 - 136	10	35
gamma-BHC (Lindane)	0.200	0.158		ug/L		79	40 - 121	9	35
gamma-Chlordane	0.200	0.160		ug/L		80	38 - 136	1	35
Heptachlor	0.200	0.164		ug/L		82	39 - 129	7	35
Heptachlor epoxide	0.200	0.161		ug/L		81	34 - 135	9	35
Methoxychlor	0.200	0.203		ug/L		101	33 - 139	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*88*		*22 - 150*
Tetrachloro-m-xylene	*71*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-9949/1-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9949

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1221	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1232	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1242	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1248	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1254	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1260	ND		0.10	0.043	ug/L		12/08/16 10:51	12/08/16 13:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*20 - 120*	*12/08/16 10:51*	*12/08/16 13:10*	*1*
DCB Decachlorobiphenyl (Surr)	*87*		*36 - 138*	*12/08/16 10:51*	*12/08/16 13:10*	*1*

Lab Sample ID: LCS 590-9949/2-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9949

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.12		ug/L		70	23 - 140		
PCB-1260			1.60	1.09		ug/L		68	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*52*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*77*		*36 - 138*

Lab Sample ID: LCSD 590-9949/3-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9949

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.09		ug/L		68	23 - 140	2	35
PCB-1260			1.60	1.07		ug/L		67	22 - 139	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*48*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*78*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-354183/1-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		12/05/16 09:51	12/12/16 17:45	1
Azinphos-methyl	ND		2.5	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Bolstar	ND		1.0	0.31	ug/L		12/05/16 09:51	12/12/16 17:45	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-354183/1-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.5	0.36	ug/L		12/05/16 09:51	12/12/16 17:45	1
Coumaphos	ND		1.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Demeton, Total	ND		3.0	0.21	ug/L		12/05/16 09:51	12/12/16 17:45	1
Diazinon	ND		0.50	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Dichlorvos	ND		0.50	0.16	ug/L		12/05/16 09:51	12/12/16 17:45	1
Dimethoate	ND		1.5	0.45	ug/L		12/05/16 09:51	12/12/16 17:45	1
Disulfoton	ND		1.0	0.32	ug/L		12/05/16 09:51	12/12/16 17:45	1
EPN	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Famphur	ND		1.0	0.18	ug/L		12/05/16 09:51	12/12/16 17:45	1
Fensulfothion	ND		2.5	0.54	ug/L		12/05/16 09:51	12/12/16 17:45	1
Fenthion	ND		2.5	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Malathion	ND		2.0	0.13	ug/L		12/05/16 09:51	12/12/16 17:45	1
Merphos	ND		5.0	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Methyl parathion	ND		4.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Mevinphos	ND		6.2	0.46	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ethyl Parathion	ND		1.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ronnel	ND		10	0.12	ug/L		12/05/16 09:51	12/12/16 17:45	1
Simazine	ND		10	0.22	ug/L		12/05/16 09:51	12/12/16 17:45	1
Sulfotepp	ND		1.5	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Thionazin	ND		1.0	0.31	ug/L		12/05/16 09:51	12/12/16 17:45	1
Tokuthion	ND		1.6	0.12	ug/L		12/05/16 09:51	12/12/16 17:45	1
Trichloronate	ND		1.5	0.24	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ethoprop	ND		1.5	0.18	ug/L		12/05/16 09:51	12/12/16 17:45	1
Propazine	ND		10	0.29	ug/L		12/05/16 09:51	12/12/16 17:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*12/05/16 09:51*	*12/12/16 17:45*	*1*
Triphenylphosphate	*86*		*60 - 154*	*12/05/16 09:51*	*12/12/16 17:45*	*1*

Lab Sample ID: LCS 280-354183/2-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.72	J	ug/L		68	52 - 115
Azinphos-methyl	4.00	4.58		ug/L		114	59 - 115
Chlorpyrifos	4.00	4.25		ug/L		106	54 - 115
Coumaphos	4.00	4.75	*	ug/L		119	63 - 118
Demeton, Total	4.00	3.34		ug/L		84	44 - 115
Diazinon	4.00	3.25		ug/L		81	47 - 115
Dichlorvos	4.00	5.42	*	ug/L		135	53 - 128
Dimethoate	4.00	2.59		ug/L		65	42 - 115
Disulfoton	4.00	3.17		ug/L		79	45 - 115
EPN	4.00	4.12		ug/L		103	56 - 115
Famphur	4.00	3.85		ug/L		96	62 - 115
Fensulfothion	4.00	4.38		ug/L		110	50 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-354183/2-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fenthion	4.00	4.02		ug/L		101	55 - 115
Malathion	4.00	3.46		ug/L		86	52 - 115
Merphos	4.00	2.91	J	ug/L		73	31 - 115
Methyl parathion	4.00	4.44		ug/L		111	58 - 115
Mevinphos	4.00	3.23	J	ug/L		81	42 - 115
Ethyl Parathion	4.00	4.17		ug/L		104	55 - 115
Phorate	4.00	2.89		ug/L		72	40 - 115
Ronnel	4.00	4.09	J	ug/L		102	55 - 115
Simazine	4.00	3.08	J	ug/L		77	39 - 115
Sulfotepp	4.00	3.57		ug/L		89	53 - 115
Thionazin	4.00	3.48		ug/L		87	54 - 115
Trichloronate	4.00	3.97		ug/L		99	48 - 115
Ethoprop	4.00	3.60		ug/L		90	50 - 115
BolstarFamphur	8.00	7.93		ug/L		99	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*86*		*49 - 171*
Triphenylphosphate	*92*		*60 - 154*

Lab Sample ID: LCSD 280-354183/3-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	2.35	J	ug/L		59	52 - 115	15	45
Azinphos-methyl	4.00	4.87	*	ug/L		122	59 - 115	6	20
Chlorpyrifos	4.00	4.19		ug/L		105	54 - 115	1	24
Coumaphos	4.00	5.20	*	ug/L		130	63 - 118	9	20
Demeton, Total	4.00	2.77	J	ug/L		69	44 - 115	19	38
Diazinon	4.00	3.49		ug/L		87	47 - 115	7	37
Dichlorvos	4.00	0.997	*	ug/L		25	53 - 128	138	37
Dimethoate	4.00	2.04		ug/L		51	42 - 115	24	38
Disulfoton	4.00	3.29		ug/L		82	45 - 115	4	31
EPN	4.00	4.39		ug/L		110	56 - 115	6	20
Famphur	4.00	4.14		ug/L		104	62 - 115	7	20
Fensulfothion	4.00	3.76		ug/L		94	50 - 115	15	27
Fenthion	4.00	3.92		ug/L		98	55 - 115	3	22
Malathion	4.00	3.43		ug/L		86	52 - 115	1	20
Merphos	4.00	2.95	J	ug/L		74	31 - 115	1	25
Methyl parathion	4.00	4.14		ug/L		103	58 - 115	7	20
Mevinphos	4.00	1.92	J *	ug/L		48	42 - 115	51	27
Ethyl Parathion	4.00	4.12		ug/L		103	55 - 115	1	20
Phorate	4.00	2.58		ug/L		65	40 - 115	11	32
Ronnel	4.00	3.74	J	ug/L		93	55 - 115	9	28
Simazine	4.00	1.89	J	ug/L		47	39 - 115	48	53
Sulfotepp	4.00	3.36		ug/L		84	53 - 115	6	27
Thionazin	4.00	2.86		ug/L		71	54 - 115	20	27

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCSD 280-354183/3-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354183

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloronate			4.00	3.87		ug/L		97	48 - 115	3	26
Ethoprop			4.00	3.22		ug/L		81	50 - 115	11	29
BolstarFamphur			8.00	8.27		ug/L		103		4	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*37*	*X*	*49 - 171*
Triphenylphosphate	*99*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-354292/1-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		12/05/16 15:38	12/09/16 05:24	1
2,4-D	ND		4.0	0.21	ug/L		12/05/16 15:38	12/09/16 05:24	1
2,4-DB	ND		4.0	0.36	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dalapon	ND		2.0	0.91	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dicamba	ND		2.0	0.15	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dichlorprop	ND		4.0	0.65	ug/L		12/05/16 15:38	12/09/16 05:24	1
MCPA	ND		400	17	ug/L		12/05/16 15:38	12/09/16 05:24	1
MCPP	ND		400	33	ug/L		12/05/16 15:38	12/09/16 05:24	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		12/05/16 15:38	12/09/16 05:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*	*12/05/16 15:38*	*12/09/16 05:24*	*1*

Lab Sample ID: LCS 280-354292/2-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354292

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T			5.00	3.73		ug/L		75	45 - 135
2,4-D			5.00	3.98	J	ug/L		80	46 - 126
2,4-DB			5.00	3.81	J	ug/L		76	18 - 135
Dalapon			5.00	4.19		ug/L		84	52 - 119
Dicamba			5.00	4.25		ug/L		85	50 - 128
Dichlorprop			5.00	3.86	J	ug/L		77	44 - 121
MCPA			500	382	J	ug/L		76	43 - 118
MCPP			500	409		ug/L		82	45 - 121
Silvex (2,4,5-TP)			5.00	3.92		ug/L		78	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 280-354292/3-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354292

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	3.83		ug/L		77	45 - 135	2	30
2,4-D			5.00	4.05		ug/L		81	46 - 126	2	30
2,4-DB			5.00	3.41	J	ug/L		68	18 - 135	11	30
Dalapon			5.00	4.19		ug/L		84	52 - 119	0	30
Dicamba			5.00	4.36		ug/L		87	50 - 128	3	30
Dichlorprop			5.00	3.98	J	ug/L		80	44 - 121	3	30
MCPA			500	386	J	ug/L		77	43 - 118	1	30
MCPP			500	418		ug/L		84	45 - 121	2	30
Silvex (2,4,5-TP)			5.00	3.97		ug/L		79	48 - 127	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*97*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-9886/1-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.0407	J	0.12	0.040	mg/L		12/05/16 10:22	12/05/16 11:46	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*12/05/16 10:22*	*12/05/16 11:46*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/05/16 10:22*	*12/05/16 11:46*	*1*

Lab Sample ID: LCS 590-9886/2-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)			1.61	1.38		mg/L		85	50 - 150
Residual Range Organics (RRO) (C25-C36)			1.60	1.53		mg/L		96	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*89*		*50 - 150*
n-Triacontane-d62	*90*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 590-9886/3-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.61	1.32		mg/L		82	50 - 150	4	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.51		mg/L		94	50 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*86*		*50 - 150*
n-Triacontane-d62	*94*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-9823/1016
Matrix: Water
Analysis Batch: 9823

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			12/01/16 13:15	1
Sulfate	ND		0.50	0.13	mg/L			12/01/16 13:15	1

Lab Sample ID: LCS 590-9823/1015
Matrix: Water
Analysis Batch: 9823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			12.5	12.3		mg/L		98	90 - 110		
Sulfate			12.5	12.6		mg/L		101	90 - 110		

Lab Sample ID: 590-5100-1 MS
Matrix: Water
Analysis Batch: 9823

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	7.1		11.4	18.1		mg/L		97	80 - 120		
Sulfate	10		11.4	21.3		mg/L		98	80 - 120		

Lab Sample ID: 590-5100-1 MSD
Matrix: Water
Analysis Batch: 9823

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7.1		11.4	17.8		mg/L		94	80 - 120	2	10
Sulfate	10		11.4	20.9		mg/L		95	80 - 120	2	10

Lab Sample ID: 590-5100-1 DU
Matrix: Water
Analysis Batch: 9823

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	7.1			7.05		mg/L				0.8	18.8

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5100-1 DU
Matrix: Water
Analysis Batch: 9823

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate	10			10.1		mg/L				0	15.7

Lab Sample ID: MB 590-9824/1016
Matrix: Water
Analysis Batch: 9824

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/01/16 13:15	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 13:15	1

Lab Sample ID: LCS 590-9824/1015
Matrix: Water
Analysis Batch: 9824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	4.93		mg/L		99	90 - 110		
Nitrite as N			5.00	4.83		mg/L		97	90 - 110		

Lab Sample ID: 590-5100-1 MS
Matrix: Water
Analysis Batch: 9824

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	4.7		4.55	9.14		mg/L		98	80 - 120		
Nitrite as N	ND		4.55	4.53		mg/L		100	80 - 120		

Lab Sample ID: 590-5100-1 MSD
Matrix: Water
Analysis Batch: 9824

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.7		4.55	8.95		mg/L		94	80 - 120	2	12.1
Nitrite as N	ND		4.55	4.47		mg/L		98	80 - 120	1	10

Lab Sample ID: 590-5100-1 DU
Matrix: Water
Analysis Batch: 9824

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate as N	4.7			4.66		mg/L				0.4	13.1
Nitrite as N	ND			ND		mg/L				NC	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-140834/1-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140834

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.27	pg/L		12/06/16 13:53	12/09/16 02:17	1
2,3,7,8-TCDF	ND		10	0.24	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8-PeCDD	ND		50	0.47	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8-PeCDF	0.398	J q	50	0.28	pg/L		12/06/16 13:53	12/09/16 02:17	1
2,3,4,7,8-PeCDF	ND		50	0.30	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,7,8-HxCDD	ND		50	0.29	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,6,7,8-HxCDD	ND		50	0.27	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8,9-HxCDD	ND		50	0.22	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,7,8-HxCDF	ND		50	0.38	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,6,7,8-HxCDF	ND		50	0.34	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8,9-HxCDF	0.844	J q	50	0.36	pg/L		12/06/16 13:53	12/09/16 02:17	1
2,3,4,6,7,8-HxCDF	0.691	J	50	0.37	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,6,7,8-HpCDD	1.24	J	50	0.27	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,6,7,8-HpCDF	0.805	J q	50	0.34	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.39	pg/L		12/06/16 13:53	12/09/16 02:17	1
OCDD	4.08	J	100	0.38	pg/L		12/06/16 13:53	12/09/16 02:17	1
OCDF	ND		100	0.44	pg/L		12/06/16 13:53	12/09/16 02:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,6,7,8-HxCDD	*75*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-OCDD	*92*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*

Lab Sample ID: LCS 320-140834/2-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	189		pg/L		95	64 - 142
2,3,7,8-TCDF	200	209		pg/L		104	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1020		pg/L		102	76 - 135
2,3,4,7,8-PeCDF	1000	1060		pg/L		106	74 - 137
1,2,3,4,7,8-HxCDD	1000	977		pg/L		98	56 - 146
1,2,3,6,7,8-HxCDD	1000	1030		pg/L		103	73 - 144
1,2,3,7,8,9-HxCDD	1000	972		pg/L		97	71 - 151
1,2,3,4,7,8-HxCDF	1000	1010		pg/L		101	75 - 131
1,2,3,6,7,8-HxCDF	1000	1050		pg/L		105	76 - 133
1,2,3,7,8,9-HxCDF	1000	1020		pg/L		102	77 - 142
2,3,4,6,7,8-HxCDF	1000	1090		pg/L		109	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	989		pg/L		99	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	994		pg/L		99	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-140834/2-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8,9-HpCDF			1000	950		pg/L		95	83 - 130		
OCDD			2000	1880		pg/L		94	80 - 132		
OCDF			2000	1860		pg/L		93	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*80*		*40 - 135*
13C-2,3,7,8-TCDF	*74*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*86*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*86*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*90*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*
13C-OCDD	*99*		*40 - 135*

Lab Sample ID: LCSD 320-140834/3-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 140834

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	200		pg/L		100	64 - 142	5	20
2,3,7,8-TCDF			200	217		pg/L		108	71 - 142	4	20
1,2,3,7,8-PeCDD			1000	1050		pg/L		105	71 - 140	4	20
1,2,3,7,8-PeCDF			1000	1050		pg/L		105	76 - 135	4	20
2,3,4,7,8-PeCDF			1000	1070		pg/L		107	74 - 137	1	20
1,2,3,4,7,8-HxCDD			1000	1030		pg/L		103	56 - 146	6	20
1,2,3,6,7,8-HxCDD			1000	1060		pg/L		106	73 - 144	2	20
1,2,3,7,8,9-HxCDD			1000	1010		pg/L		101	71 - 151	4	20
1,2,3,4,7,8-HxCDF			1000	1060		pg/L		106	75 - 131	5	20
1,2,3,6,7,8-HxCDF			1000	1080		pg/L		108	76 - 133	3	20
1,2,3,7,8,9-HxCDF			1000	1070		pg/L		107	77 - 142	5	20
2,3,4,6,7,8-HxCDF			1000	1150		pg/L		115	80 - 137	5	20
1,2,3,4,6,7,8-HpCDD			1000	1060		pg/L		106	78 - 139	7	20
1,2,3,4,6,7,8-HpCDF			1000	1060		pg/L		106	79 - 133	7	20
1,2,3,4,7,8,9-HpCDF			1000	1020		pg/L		102	83 - 130	7	20
OCDD			2000	2010		pg/L		100	80 - 132	6	20
OCDF			2000	2000		pg/L		100	72 - 140	7	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*79*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*93*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*100*		*40 - 135*

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-141742/1-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141742

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.18	pg/L		12/12/16 14:18	12/14/16 00:08	1
2,3,7,8-TCDF	0.177	J q	10	0.11	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8-PeCDD	ND		50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8-PeCDF	ND		50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
2,3,4,7,8-PeCDF	ND		50	0.16	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,7,8-HxCDD	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,6,7,8-HxCDD	ND		50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8,9-HxCDD	ND		50	0.13	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,7,8-HxCDF	ND		50	0.18	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,6,7,8-HxCDF	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8,9-HxCDF	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
2,3,4,6,7,8-HxCDF	0.280	J	50	0.18	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,6,7,8-HpCDD	0.758	J q	50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,6,7,8-HpCDF	0.560	J	50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
OCDD	2.24	J q	100	0.16	pg/L		12/12/16 14:18	12/14/16 00:08	1
OCDF	0.840	J	100	0.26	pg/L		12/12/16 14:18	12/14/16 00:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,7,8-PeCDD	*97*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,7,8-PeCDF	*88*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-OCDD	*92*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*

Lab Sample ID: LCS 320-141742/2-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	202		pg/L		101	64 - 142
2,3,7,8-TCDF	200	207		pg/L		103	71 - 142
1,2,3,7,8-PeCDD	1000	1100		pg/L		110	71 - 140
1,2,3,7,8-PeCDF	1000	1060		pg/L		106	76 - 135
2,3,4,7,8-PeCDF	1000	1050		pg/L		105	74 - 137
1,2,3,4,7,8-HxCDD	1000	994		pg/L		99	56 - 146
1,2,3,6,7,8-HxCDD	1000	1030		pg/L		103	73 - 144
1,2,3,7,8,9-HxCDD	1000	1020		pg/L		102	71 - 151
1,2,3,4,7,8-HxCDF	1000	1030		pg/L		103	75 - 131
1,2,3,6,7,8-HxCDF	1000	1100		pg/L		110	76 - 133
1,2,3,7,8,9-HxCDF	1000	1080		pg/L		108	77 - 142
2,3,4,6,7,8-HxCDF	1000	1190		pg/L		119	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	1010		pg/L		101	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-141742/2-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141742

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8,9-HpCDF			1000	976		pg/L		98	83 - 130		
OCDD			2000	1900		pg/L		95	80 - 132		
OCDF			2000	1890		pg/L		94	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*91*		*40 - 135*
13C-2,3,7,8-TCDF	*84*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*101*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*92*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*85*		*40 - 135*
13C-OCDD	*93*		*40 - 135*

Lab Sample ID: LCSD 320-141742/3-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 141742

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	211		pg/L		105	64 - 142	4	20
2,3,7,8-TCDF			200	213		pg/L		107	71 - 142	3	20
1,2,3,7,8-PeCDD			1000	1130		pg/L		113	71 - 140	3	20
1,2,3,7,8-PeCDF			1000	1100		pg/L		110	76 - 135	3	20
2,3,4,7,8-PeCDF			1000	1110		pg/L		111	74 - 137	5	20
1,2,3,4,7,8-HxCDD			1000	1080		pg/L		108	56 - 146	9	20
1,2,3,6,7,8-HxCDD			1000	1100		pg/L		110	73 - 144	7	20
1,2,3,7,8,9-HxCDD			1000	1080		pg/L		108	71 - 151	5	20
1,2,3,4,7,8-HxCDF			1000	1120		pg/L		112	75 - 131	8	20
1,2,3,6,7,8-HxCDF			1000	1140		pg/L		114	76 - 133	4	20
1,2,3,7,8,9-HxCDF			1000	1120		pg/L		112	77 - 142	4	20
2,3,4,6,7,8-HxCDF			1000	1240		pg/L		124	80 - 137	5	20
1,2,3,4,6,7,8-HpCDD			1000	1070		pg/L		107	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF			1000	1080		pg/L		108	79 - 133	6	20
1,2,3,4,7,8,9-HpCDF			1000	1020		pg/L		102	83 - 130	4	20
OCDD			2000	2020		pg/L		101	80 - 132	6	20
OCDF			2000	1990		pg/L		100	72 - 140	5	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*87*		*40 - 135*
13C-2,3,7,8-TCDF	*80*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*96*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*89*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*88*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*87*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*
13C-OCDD	*93*		*40 - 135*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-234217/14-A
Matrix: Water
Analysis Batch: 234367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/09/16 15:51	12/12/16 13:51	1
Antimony	ND		0.00040	0.000080	mg/L		12/09/16 15:51	12/12/16 13:51	1
Barium	ND		0.0012	0.000054	mg/L		12/09/16 15:51	12/12/16 13:51	1
Beryllium	ND		0.00040	0.00010	mg/L		12/09/16 15:51	12/12/16 13:51	1
Cadmium	ND		0.00040	0.000028	mg/L		12/09/16 15:51	12/12/16 13:51	1
Chromium	ND		0.00040	0.00014	mg/L		12/09/16 15:51	12/12/16 13:51	1
Copper	ND		0.0020	0.00060	mg/L		12/09/16 15:51	12/12/16 13:51	1
Iron	ND		0.040	0.0058	mg/L		12/09/16 15:51	12/12/16 13:51	1
Lead	ND		0.00040	0.000034	mg/L		12/09/16 15:51	12/12/16 13:51	1
Manganese	ND		0.0020	0.00035	mg/L		12/09/16 15:51	12/12/16 13:51	1
Nickel	ND		0.0030	0.00040	mg/L		12/09/16 15:51	12/12/16 13:51	1
Selenium	ND		0.0010	0.00030	mg/L		12/09/16 15:51	12/12/16 13:51	1
Silver	ND		0.00040	0.000030	mg/L		12/09/16 15:51	12/12/16 13:51	1
Thallium	ND		0.0010	0.00014	mg/L		12/09/16 15:51	12/12/16 13:51	1
Vanadium	ND		0.0040	0.00098	mg/L		12/09/16 15:51	12/12/16 13:51	1
Zinc	ND		0.0070	0.0019	mg/L		12/09/16 15:51	12/12/16 13:51	1

Lab Sample ID: LCS 580-234217/15-A
Matrix: Water
Analysis Batch: 234367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234217

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.106		mg/L		106	85 - 115
Antimony	0.100	0.103		mg/L		103	85 - 115
Barium	0.100	0.102		mg/L		102	85 - 115
Beryllium	0.100	0.103		mg/L		103	85 - 115
Cadmium	0.100	0.102		mg/L		102	85 - 115
Chromium	0.100	0.106		mg/L		106	85 - 115
Copper	0.100	0.101		mg/L		101	85 - 115
Iron	10.0	10.1		mg/L		101	85 - 115
Lead	0.100	0.101		mg/L		101	85 - 115
Manganese	0.100	0.0999		mg/L		100	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.104		mg/L		104	85 - 115
Silver	0.100	0.103		mg/L		103	85 - 115
Thallium	0.100	0.101		mg/L		101	85 - 115
Vanadium	0.100	0.101		mg/L		101	85 - 115
Zinc	0.100	0.102		mg/L		102	85 - 115

Lab Sample ID: LCSD 580-234217/16-A
Matrix: Water
Analysis Batch: 234367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234217

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.103		mg/L		103	85 - 115	3	20
Antimony	0.100	0.101		mg/L		101	85 - 115	2	20
Barium	0.100	0.101		mg/L		101	85 - 115	1	20
Beryllium	0.100	0.101		mg/L		101	85 - 115	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-234217/16-A
Matrix: Water
Analysis Batch: 234367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234217

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.101		mg/L		101	85 - 115	1	20
Chromium	0.100	0.0981		mg/L		98	85 - 115	7	20
Copper	0.100	0.0987		mg/L		99	85 - 115	2	20
Iron	10.0	9.96		mg/L		100	85 - 115	2	20
Lead	0.100	0.0990		mg/L		99	85 - 115	2	20
Manganese	0.100	0.0976		mg/L		98	85 - 115	2	20
Nickel	0.100	0.0977		mg/L		98	85 - 115	3	20
Selenium	0.100	0.102		mg/L		102	85 - 115	2	20
Silver	0.100	0.101		mg/L		101	85 - 115	2	20
Thallium	0.100	0.100		mg/L		100	85 - 115	1	20
Vanadium	0.100	0.0989		mg/L		99	85 - 115	2	20
Zinc	0.100	0.0984		mg/L		98	85 - 115	3	20

Lab Sample ID: MB 580-234239/15-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/10/16 09:49	12/13/16 14:46	1
Antimony	ND		0.00040	0.000080	mg/L		12/10/16 09:49	12/13/16 14:46	1
Barium	ND		0.0012	0.000054	mg/L		12/10/16 09:49	12/13/16 14:46	1
Beryllium	ND		0.00040	0.00010	mg/L		12/10/16 09:49	12/13/16 14:46	1
Cadmium	ND		0.00040	0.000028	mg/L		12/10/16 09:49	12/13/16 14:46	1
Chromium	ND		0.00040	0.00014	mg/L		12/10/16 09:49	12/13/16 14:46	1
Copper	ND		0.0020	0.00060	mg/L		12/10/16 09:49	12/13/16 14:46	1
Iron	ND		0.040	0.0058	mg/L		12/10/16 09:49	12/13/16 14:46	1
Lead	ND		0.00040	0.000034	mg/L		12/10/16 09:49	12/13/16 14:46	1
Manganese	ND		0.0020	0.00035	mg/L		12/10/16 09:49	12/13/16 14:46	1
Nickel	ND		0.0030	0.00040	mg/L		12/10/16 09:49	12/13/16 14:46	1
Selenium	0.000318	J	0.0010	0.00030	mg/L		12/10/16 09:49	12/13/16 14:46	1
Silver	ND		0.00040	0.000030	mg/L		12/10/16 09:49	12/13/16 14:46	1
Thallium	ND		0.0010	0.00014	mg/L		12/10/16 09:49	12/13/16 14:46	1
Vanadium	ND		0.0040	0.00098	mg/L		12/10/16 09:49	12/13/16 14:46	1
Zinc	ND		0.0070	0.0019	mg/L		12/10/16 09:49	12/13/16 14:46	1

Lab Sample ID: LCS 580-234239/16-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0979		mg/L		98	85 - 115
Antimony	0.100	0.0991		mg/L		99	85 - 115
Barium	0.100	0.100		mg/L		100	85 - 115
Beryllium	0.100	0.0968		mg/L		97	85 - 115
Cadmium	0.100	0.0977		mg/L		98	85 - 115
Chromium	0.100	0.0899		mg/L		90	85 - 115
Copper	0.100	0.0974		mg/L		97	85 - 115
Iron	10.0	8.79		mg/L		88	85 - 115
Lead	0.100	0.0968		mg/L		97	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-234239/16-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.100	0.0910		mg/L		91	85 - 115
Nickel	0.100	0.0956		mg/L		96	85 - 115
Selenium	0.100	0.0973		mg/L		97	85 - 115
Silver	0.100	0.0984		mg/L		98	85 - 115
Thallium	0.100	0.0991		mg/L		99	85 - 115
Vanadium	0.100	0.0902		mg/L		90	85 - 115
Zinc	0.100	0.0963		mg/L		96	85 - 115

Lab Sample ID: LCSD 580-234239/17-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234239

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0976		mg/L		98	85 - 115	0	20
Antimony	0.100	0.0981		mg/L		98	85 - 115	1	20
Barium	0.100	0.0985		mg/L		98	85 - 115	2	20
Beryllium	0.100	0.0960		mg/L		96	85 - 115	1	20
Cadmium	0.100	0.0979		mg/L		98	85 - 115	0	20
Chromium	0.100	0.0931		mg/L		93	85 - 115	3	20
Copper	0.100	0.0976		mg/L		98	85 - 115	0	20
Iron	10.0	9.15		mg/L		91	85 - 115	4	20
Lead	0.100	0.0985		mg/L		98	85 - 115	2	20
Manganese	0.100	0.0943		mg/L		94	85 - 115	4	20
Nickel	0.100	0.0963		mg/L		96	85 - 115	1	20
Selenium	0.100	0.0961		mg/L		96	85 - 115	1	20
Silver	0.100	0.0991		mg/L		99	85 - 115	1	20
Thallium	0.100	0.101		mg/L		101	85 - 115	2	20
Vanadium	0.100	0.0928		mg/L		93	85 - 115	3	20
Zinc	0.100	0.0967		mg/L		97	85 - 115	0	20

Lab Sample ID: LCS 580-234411/12-A
Matrix: Water
Analysis Batch: 234518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234411

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0975		mg/L		97	85 - 115
Antimony	0.100	0.0955		mg/L		96	85 - 115
Barium	0.100	0.0963		mg/L		96	85 - 115
Beryllium	0.100	0.0961		mg/L		96	85 - 115
Cadmium	0.100	0.0979		mg/L		98	85 - 115
Chromium	0.100	0.0982		mg/L		98	85 - 115
Copper	0.100	0.0972		mg/L		97	85 - 115
Iron	10.0	9.90		mg/L		99	85 - 115
Lead	0.100	0.0978		mg/L		98	85 - 115
Manganese	0.100	0.0992		mg/L		99	85 - 115
Nickel	0.100	0.0969		mg/L		97	85 - 115
Selenium	0.100	0.0989		mg/L		99	85 - 115
Silver	0.100	0.0976		mg/L		98	85 - 115
Thallium	0.100	0.0988		mg/L		99	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-234411/12-A
Matrix: Water
Analysis Batch: 234518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234411

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.100	0.0990		mg/L		99	85 - 115
Zinc	0.100	0.0972		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-234411/13-A
Matrix: Water
Analysis Batch: 234518

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234411

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0957		mg/L		96	85 - 115	2	20
Antimony	0.100	0.0937		mg/L		94	85 - 115	2	20
Barium	0.100	0.0946		mg/L		95	85 - 115	2	20
Beryllium	0.100	0.0935		mg/L		94	85 - 115	3	20
Cadmium	0.100	0.0954		mg/L		95	85 - 115	3	20
Chromium	0.100	0.0961		mg/L		96	85 - 115	2	20
Copper	0.100	0.0951		mg/L		95	85 - 115	2	20
Iron	10.0	9.79		mg/L		98	85 - 115	1	20
Lead	0.100	0.0951		mg/L		95	85 - 115	3	20
Manganese	0.100	0.0977		mg/L		98	85 - 115	2	20
Nickel	0.100	0.0949		mg/L		95	85 - 115	2	20
Selenium	0.100	0.0987		mg/L		99	85 - 115	0	20
Silver	0.100	0.0955		mg/L		96	85 - 115	2	20
Thallium	0.100	0.0952		mg/L		95	85 - 115	4	20
Vanadium	0.100	0.0964		mg/L		96	85 - 115	3	20
Zinc	0.100	0.0948		mg/L		95	85 - 115	3	20

Lab Sample ID: MB 580-233779/15-C
Matrix: Water
Analysis Batch: 234518

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 234411

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/13/16 13:14	12/14/16 12:46	1
Antimony	ND		0.00040	0.000080	mg/L		12/13/16 13:14	12/14/16 12:46	1
Barium	ND		0.0012	0.000054	mg/L		12/13/16 13:14	12/14/16 12:46	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:14	12/14/16 12:46	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:14	12/14/16 12:46	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/16 13:14	12/14/16 12:46	1
Copper	ND		0.0020	0.00060	mg/L		12/13/16 13:14	12/14/16 12:46	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:14	12/14/16 12:46	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:14	12/14/16 12:46	1
Manganese	ND		0.0020	0.00035	mg/L		12/13/16 13:14	12/14/16 12:46	1
Nickel	ND		0.0030	0.00040	mg/L		12/13/16 13:14	12/14/16 12:46	1
Selenium	ND		0.0010	0.00030	mg/L		12/13/16 13:14	12/14/16 12:46	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:14	12/14/16 12:46	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:14	12/14/16 12:46	1
Vanadium	ND		0.0040	0.00098	mg/L		12/13/16 13:14	12/14/16 12:46	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:14	12/14/16 12:46	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5100-5 MS
Matrix: Water
Analysis Batch: 234518

Client Sample ID: MW-16A:113016
Prep Type: Dissolved
Prep Batch: 234411

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0024		0.100	0.0971		mg/L		95	70 - 130
Antimony	0.00013	J	0.100	0.0932		mg/L		93	70 - 130
Barium	0.039		0.100	0.126		mg/L		86	70 - 130
Beryllium	ND		0.100	0.0942		mg/L		94	70 - 130
Cadmium	ND		0.100	0.0968		mg/L		97	70 - 130
Chromium	ND		0.100	0.0940		mg/L		94	70 - 130
Copper	0.0037		0.100	0.0950		mg/L		91	70 - 130
Iron	0.0099	J	10.0	9.38		mg/L		94	70 - 130
Lead	0.000046	J	0.100	0.0952		mg/L		95	70 - 130
Manganese	0.0013	J	0.100	0.0955		mg/L		94	70 - 130
Nickel	0.0015	J	0.100	0.0925		mg/L		91	70 - 130
Selenium	ND		0.100	0.0966		mg/L		97	70 - 130
Silver	ND		0.100	0.0953		mg/L		95	70 - 130
Thallium	ND		0.100	0.0959		mg/L		96	70 - 130
Vanadium	0.0072		0.100	0.101		mg/L		93	70 - 130
Zinc	ND		0.100	0.0931		mg/L		93	70 - 130

Lab Sample ID: 590-5100-5 MSD
Matrix: Water
Analysis Batch: 234518

Client Sample ID: MW-16A:113016
Prep Type: Dissolved
Prep Batch: 234411

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0024		0.100	0.0974		mg/L		95	70 - 130	0	20
Antimony	0.00013	J	0.100	0.0922		mg/L		92	70 - 130	1	20
Barium	0.039		0.100	0.126		mg/L		87	70 - 130	1	20
Beryllium	ND		0.100	0.0936		mg/L		94	70 - 130	1	20
Cadmium	ND		0.100	0.0963		mg/L		96	70 - 130	1	20
Chromium	ND		0.100	0.0936		mg/L		94	70 - 130	0	20
Copper	0.0037		0.100	0.0951		mg/L		91	70 - 130	0	20
Iron	0.0099	J	10.0	9.41		mg/L		94	70 - 130	0	20
Lead	0.000046	J	0.100	0.0950		mg/L		95	70 - 130	0	20
Manganese	0.0013	J	0.100	0.0954		mg/L		94	70 - 130	0	20
Nickel	0.0015	J	0.100	0.0929		mg/L		91	70 - 130	0	20
Selenium	ND		0.100	0.0968		mg/L		97	70 - 130	0	20
Silver	ND		0.100	0.0950		mg/L		95	70 - 130	0	20
Thallium	ND		0.100	0.0955		mg/L		95	70 - 130	0	20
Vanadium	0.0072		0.100	0.101		mg/L		94	70 - 130	0	20
Zinc	ND		0.100	0.0929		mg/L		93	70 - 130	0	20

Lab Sample ID: 590-5100-5 DU
Matrix: Water
Analysis Batch: 234518

Client Sample ID: MW-16A:113016
Prep Type: Dissolved
Prep Batch: 234411

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0024		0.00242		mg/L		0.2	20
Antimony	0.00013	J	0.000122	J	mg/L		4	20
Barium	0.039		0.0389		mg/L		0.6	20
Beryllium	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5100-5 DU — **Client Sample ID: MW-16A:113016**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234518 — **Prep Batch: 234411**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	0.0037		0.00367		mg/L		2	20
Iron	0.0099	J	0.00703	J F5	mg/L		34	20
Lead	0.000046	J	ND		mg/L		NC	20
Manganese	0.0013	J	0.00131	J	mg/L		1	20
Nickel	0.0015	J	0.00137	J	mg/L		10	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0072		0.00717		mg/L		0.3	20
Zinc	ND		ND		mg/L		NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-233896/21-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 233951 — **Prep Batch: 233896**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000513	J	0.00020	0.000041	mg/L		12/06/16 08:49	12/06/16 11:51	1

Lab Sample ID: LCS 580-233896/22-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 233951 — **Prep Batch: 233896**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00228		mg/L		114	85 - 115

Lab Sample ID: LCSD 580-233896/23-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 233951 — **Prep Batch: 233896**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00217		mg/L		109	85 - 115	5	20

Lab Sample ID: LCS 580-234386/19-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234386**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00207		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-234386/20-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234386**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00198		mg/L		99	85 - 115	4	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: MB 580-233779/15-B
Matrix: Water
Analysis Batch: 234490

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 234386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:25	1

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-392115/1-A
Matrix: Water
Analysis Batch: 392251

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 392115

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:03	1

Lab Sample ID: LCS 490-392115/2-A
Matrix: Water
Analysis Batch: 392251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 392115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.110		mg/L		110	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-391760/1-A
Matrix: Water
Analysis Batch: 392495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 391760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		12/05/16 10:35	12/07/16 11:40	1

Lab Sample ID: LCS 490-391760/2-A
Matrix: Water
Analysis Batch: 392495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.33		mg/L		107	90 - 110

Lab Sample ID: 590-5100-6 MS
Matrix: Water
Analysis Batch: 392495

Client Sample ID: MW-9A:113016
Prep Type: Total/NA
Prep Batch: 391760

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.57	F1	5.00	4.73	F1	mg/L		83	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-393685/3
Matrix: Water
Analysis Batch: 393685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/12/16 14:26	1

Lab Sample ID: LCS 490-393685/4
Matrix: Water
Analysis Batch: 393685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	49.6		mg/L		99	90 - 110

Lab Sample ID: LCSD 490-393685/5
Matrix: Water
Analysis Batch: 393685

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	49.4		mg/L		99	90 - 110	1	20

Lab Sample ID: 590-5100-1 MS
Matrix: Water
Analysis Batch: 393685

Client Sample ID: MW-14:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND	F1	50.0	65.5	F1	mg/L		131	90 - 110

Lab Sample ID: 590-5100-7 DU
Matrix: Water
Analysis Batch: 393685

Client Sample ID: MW-DUP:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	11	J	10.4	J	mg/L		2	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-392868/1
Matrix: Water
Analysis Batch: 392868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			12/08/16 07:38	1

Lab Sample ID: LCS 490-392868/4
Matrix: Water
Analysis Batch: 392868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.2		mg/L		102	90 - 110
TOC Result 1	10.0	10.2		mg/L		102	90 - 110
TOC Result 2	10.0	10.1		mg/L		101	90 - 110

Method: SM 5310C - TOC (Continued)

Lab Sample ID: 590-5100-4 MS
Matrix: Water
Analysis Batch: 392868

Client Sample ID: MW-16:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	3.8		20.0	22.9		mg/L		96	75 - 122
TOC Result 1	3.8		20.0	23.0		mg/L		96	75 - 122
TOC Result 2	3.7		20.0	22.7		mg/L		95	75 - 122

Lab Sample ID: 590-5100-4 MSD
Matrix: Water
Analysis Batch: 392868

Client Sample ID: MW-16:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	3.8		20.0	22.8		mg/L		95	75 - 122	0	20
TOC Result 1	3.8		20.0	23.0		mg/L		96	75 - 122	0	20
TOC Result 2	3.7		20.0	22.6		mg/L		94	75 - 122	1	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-14:113016
Date Collected: 11/30/16 11:16
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 22:39	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 22:39	MRS	TAL SPK
Total/NA	Prep	3520C			1050.3 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 22:12	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 14:47	NMI	TAL SPK
Total/NA	Prep	3510C			266 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 01:45	JDR	TAL SEA
Total/NA	Prep	3510C			219.1 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 14:11	NMI	TAL SPK
Total/NA	Prep	3510C			1038.3 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 02:40	TEM	TAL DEN
Total/NA	Prep	8151A			1035.8 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 06:32	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			242.8 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 15:02	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 11:02	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 11:02	MRS	TAL SPK
Total/NA	Prep	8290			991.4 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 04:35	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 13:40	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234217	12/09/16 15:51	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234367	12/12/16 14:45	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 14:58	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:09	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:07	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 11:57	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:26	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-12A:113016

Date Collected: 11/30/16 12:21
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 23:22	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 23:22	MRS	TAL SPK
Total/NA	Prep	3520C			1038.2 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 22:37	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 15:10	NMI	TAL SPK
Total/NA	Prep	3510C			236.3 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 02:04	JDR	TAL SEA
Total/NA	Prep	3510C			245.1 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 14:32	NMI	TAL SPK
Total/NA	Prep	3510C			1039.2 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 03:11	TEM	TAL DEN
Total/NA	Prep	8151A			1043.3 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 06:55	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			233.5 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 15:20	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 11:24	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 11:24	MRS	TAL SPK
Total/NA	Prep	8290			976.7 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 05:21	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 13:44	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234217	12/09/16 15:51	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234367	12/12/16 14:49	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:01	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:11	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:07	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 11:58	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-15:113016

Date Collected: 11/30/16 14:35
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/02/16 23:44	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/02/16 23:44	MRS	TAL SPK
Total/NA	Prep	3520C			1042.2 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 23:01	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 15:33	NMI	TAL SPK
Total/NA	Prep	3510C			250.4 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 02:22	JDR	TAL SEA
Total/NA	Prep	3510C			233.5 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 14:52	NMI	TAL SPK
Total/NA	Prep	3510C			1034.1 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 03:42	TEM	TAL DEN
Total/NA	Prep	8151A			1047.1 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 07:18	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			230.9 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 15:38	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 11:46	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 11:46	MRS	TAL SPK
Total/NA	Prep	8290			1043.1 mL	20 uL	141742	12/12/16 14:18	DXD	TAL SAC
Total/NA	Analysis	8290A		1			142008	12/14/16 02:26	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 13:49	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234217	12/09/16 15:51	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234367	12/12/16 14:54	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:03	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:18	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:08	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 11:59	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-16:113016

Date Collected: 11/30/16 12:27
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 00:05	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 00:05	MRS	TAL SPK
Total/NA	Prep	3520C			1047.8 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 23:25	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 16:19	NMI	TAL SPK
Total/NA	Prep	3510C			267.1 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 02:41	JDR	TAL SEA
Total/NA	Prep	3510C			267.2 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 15:13	NMI	TAL SPK
Total/NA	Prep	3510C			1033.1 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 04:14	TEM	TAL DEN
Total/NA	Prep	8151A			1041.2 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 07:41	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			251.9 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 15:56	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 11:57	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 11:57	MRS	TAL SPK
Total/NA	Prep	8290			1053.6 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 06:07	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 13:53	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234217	12/09/16 15:51	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234367	12/12/16 14:58	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:05	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:20	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:09	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 12:00	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-16A:113016

Date Collected: 11/30/16 10:24
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 00:27	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 00:27	MRS	TAL SPK
Total/NA	Prep	3520C			1051.9 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/07/16 23:49	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 16:42	NMI	TAL SPK
Total/NA	Prep	3510C			259.7 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 03:00	JDR	TAL SEA
Total/NA	Prep	3510C			261.9 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 15:34	NMI	TAL SPK
Total/NA	Prep	3510C			1041.2 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 04:45	TEM	TAL DEN
Total/NA	Prep	8151A			1049 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 08:04	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			250.7 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 16:13	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 12:09	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 12:09	MRS	TAL SPK
Total/NA	Prep	8290			1050.5 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 06:53	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 12:50	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234217	12/09/16 15:51	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234367	12/12/16 15:02	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:07	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:22	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:10	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 12:01	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-9A:113016

Date Collected: 11/30/16 14:26
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 00:48	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 00:48	MRS	TAL SPK
Total/NA	Prep	3520C			1045.8 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 00:14	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 17:05	NMI	TAL SPK
Total/NA	Prep	3510C			265.5 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 03:19	JDR	TAL SEA
Total/NA	Prep	3510C			269.1 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 15:54	NMI	TAL SPK
Total/NA	Prep	3510C			1035.3 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 05:17	TEM	TAL DEN
Total/NA	Prep	8151A			1047.4 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 08:27	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			251.1 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 16:31	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 12:31	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 12:31	MRS	TAL SPK
Total/NA	Prep	8290			1046.1 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 07:40	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 13:58	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234217	12/09/16 15:51	MKN	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234367	12/12/16 15:07	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:09	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:24	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:11	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 12:02	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Client Sample ID: MW-DUP:113016
Date Collected: 11/30/16 08:00
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5100-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 01:10	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 01:10	MRS	TAL SPK
Total/NA	Prep	3520C			938.4 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 00:38	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 17:28	NMI	TAL SPK
Total/NA	Prep	3510C			241.3 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 03:38	JDR	TAL SEA
Total/NA	Prep	3510C			241.8 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 16:15	NMI	TAL SPK
Total/NA	Prep	3510C			1041 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 05:48	TEM	TAL DEN
Total/NA	Prep	8151A			982.7 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 08:50	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			243.4 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 17:04	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 12:42	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 12:42	MRS	TAL SPK
Total/NA	Prep	8290			937.1 mL	20 uL	141742	12/12/16 14:18	DXD	TAL SAC
Total/NA	Analysis	8290A		1			142008	12/14/16 03:12	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234411	12/13/16 13:14	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234518	12/14/16 14:02	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234239	12/10/16 09:49	R1K	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234457	12/13/16 15:44	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:12	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	233896	12/06/16 08:49	MKN	TAL SEA
Total/NA	Analysis	245.1		1			233951	12/06/16 12:27	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:12	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391760	12/05/16 10:35	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	392495	12/07/16 12:04	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393685	12/12/16 14:29	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica
11922 East 1st Ave
Spokane, WA 992
Phone (509) 924-9

590-5100 Chain of Custody

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

12/21/2016

Client Information: JML / JWR

Client Contact: Josh Lee	Phone: 406-239-7810	Lab PM: Arrington, Randee E	Carrier Tracking No(s):
Company: GeoEngineers Inc		E-Mail: randee.arrington@testamericainc.com	COC No: 590-1993-727.1
Address: 523 East Second Ave	Due Date Requested: Std.		Page: Page 1 of 2
City: Spokane	TAT Requested (days): Std.		Job #:
State, Zip: WA, 99202			
Phone: 509-363-3125	PO #: Purchase Order not required		
Email: jmlee@geoengineers.com	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site: Marshall Landfill	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-14: 113016	11/30/16	1116	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	
MW-12A: 113016		1221		Water																	
MW-15: 113016		1435		Water																	
MW-16: 113016		1227		Water																	
MW-16A: 113016		1024		Water																	
MW-9A: 113016		1426		Water																	
MW-dup: 113016		0800		Water																	
				Water																	
				Water																	
				Water																	
				Water																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	11/30/16 1650	GEZ	Sheila Khad	11/30/16 1650	TA dock
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.1°C, 4.4°C, 5.1°C IR003

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / JWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.4
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
MW-14: 113016	11/30/16	1116	G	Water	N		X	X	X	23	
MW-12A: 113016		1221		Water							
MW-15: 113016		1435		Water							
MW-16: 113016		1227		Water							
MW-16A: 113016		1024		Water							
MW-9A: 113016		1426		Water							
MW-dup: 113016		0800		Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	11/30/16 1650		Sheila Knock	11.30.16 1650	TASpok
Relinquished by:					
Relinquished by:					

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.6°C, 4.4°C, 5.1°C IR0G3

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2329.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5100-1
Address: 4955 Yarrow Street,	Due Date Requested: 12/12/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP Herbicide (Aqueous)	8141B/3510C Standard 8141 list	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-14:113016 (590-5100-1)	11/30/16	11:16 Pacific		Water			X	X	4	
MW-12A:113016 (590-5100-2)	11/30/16	12:21 Pacific		Water			X	X	4	
MW-15:113016 (590-5100-3)	11/30/16	14:35 Pacific		Water			X	X	4	
MW-16:113016 (590-5100-4)	11/30/16	12:27 Pacific		Water			X	X	4	
MW-16A:113016 (590-5100-5)	11/30/16	10:24 Pacific		Water			X	X	4	
MW-9A:113016 (590-5100-6)	11/30/16	14:26 Pacific		Water			X	X	4	
MW-DUP:113016 (590-5100-7)	11/30/16	08:00 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Grady	12/1/16 1140	TAS POC	Reed Pelt	12-2-16 950	TAS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.9, 1.2, 0.7 IR#5-0.2 Transfer RP 12-2-16

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2327.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5100-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/14/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-14:113016 (590-5100-1)	11/30/16	11:16 Pacific		Water			X	2	
MW-12A:113016 (590-5100-2)	11/30/16	12:21 Pacific		Water			X	2	
MW-15:113016 (590-5100-3)	11/30/16	14:35 Pacific		Water			X	2	
MW-16:113016 (590-5100-4)	11/30/16	12:27 Pacific		Water			X	2	
MW-9A:113016 (590-5100-6)	11/30/16	14:26 Pacific		Water			X	2	
MW-DUP:113016 (590-5100-7)	11/30/16	08:00 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Trad	12/1/16 1115	TA Spok	[illegible]	12/2/16 0940	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4c, 7.4

12/21/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2328.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5100-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/14/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-16A:113016 (590-5100-5)	11/30/16	10:24 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Krack	12/1/16 1415	TAKSPOK	[signature]	12/2/16 0940	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6 ; 2.4

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 580-42932.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5100-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/14/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-15:113016 (590-5100-3)	11/30/16	14:35 Pacific		Water			X	1	
MW-DUP:113016 (590-5100-7)	11/30/16	08:00 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
B Stark	12.9.16 1536	STA TA	Ali Zeighami	12/10/16 09:30	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.3

12/21/2016

13 12 11 10 9 8 7 6 5 4 3 2 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-5100 Chain of Custody

Cooler Received/Opened On 12/2/2016 @ 0950

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 2297 (last 4 digits, FedEx) Courier: ____FedEx_____

   IR Gun ID__17960358__ pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 3.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

   If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) SLV

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? N/A YES...NO...NA

   b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) AB

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

   b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) SLV

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) SLV

I certify that I attached a label with the unique LIMS number to each container (intial) SLV

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-I
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-5100

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

12/21/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		C No: 590-2334.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-5100-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/12/2016			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-14:113016 (590-5100-1)	11/30/16	11:16 Pacific		Water			X	X	X	X	3	
MW-12A:113016 (590-5100-2)	11/30/16	12:21 Pacific		Water			X	X	X	X	3	
MW-15:113016 (590-5100-3)	11/30/16	14:35 Pacific		Water			X	X	X	X	3	
MW-16:113016 (590-5100-4)	11/30/16	12:27 Pacific		Water			X	X	X	X	3	
MW-16A:113016 (590-5100-5)	11/30/16	10:24 Pacific		Water			X	X	X	X	3	
MW-9A:113016 (590-5100-6)	11/30/16	14:26 Pacific		Water			X	X	X	X	3	
MW-DUP:113016 (590-5100-7)	11/30/16	08:00 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 12/11/16 1500	Company	Received by:	Date/Time: 12/12/16 0950	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2326.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5100-1
Address: 5755 8th Street East,	Due Date Requested: 12/12/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8270D/3520C Standard Reporting List	8081B/3510C_LVI Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-14:113016 (590-5100-1)	11/30/16	11:16 Pacific		Water			X	X	X	X	X	X	6	
MW-12A:113016 (590-5100-2)	11/30/16	12:21 Pacific		Water			X	X	X	X	X	X	6	
MW-15:113016 (590-5100-3)	11/30/16	14:35 Pacific		Water			X	X	X	X	X	X	6	
MW-16:113016 (590-5100-4)	11/30/16	12:27 Pacific		Water			X	X	X	X	X	X	6	
MW-16A:113016 (590-5100-5)	11/30/16	10:24 Pacific		Water			X	X	X	X	X	X	6	
MW-9A:113016 (590-5100-6)	11/30/16	14:26 Pacific		Water			X	X	X	X	X	X	6	
MW-DUP:113016 (590-5100-7)	11/30/16	08:00 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Sheila Hart	Date/Time: 12/1/16 1100	Company: TA Spok	Received by: Tom Blunt
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Received by: Tom Blunt	Date/Time: 12/2/16 1020	Company: TA-Sea		
Received by:	Date/Time:	Company:		
Received by:	Date/Time:	Company:		

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR3 2.1/2.4 IR3 -0.1/0.3

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5100-1

Login Number: 5100
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5100-1

Login Number: 5100
List Number: 2
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 12/02/16 01:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5100-1

Login Number: 5100
List Number: 3
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 12/02/16 06:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5100-1

Login Number: 5100
List Number: 5
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 12/05/16 10:22 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5100-1

Login Number: 5100
List Number: 4
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 12/02/16 05:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1°, -0.1°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	Verified at TA-Spokane
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5100-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5100-1	MW-14:113016	82	76	88	79	91	82	101	94
590-5100-2	MW-12A:113016	78	72	84	76	89	80	92	89
590-5100-3	MW-15:113016	91	84	102	93	94	84	91	87
590-5100-4	MW-16:113016	77	70	85	75	85	75	92	87
590-5100-5	MW-16A:113016	79	73	86	78	87	81	95	91
590-5100-6	MW-9A:113016	77	71	81	74	92	82	101	97
590-5100-7	MW-DUP:113016	85	77	95	86	92	84	89	88
LCS 320-140834/2-A	Lab Control Sample	80	74	86	78	86	79	90	89
LCS 320-141742/2-A	Lab Control Sample	91	84	101	92	91	82	86	85
LCSD 320-140834/3-A	Lab Control Sample Dup	79	73	85	77	87	81	93	90
LCSD 320-141742/3-A	Lab Control Sample Dup	87	80	96	89	88	81	87	84
MB 320-140834/1-A	Method Blank	79	76	83	77	75	61	86	76
MB 320-141742/1-A	Method Blank	85	81	97	88	87	77	83	81

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OCDD (40-135)							
590-5100-1	MW-14:113016	112							
590-5100-2	MW-12A:113016	100							
590-5100-3	MW-15:113016	100							
590-5100-4	MW-16:113016	100							
590-5100-5	MW-16A:113016	101							
590-5100-6	MW-9A:113016	111							
590-5100-7	MW-DUP:113016	99							
LCS 320-140834/2-A	Lab Control Sample	99							
LCS 320-141742/2-A	Lab Control Sample	93							
LCSD 320-140834/3-A	Lab Control Sample Dup	100							
LCSD 320-141742/3-A	Lab Control Sample Dup	93							
MB 320-140834/1-A	Method Blank	92							
MB 320-141742/1-A	Method Blank	92							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5117-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/20/2016 3:28:05 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5117-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/1/2016 2:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.4º C, 2.8º C, 3.3º C, 4.0º C, 4.4º C and 4.7º C.

Receipt Exceptions
Eight 1 liter unpreserved amber glass containers were requested to be collected for all samples but only seven were received for sample MW-7B:120116 (590-5117-2) and nine were received for sample MW-7D:120116 (590-5117-1).

A 250ml unpreserved amber glass container was received without a label. The sample was identifed to be MW-7B:120116 (590-5117-2) by the process of elimination.

GC/MS VOA
Method NWTPH-Gx: The method blank for analytical batch 590-9881 contained Gasoline above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-234074 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) associated with batch 280-354926 recovered above the upper control limit (+15%) for 2,4-D, 2,4-Dichlorophenylacetic acid, Dalapon, Dicamba, Dichlorprop, MCPA, and MCPP. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The surrogate is in control on both columns for the associated samples. The following samples are impacted: MW-7D:120116 (590-5117-1), MW-7B:120116 (590-5117-2), MW-15A:120116 (590-5117-3), MW-2A:120116 (590-5117-4), MW-3:120116 (590-5117-5), MW-5A:120116 (590-5117-6), (CCV 280-354926/24), (CCV 280-354926/35), (CCV 280-354926/45), (CCVRT 280-354926/8), (LCS 280-354292/2-A), (LCSD 280-354292/3-A) and (MB 280-354292/1-A).

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-355621 recovered above the upper control limit for Dichlorvos. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-15A:120116 (590-5117-3), MW-2A:120116 (590-5117-4), MW-3:120116 (590-5117-5) and MW-5A:120116 (590-5117-6).

Method 8141B: The laboratory control sample duplicate (LCSD) for preparation batch 280-354313 and analytical batch 280-355621 recovered outside control limits for the following analytes: Azinphos-methyl, Coumaphos, Dichlorvos and Methyl parathion These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B: The following CCV failed low outside the control limits for Toxaphene on the primary column. All data for the affected analyte will be reported from the column which met the control limits.

Method NWTPH-Dx: The method blank for preparation batch 590-9886 and analytical batch 590-9885 contained Diesel Range Organics (DRO) (C10-C25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 590-5117-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 410.4: The matrix spike (MS) recovery for analytical batch 490-393766 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-354292.

Method 8141B_3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-354313.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5117-1	MW-7D:120116	Water	12/01/16 09:10	12/01/16 14:00
590-5117-2	MW-7B:120116	Water	12/01/16 10:31	12/01/16 14:00
590-5117-3	MW-15A:120116	Water	12/01/16 12:20	12/01/16 14:00
590-5117-4	MW-2A:120116	Water	12/01/16 09:05	12/01/16 14:00
590-5117-5	MW-3:120116	Water	12/01/16 10:11	12/01/16 14:00
590-5117-6	MW-5A:120116	Water	12/01/16 11:52	12/01/16 14:00

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7D:120116
Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 01:53	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 01:53	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 01:53	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 01:53	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 01:53	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 01:53	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 01:53	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 01:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 01:53	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 01:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 01:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 01:53	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 01:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 01:53	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 01:53	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 01:53	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 01:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 01:53	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 01:53	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 01:53	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 01:53	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 01:53	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 01:53	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 01:53	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 01:53	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 01:53	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 01:53	1
Acetone	ND		25	4.1	ug/L			12/03/16 01:53	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 01:53	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 01:53	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 01:53	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 01:53	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 01:53	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 01:53	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 01:53	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 01:53	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 01:53	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 01:53	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 01:53	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 01:53	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 01:53	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 01:53	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 01:53	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 01:53	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 01:53	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 01:53	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 01:53	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 01:53	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 01:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7D:120116
Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 01:53	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 01:53	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 01:53	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 01:53	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 01:53	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 01:53	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 01:53	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 01:53	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 01:53	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 01:53	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 01:53	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 01:53	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 01:53	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 01:53	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 01:53	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 01:53	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 01:53	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 01:53	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 01:53	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 01:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 125*		*12/03/16 01:53*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/03/16 01:53*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*12/03/16 01:53*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/03/16 01:53*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**21**	**J B**	100	18	ug/L			12/03/16 01:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*		*12/03/16 01:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7D:120116
Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/08/16 01:26	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/08/16 01:26	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/08/16 01:26	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzoic acid	ND		2.9	0.57	ug/L		12/05/16 16:00	12/08/16 01:26	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/08/16 01:26	1
Butyl benzyl phthalate	**0.37**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/08/16 01:26	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/08/16 01:26	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Di-n-butyl phthalate	**0.23**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/08/16 01:26	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/08/16 01:26	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/08/16 01:26	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1

Client Sample ID: MW-7D:120116
Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 01:26	1
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:26	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/08/16 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*57 - 132*	*12/05/16 16:00*	*12/08/16 01:26*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/05/16 16:00*	*12/08/16 01:26*	*1*
2-Fluorophenol	*79*		*50 - 113*	*12/05/16 16:00*	*12/08/16 01:26*	*1*
Nitrobenzene-d5	*85*		*59 - 120*	*12/05/16 16:00*	*12/08/16 01:26*	*1*
Phenol-d5	*87*		*52 - 120*	*12/05/16 16:00*	*12/08/16 01:26*	*1*
Terphenyl-d14	*89*		*72 - 140*	*12/05/16 16:00*	*12/08/16 01:26*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 18:13	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0061	ug/L		12/06/16 11:10	12/08/16 05:22	1
4,4'-DDE	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 05:22	1
4,4'-DDT	ND		0.030	0.0050	ug/L		12/06/16 11:10	12/08/16 05:22	1
Aldrin	ND		0.030	0.0071	ug/L		12/06/16 11:10	12/08/16 05:22	1
alpha-BHC	ND		0.030	0.0071	ug/L		12/06/16 11:10	12/08/16 05:22	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 05:22	1
beta-BHC	ND		0.050	0.012	ug/L		12/06/16 11:10	12/08/16 05:22	1
delta-BHC	ND		0.050	0.010	ug/L		12/06/16 11:10	12/08/16 05:22	1
Dieldrin	ND		0.030	0.0050	ug/L		12/06/16 11:10	12/08/16 05:22	1
Endosulfan I	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 05:22	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 05:22	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 05:22	1
Endrin	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 05:22	1
Endrin aldehyde	ND		0.20	0.034	ug/L		12/06/16 11:10	12/08/16 05:22	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 05:22	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		12/06/16 11:10	12/08/16 05:22	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 05:22	1
Heptachlor	ND		0.020	0.0040	ug/L		12/06/16 11:10	12/08/16 05:22	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 05:22	1
Methoxychlor	ND		0.10	0.0020	ug/L		12/06/16 11:10	12/08/16 05:22	1
Toxaphene	ND		1.0	0.22	ug/L		12/06/16 11:10	12/08/16 05:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*22 - 150*	*12/06/16 11:10*	*12/08/16 05:22*	*1*
Tetrachloro-m-xylene	*68*		*40 - 113*	*12/06/16 11:10*	*12/08/16 05:22*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 16:56	1
PCB-1221	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 16:56	1
PCB-1232	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 16:56	1
PCB-1242	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 16:56	1

Client Sample ID: MW-7D:120116
Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 16:56	1
PCB-1254	ND		0.095	0.059	ug/L		12/08/16 10:51	12/08/16 16:56	1
PCB-1260	ND		0.095	0.041	ug/L		12/08/16 10:51	12/08/16 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*20 - 120*	*12/08/16 10:51*	*12/08/16 16:56*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*36 - 138*	*12/08/16 10:51*	*12/08/16 16:56*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.31	ug/L		12/05/16 21:10	12/14/16 21:20	1
Azinphos-methyl	ND	*	2.6	0.17	ug/L		12/05/16 21:10	12/14/16 21:20	1
Bolstar	ND		1.0	0.33	ug/L		12/05/16 21:10	12/14/16 21:20	1
Chlorpyrifos	ND		1.6	0.37	ug/L		12/05/16 21:10	12/14/16 21:20	1
Coumaphos	ND	*	1.0	0.14	ug/L		12/05/16 21:10	12/14/16 21:20	1
Demeton, Total	ND		3.1	0.22	ug/L		12/05/16 21:10	12/14/16 21:20	1
Diazinon	ND		0.52	0.15	ug/L		12/05/16 21:10	12/14/16 21:20	1
Dichlorvos	ND	*	0.52	0.17	ug/L		12/05/16 21:10	12/14/16 21:20	1
Dimethoate	ND		1.6	0.47	ug/L		12/05/16 21:10	12/14/16 21:20	1
Disulfoton	ND		1.0	0.34	ug/L		12/05/16 21:10	12/14/16 21:20	1
EPN	ND		1.2	0.16	ug/L		12/05/16 21:10	12/14/16 21:20	1
Famphur	ND		1.0	0.19	ug/L		12/05/16 21:10	12/14/16 21:20	1
Fensulfothion	ND		2.6	0.57	ug/L		12/05/16 21:10	12/14/16 21:20	1
Fenthion	ND		2.6	0.16	ug/L		12/05/16 21:10	12/14/16 21:20	1
Malathion	ND		2.1	0.14	ug/L		12/05/16 21:10	12/14/16 21:20	1
Merphos	ND		5.2	0.18	ug/L		12/05/16 21:10	12/14/16 21:20	1
Methyl parathion	ND	*	4.2	0.15	ug/L		12/05/16 21:10	12/14/16 21:20	1
Mevinphos	ND		6.5	0.48	ug/L		12/05/16 21:10	12/14/16 21:20	1
Ethyl Parathion	ND		1.0	0.15	ug/L		12/05/16 21:10	12/14/16 21:20	1
Phorate	ND		1.2	0.16	ug/L		12/05/16 21:10	12/14/16 21:20	1
Ronnel	ND		10	0.12	ug/L		12/05/16 21:10	12/14/16 21:20	1
Simazine	ND		10	0.23	ug/L		12/05/16 21:10	12/14/16 21:20	1
Sulfotepp	ND		1.6	0.17	ug/L		12/05/16 21:10	12/14/16 21:20	1
Thionazin	ND		1.0	0.32	ug/L		12/05/16 21:10	12/14/16 21:20	1
Tokuthion	ND		1.7	0.13	ug/L		12/05/16 21:10	12/14/16 21:20	1
Trichloronate	ND		1.6	0.25	ug/L		12/05/16 21:10	12/14/16 21:20	1
Ethoprop	ND		1.6	0.18	ug/L		12/05/16 21:10	12/14/16 21:20	1
Propazine	ND		10	0.31	ug/L		12/05/16 21:10	12/14/16 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*79*		*49 - 171*	*12/05/16 21:10*	*12/14/16 21:20*	*1*
Triphenylphosphate	*89*		*60 - 154*	*12/05/16 21:10*	*12/14/16 21:20*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		12/05/16 15:38	12/09/16 10:21	1
2,4-D	ND		3.9	0.20	ug/L		12/05/16 15:38	12/09/16 10:21	1
2,4-DB	ND		3.9	0.35	ug/L		12/05/16 15:38	12/09/16 10:21	1
Dalapon	ND		1.9	0.88	ug/L		12/05/16 15:38	12/09/16 10:21	1
Dicamba	ND		1.9	0.15	ug/L		12/05/16 15:38	12/09/16 10:21	1

Client Sample ID: MW-7D:120116

Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1

Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.9	0.63	ug/L		12/05/16 15:38	12/09/16 10:21	1
MCPA	ND		390	17	ug/L		12/05/16 15:38	12/09/16 10:21	1
MCPP	ND		390	32	ug/L		12/05/16 15:38	12/09/16 10:21	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		12/05/16 15:38	12/09/16 10:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*12/05/16 15:38*	*12/09/16 10:21*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		12/05/16 10:22	12/05/16 17:21	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		12/05/16 10:22	12/05/16 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:21*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:21*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.2**		0.80	0.42	mg/L			12/02/16 14:08	1
Nitrate as N	**0.27**		0.20	0.039	mg/L			12/02/16 14:08	1
Nitrite as N	ND		0.20	0.069	mg/L			12/02/16 14:08	1
Sulfate	**4.7**		0.50	0.13	mg/L			12/02/16 14:08	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.29	pg/L		12/06/16 13:53	12/09/16 08:26	1
2,3,7,8-TCDF	**0.44**	**J**	10	0.20	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,7,8-PeCDD	ND		50	0.33	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,7,8-PeCDF	ND		50	0.30	pg/L		12/06/16 13:53	12/09/16 08:26	1
2,3,4,7,8-PeCDF	ND		50	0.32	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,4,7,8-HxCDD	ND		50	0.30	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,6,7,8-HxCDD	ND		50	0.28	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,7,8,9-HxCDD	ND		50	0.23	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,4,7,8-HxCDF	ND		50	0.25	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,6,7,8-HxCDF	ND		50	0.23	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,7,8,9-HxCDF	ND		50	0.24	pg/L		12/06/16 13:53	12/09/16 08:26	1
2,3,4,6,7,8-HxCDF	ND		50	0.25	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,4,6,7,8-HpCDD	**0.89**	**J B**	50	0.30	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,4,6,7,8-HpCDF	**0.70**	**J B**	50	0.23	pg/L		12/06/16 13:53	12/09/16 08:26	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.26	pg/L		12/06/16 13:53	12/09/16 08:26	1
OCDD	**4.5**	**J B**	100	0.36	pg/L		12/06/16 13:53	12/09/16 08:26	1
OCDF	**1.2**	**J q**	100	0.30	pg/L		12/06/16 13:53	12/09/16 08:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-2,3,7,8-TCDF	*71*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-1,2,3,7,8-PeCDD	*81*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-1,2,3,6,7,8-HxCDD	*88*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*

Client Sample ID: MW-7D:120116

Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*
13C-OCDD	*104*		*40 - 135*	*12/06/16 13:53*	*12/09/16 08:26*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00032**	**J**	0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 11:13	1
Antimony	ND		0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 11:13	1
Barium	**0.021**		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 11:13	1
Beryllium	ND		0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 11:13	1
Cadmium	ND		0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 11:13	1
Chromium	**0.0016**		0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 11:13	1
Copper	ND		0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 11:13	1
Iron	**0.040**		0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 11:13	1
Lead	**0.00020**	**J**	0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 11:13	1
Manganese	**0.0068**		0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 11:13	1
Nickel	ND		0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 11:13	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 11:13	1
Silver	ND		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 11:13	1
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 11:13	1
Vanadium	**0.011**		0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 11:13	1
Zinc	**0.012**		0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 11:13	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00031**	**J**	0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 15:14	1
Antimony	ND		0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 15:14	1
Barium	**0.021**		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 15:14	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 15:14	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 15:14	1
Chromium	**0.0017**		0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 15:14	1
Copper	ND		0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 15:14	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 15:14	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 15:14	1
Manganese	**0.00042**	**J**	0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 15:14	1
Nickel	ND		0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 15:14	1
Selenium	**0.00040**	**J**	0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 15:14	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 15:14	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 15:14	1
Vanadium	**0.011**		0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 15:14	1
Zinc	**0.0093**		0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 15:14	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:58	12/13/16 17:38	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:25	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7D:120116

Lab Sample ID: 590-5117-1
Date Collected: 12/01/16 09:10
Matrix: Water
Date Received: 12/01/16 14:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:48	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:11	1
Chemical Oxygen Demand	**4.3**	**J F1**	20	4.0	mg/L			12/12/16 18:34	1
Total Organic Carbon	ND		1.0	0.50	mg/L			12/12/16 19:03	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 14:50	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 14:50	1

Client Sample ID: MW-7B:120116

Lab Sample ID: 590-5117-2
Date Collected: 12/01/16 10:31
Matrix: Water
Date Received: 12/01/16 14:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 02:14	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 02:14	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 02:14	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 02:14	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 02:14	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 02:14	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 02:14	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 02:14	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 02:14	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 02:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 02:14	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 02:14	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 02:14	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 02:14	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 02:14	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 02:14	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 02:14	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 02:14	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 02:14	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 02:14	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 02:14	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 02:14	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 02:14	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 02:14	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 02:14	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 02:14	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 02:14	1
Acetone	ND		25	4.1	ug/L			12/03/16 02:14	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 02:14	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 02:14	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 02:14	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 02:14	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 02:14	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 02:14	1

Client Sample ID: MW-7B:120116
Date Collected: 12/01/16 10:31
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 02:14	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 02:14	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 02:14	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 02:14	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 02:14	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 02:14	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 02:14	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 02:14	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 02:14	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 02:14	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 02:14	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 02:14	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 02:14	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 02:14	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 02:14	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 02:14	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 02:14	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 02:14	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 02:14	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 02:14	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 02:14	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 02:14	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 02:14	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 02:14	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 02:14	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 02:14	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 02:14	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 02:14	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 02:14	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 02:14	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 02:14	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 02:14	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 02:14	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 02:14	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 02:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*12/03/16 02:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/03/16 02:14*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*12/03/16 02:14*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/03/16 02:14*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	21	J B	100	18	ug/L			12/03/16 02:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/03/16 02:14*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7B:120116
Date Collected: 12/01/16 10:31
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
3-Nitroaniline	ND		0.38	0.12	ug/L		12/05/16 16:00	12/08/16 01:50	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		12/05/16 16:00	12/08/16 01:50	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
4-Chloroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
4-Nitroaniline	ND		0.58	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/05/16 16:00	12/08/16 01:50	1
Acenaphthene	ND		0.096	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Acenaphthylene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Anthracene	ND		0.038	0.0096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzoic acid	ND		2.9	0.58	ug/L		12/05/16 16:00	12/08/16 01:50	1
Benzyl alcohol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Bis(2-ethylhexyl) phthalate	**1.9**	**J**	2.9	1.1	ug/L		12/05/16 16:00	12/08/16 01:50	1
Butyl benzyl phthalate	**0.33**	**J**	0.58	0.19	ug/L		12/05/16 16:00	12/08/16 01:50	1
Carbazole	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/08/16 01:50	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7B:120116
Date Collected: 12/01/16 10:31
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.18**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/08/16 01:50	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/08/16 01:50	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/08/16 01:50	1
Fluorene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Hexachloroethane	ND		0.58	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Isophorone	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Naphthalene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Phenanthrene	ND		0.077	0.019	ug/L		12/05/16 16:00	12/08/16 01:50	1
Phenol	ND		0.58	0.096	ug/L		12/05/16 16:00	12/08/16 01:50	1
Pyrene	ND		0.058	0.012	ug/L		12/05/16 16:00	12/08/16 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*86*		*57 - 132*	*12/05/16 16:00*	*12/08/16 01:50*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/08/16 01:50*	*1*
2-Fluorophenol	*78*		*50 - 113*	*12/05/16 16:00*	*12/08/16 01:50*	*1*
Nitrobenzene-d5	*80*		*59 - 120*	*12/05/16 16:00*	*12/08/16 01:50*	*1*
Phenol-d5	*80*		*52 - 120*	*12/05/16 16:00*	*12/08/16 01:50*	*1*
Terphenyl-d14	*84*		*72 - 140*	*12/05/16 16:00*	*12/08/16 01:50*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 18:36	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0059	ug/L		12/06/16 11:10	12/08/16 05:41	1
4,4'-DDE	ND		0.020	0.0029	ug/L		12/06/16 11:10	12/08/16 05:41	1
4,4'-DDT	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 05:41	1
Aldrin	ND		0.029	0.0069	ug/L		12/06/16 11:10	12/08/16 05:41	1
alpha-BHC	ND		0.029	0.0069	ug/L		12/06/16 11:10	12/08/16 05:41	1
alpha-Chlordane	ND		0.020	0.0029	ug/L		12/06/16 11:10	12/08/16 05:41	1
beta-BHC	ND		0.049	0.012	ug/L		12/06/16 11:10	12/08/16 05:41	1
delta-BHC	ND		0.049	0.0098	ug/L		12/06/16 11:10	12/08/16 05:41	1
Dieldrin	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 05:41	1
Endosulfan I	ND		0.020	0.0029	ug/L		12/06/16 11:10	12/08/16 05:41	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 05:41	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 05:41	1
Endrin	ND		0.020	0.0029	ug/L		12/06/16 11:10	12/08/16 05:41	1
Endrin aldehyde	ND		0.20	0.033	ug/L		12/06/16 11:10	12/08/16 05:41	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 05:41	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 05:41	1
gamma-Chlordane	ND		0.020	0.0029	ug/L		12/06/16 11:10	12/08/16 05:41	1

Client Sample ID: MW-7B:120116
Date Collected: 12/01/16 10:31
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.020	0.0039	ug/L		12/06/16 11:10	12/08/16 05:41	1
Heptachlor epoxide	ND		0.020	0.0029	ug/L		12/06/16 11:10	12/08/16 05:41	1
Methoxychlor	ND		0.098	0.0020	ug/L		12/06/16 11:10	12/08/16 05:41	1
Toxaphene	ND		0.98	0.22	ug/L		12/06/16 11:10	12/08/16 05:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*53*		*22 - 150*	*12/06/16 11:10*	*12/08/16 05:41*	*1*
Tetrachloro-m-xylene	*64*		*40 - 113*	*12/06/16 11:10*	*12/08/16 05:41*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.12	0.075	ug/L		12/08/16 10:51	12/08/16 17:16	1
PCB-1221	ND		0.12	0.075	ug/L		12/08/16 10:51	12/08/16 17:16	1
PCB-1232	ND		0.12	0.075	ug/L		12/08/16 10:51	12/08/16 17:16	1
PCB-1242	ND		0.12	0.075	ug/L		12/08/16 10:51	12/08/16 17:16	1
PCB-1248	ND		0.12	0.075	ug/L		12/08/16 10:51	12/08/16 17:16	1
PCB-1254	ND		0.12	0.075	ug/L		12/08/16 10:51	12/08/16 17:16	1
PCB-1260	ND		0.12	0.053	ug/L		12/08/16 10:51	12/08/16 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*20 - 120*	*12/08/16 10:51*	*12/08/16 17:16*	*1*
DCB Decachlorobiphenyl (Surr)	*80*		*36 - 138*	*12/08/16 10:51*	*12/08/16 17:16*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		12/05/16 21:10	12/14/16 21:51	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 21:10	12/14/16 21:51	1
Bolstar	ND		0.95	0.30	ug/L		12/05/16 21:10	12/14/16 21:51	1
Chlorpyrifos	ND		1.4	0.34	ug/L		12/05/16 21:10	12/14/16 21:51	1
Coumaphos	ND	*	0.95	0.13	ug/L		12/05/16 21:10	12/14/16 21:51	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 21:10	12/14/16 21:51	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 21:10	12/14/16 21:51	1
Dichlorvos	ND	*	0.48	0.15	ug/L		12/05/16 21:10	12/14/16 21:51	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 21:10	12/14/16 21:51	1
Disulfoton	ND		0.95	0.31	ug/L		12/05/16 21:10	12/14/16 21:51	1
EPN	ND		1.1	0.14	ug/L		12/05/16 21:10	12/14/16 21:51	1
Famphur	ND		0.95	0.17	ug/L		12/05/16 21:10	12/14/16 21:51	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 21:10	12/14/16 21:51	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 21:10	12/14/16 21:51	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 21:10	12/14/16 21:51	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 21:10	12/14/16 21:51	1
Methyl parathion	ND	*	3.8	0.13	ug/L		12/05/16 21:10	12/14/16 21:51	1
Mevinphos	ND		5.9	0.44	ug/L		12/05/16 21:10	12/14/16 21:51	1
Ethyl Parathion	ND		0.95	0.14	ug/L		12/05/16 21:10	12/14/16 21:51	1
Phorate	ND		1.1	0.15	ug/L		12/05/16 21:10	12/14/16 21:51	1
Ronnel	ND		9.5	0.11	ug/L		12/05/16 21:10	12/14/16 21:51	1
Simazine	ND		9.5	0.21	ug/L		12/05/16 21:10	12/14/16 21:51	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 21:10	12/14/16 21:51	1
Thionazin	ND		0.95	0.30	ug/L		12/05/16 21:10	12/14/16 21:51	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 21:10	12/14/16 21:51	1

Client Sample ID: MW-7B:120116
Date Collected: 12/01/16 10:31
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-2
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 21:10	12/14/16 21:51	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 21:10	12/14/16 21:51	1
Propazine	ND		9.5	0.28	ug/L		12/05/16 21:10	12/14/16 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*81*		*49 - 171*	*12/05/16 21:10*	*12/14/16 21:51*	*1*
Triphenylphosphate	*87*		*60 - 154*	*12/05/16 21:10*	*12/14/16 21:51*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/05/16 15:38	12/09/16 10:44	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 10:44	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 10:44	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 10:44	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 10:44	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 10:44	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 10:44	1
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 10:44	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/05/16 15:38	12/09/16 10:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*12/05/16 15:38*	*12/09/16 10:44*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.044	mg/L		12/05/16 10:22	12/05/16 17:38	1
Residual Range Organics (RRO) (C25-C36)	ND		0.22	0.066	mg/L		12/05/16 10:22	12/05/16 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:38*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:38*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.2**		0.80	0.42	mg/L			12/02/16 11:54	1
Nitrate as N	**0.36**		0.20	0.039	mg/L			12/02/16 11:54	1
Nitrite as N	ND		0.20	0.069	mg/L			12/02/16 11:54	1
Sulfate	**3.8**		0.50	0.13	mg/L			12/02/16 11:54	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.26	pg/L		12/06/16 13:53	12/09/16 09:12	1
2,3,7,8-TCDF	ND		9.6	0.14	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,7,8-PeCDD	ND		48	0.48	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,7,8-PeCDF	ND		48	0.30	pg/L		12/06/16 13:53	12/09/16 09:12	1
2,3,4,7,8-PeCDF	ND		48	0.32	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,4,7,8-HxCDD	ND		48	0.24	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,6,7,8-HxCDD	**0.47**	**J q**	48	0.22	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,7,8,9-HxCDD	**0.49**	**J**	48	0.19	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,4,7,8-HxCDF	ND		48	0.25	pg/L		12/06/16 13:53	12/09/16 09:12	1

Client Sample ID: MW-7B:120116

Date Collected: 12/01/16 10:31
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Lab Sample ID: 590-5117-2

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	**0.40**	**J q**	48	0.23	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,7,8,9-HxCDF	**0.69**	**J B**	48	0.24	pg/L		12/06/16 13:53	12/09/16 09:12	1
2,3,4,6,7,8-HxCDF	**0.46**	**J B q**	48	0.25	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,4,6,7,8-HpCDD	ND		48	0.30	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,4,6,7,8-HpCDF	**0.73**	**J B**	48	0.26	pg/L		12/06/16 13:53	12/09/16 09:12	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.29	pg/L		12/06/16 13:53	12/09/16 09:12	1
OCDD	**3.0**	**J B**	96	0.35	pg/L		12/06/16 13:53	12/09/16 09:12	1
OCDF	**1.7**	**J**	96	0.31	pg/L		12/06/16 13:53	12/09/16 09:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*78*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*98*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*104*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*99*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*
13C-OCDD	*114*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:12*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00080**	**J**	0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 11:18	1
Antimony	**0.00095**		0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 11:18	1
Barium	**0.072**		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 11:18	1
Beryllium	**0.00023**	**J**	0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 11:18	1
Cadmium	**0.00013**	**J**	0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 11:18	1
Chromium	**0.0040**		0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 11:18	1
Copper	**0.024**		0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 11:18	1
Iron	**3.5**		0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 11:18	1
Lead	**0.012**		0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 11:18	1
Manganese	**0.031**		0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 11:18	1
Nickel	**0.0052**		0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 11:18	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 11:18	1
Silver	**0.00075**		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 11:18	1
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 11:18	1
Vanadium	**0.0042**		0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 11:18	1
Zinc	**0.23**		0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 11:18	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00041**	**J**	0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 14:25	1
Antimony	**0.00062**		0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 14:25	1
Barium	**0.051**		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 14:25	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 14:25	1
Cadmium	**0.000037**	**J**	0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 14:25	1
Chromium	**0.0013**		0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 14:25	1
Copper	**0.0014**	**J**	0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 14:25	1
Iron	**0.012**	**J**	0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 14:25	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 14:25	1
Manganese	**0.0010**	**J**	0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 14:25	1

Client Sample ID: MW-7B:120116

Lab Sample ID: 590-5117-2

Date Collected: 12/01/16 10:31

Matrix: Water

Date Received: 12/01/16 14:00

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0018**	**J**	0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 14:25	1
Selenium	**0.00052**	**J**	0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 14:25	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 14:25	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 14:25	1
Vanadium	**0.0025**	**J**	0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 14:25	1
Zinc	**0.043**		0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 14:25	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:45	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:49	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:13	1
Chemical Oxygen Demand	**4.2**	**J**	20	4.0	mg/L			12/12/16 18:34	1
Total Organic Carbon	ND		1.0	0.50	mg/L			12/12/16 19:21	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**4.1**				MPN/100mL			12/01/16 14:50	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 14:50	1

Client Sample ID: MW-15A:120116

Lab Sample ID: 590-5117-3

Date Collected: 12/01/16 12:20

Matrix: Water

Date Received: 12/01/16 14:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 02:36	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 02:36	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 02:36	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 02:36	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 02:36	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 02:36	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 02:36	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 02:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 02:36	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 02:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 02:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 02:36	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 02:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 02:36	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 02:36	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 02:36	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 02:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 02:36	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-15A:120116
Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 02:36	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 02:36	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 02:36	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 02:36	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 02:36	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 02:36	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 02:36	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 02:36	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 02:36	1
Acetone	ND		25	4.1	ug/L			12/03/16 02:36	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 02:36	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 02:36	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 02:36	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 02:36	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 02:36	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 02:36	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 02:36	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 02:36	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 02:36	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 02:36	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 02:36	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 02:36	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 02:36	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 02:36	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 02:36	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 02:36	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 02:36	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 02:36	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 02:36	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 02:36	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 02:36	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 02:36	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 02:36	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 02:36	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 02:36	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 02:36	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 02:36	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 02:36	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 02:36	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 02:36	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 02:36	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 02:36	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 02:36	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 02:36	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 02:36	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 02:36	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 02:36	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 02:36	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 02:36	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-15A:120116
Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 02:36	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 02:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 125*		*12/03/16 02:36*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*12/03/16 02:36*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 120*		*12/03/16 02:36*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/03/16 02:36*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	23	J B	100	18	ug/L			12/03/16 02:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/03/16 02:36*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
1,2-Dichlorobenzene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
1,3-Dichlorobenzene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
1,4-Dichlorobenzene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
1-Methylnaphthalene	ND		0.059	0.030	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,4,5-Trichlorophenol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,4,6-Trichlorophenol	ND		0.59	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,4-Dichlorophenol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,4-Dinitrophenol	ND		5.0	0.99	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,4-Dinitrotoluene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2,6-Dinitrotoluene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2-Chloronaphthalene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
2-Chlorophenol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
2-Methylphenol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2-Nitroaniline	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
2-Nitrophenol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
3 & 4 Methylphenol	ND		0.79	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
3,3'-Dichlorobenzidine	ND		2.0	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/05/16 16:00	12/08/16 02:15	1
4,6-Dinitro-2-methylphenol	ND		4.0	0.99	ug/L		12/05/16 16:00	12/08/16 02:15	1
4-Bromophenyl phenyl ether	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
4-Chloro-3-methylphenol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
4-Chloroaniline	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
4-Chlorophenyl phenyl ether	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
4-Nitroaniline	ND		0.59	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
4-Nitrophenol	ND		3.0	0.99	ug/L		12/05/16 16:00	12/08/16 02:15	1
Acenaphthene	ND		0.099	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Acenaphthylene	ND		0.079	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Anthracene	ND		0.040	0.0099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Benzo[a]anthracene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1

Client Sample ID: MW-15A:120116
Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Benzo[b]fluoranthene	ND		0.079	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Benzo[g,h,i]perylene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Benzo[k]fluoranthene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Benzoic acid	ND		3.0	0.59	ug/L		12/05/16 16:00	12/08/16 02:15	1
Benzyl alcohol	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
bis (2-chloroisopropyl) ether	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Bis(2-chloroethoxy)methane	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Bis(2-chloroethyl)ether	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Bis(2-ethylhexyl) phthalate	**7.3**		3.0	1.2	ug/L		12/05/16 16:00	12/08/16 02:15	1
Butyl benzyl phthalate	**0.35**	**J**	0.59	0.20	ug/L		12/05/16 16:00	12/08/16 02:15	1
Carbazole	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Chrysene	ND		0.040	0.013	ug/L		12/05/16 16:00	12/08/16 02:15	1
Dibenz(a,h)anthracene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Dibenzofuran	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Diethyl phthalate	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Dimethyl phthalate	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Di-n-butyl phthalate	**0.20**	**J**	0.40	0.13	ug/L		12/05/16 16:00	12/08/16 02:15	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/05/16 16:00	12/08/16 02:15	1
Fluoranthene	ND		0.050	0.013	ug/L		12/05/16 16:00	12/08/16 02:15	1
Fluorene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Hexachlorobenzene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Hexachlorobutadiene	ND		0.59	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Hexachlorocyclopentadiene	ND		2.0	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Hexachloroethane	ND		0.59	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Indeno[1,2,3-cd]pyrene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Isophorone	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Naphthalene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Nitrobenzene	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
N-Nitrosodi-n-propylamine	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
N-Nitrosodiphenylamine	ND		0.40	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Pentachlorophenol	ND		0.69	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Phenanthrene	ND		0.079	0.020	ug/L		12/05/16 16:00	12/08/16 02:15	1
Phenol	ND		0.59	0.099	ug/L		12/05/16 16:00	12/08/16 02:15	1
Pyrene	ND		0.059	0.013	ug/L		12/05/16 16:00	12/08/16 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*95*		*57 - 132*	*12/05/16 16:00*	*12/08/16 02:15*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/05/16 16:00*	*12/08/16 02:15*	*1*
2-Fluorophenol	*81*		*50 - 113*	*12/05/16 16:00*	*12/08/16 02:15*	*1*
Nitrobenzene-d5	*81*		*59 - 120*	*12/05/16 16:00*	*12/08/16 02:15*	*1*
Phenol-d5	*83*		*52 - 120*	*12/05/16 16:00*	*12/08/16 02:15*	*1*
Terphenyl-d14	*87*		*72 - 140*	*12/05/16 16:00*	*12/08/16 02:15*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 18:59	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-15A:120116
Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0057	ug/L		12/06/16 11:10	12/08/16 06:01	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:01	1
4,4'-DDT	ND		0.029	0.0048	ug/L		12/06/16 11:10	12/08/16 06:01	1
Aldrin	ND		0.029	0.0067	ug/L		12/06/16 11:10	12/08/16 06:01	1
alpha-BHC	ND		0.029	0.0067	ug/L		12/06/16 11:10	12/08/16 06:01	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:01	1
beta-BHC	ND		0.048	0.011	ug/L		12/06/16 11:10	12/08/16 06:01	1
delta-BHC	ND		0.048	0.0096	ug/L		12/06/16 11:10	12/08/16 06:01	1
Dieldrin	ND		0.029	0.0048	ug/L		12/06/16 11:10	12/08/16 06:01	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:01	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:01	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:01	1
Endrin	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:01	1
Endrin aldehyde	ND		0.19	0.033	ug/L		12/06/16 11:10	12/08/16 06:01	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:01	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		12/06/16 11:10	12/08/16 06:01	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:01	1
Heptachlor	ND		0.019	0.0038	ug/L		12/06/16 11:10	12/08/16 06:01	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:01	1
Methoxychlor	ND		0.096	0.0019	ug/L		12/06/16 11:10	12/08/16 06:01	1
Toxaphene	ND		0.96	0.21	ug/L		12/06/16 11:10	12/08/16 06:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*22 - 150*	*12/06/16 11:10*	*12/08/16 06:01*	*1*
Tetrachloro-m-xylene	*70*		*40 - 113*	*12/06/16 11:10*	*12/08/16 06:01*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.099	0.062	ug/L		12/08/16 10:51	12/08/16 17:37	1
PCB-1221	ND		0.099	0.062	ug/L		12/08/16 10:51	12/08/16 17:37	1
PCB-1232	ND		0.099	0.062	ug/L		12/08/16 10:51	12/08/16 17:37	1
PCB-1242	ND		0.099	0.062	ug/L		12/08/16 10:51	12/08/16 17:37	1
PCB-1248	ND		0.099	0.062	ug/L		12/08/16 10:51	12/08/16 17:37	1
PCB-1254	ND		0.099	0.062	ug/L		12/08/16 10:51	12/08/16 17:37	1
PCB-1260	ND		0.099	0.043	ug/L		12/08/16 10:51	12/08/16 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*46*		*20 - 120*	*12/08/16 10:51*	*12/08/16 17:37*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*36 - 138*	*12/08/16 10:51*	*12/08/16 17:37*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		12/05/16 21:10	12/14/16 23:25	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 21:10	12/14/16 23:25	1
Bolstar	ND		0.96	0.30	ug/L		12/05/16 21:10	12/14/16 23:25	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 21:10	12/14/16 23:25	1
Coumaphos	ND	*	0.96	0.13	ug/L		12/05/16 21:10	12/14/16 23:25	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 21:10	12/14/16 23:25	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 21:10	12/14/16 23:25	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 21:10	12/14/16 23:25	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-15A:120116
Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 21:10	12/14/16 23:25	1
Disulfoton	ND		0.96	0.31	ug/L		12/05/16 21:10	12/14/16 23:25	1
EPN	ND		1.2	0.14	ug/L		12/05/16 21:10	12/14/16 23:25	1
Famphur	ND		0.96	0.17	ug/L		12/05/16 21:10	12/14/16 23:25	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 21:10	12/14/16 23:25	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 21:10	12/14/16 23:25	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 21:10	12/14/16 23:25	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 21:10	12/14/16 23:25	1
Methyl parathion	ND	*	3.8	0.14	ug/L		12/05/16 21:10	12/14/16 23:25	1
Mevinphos	ND		5.9	0.44	ug/L		12/05/16 21:10	12/14/16 23:25	1
Ethyl Parathion	ND		0.96	0.14	ug/L		12/05/16 21:10	12/14/16 23:25	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 21:10	12/14/16 23:25	1
Ronnel	ND		9.6	0.11	ug/L		12/05/16 21:10	12/14/16 23:25	1
Simazine	ND		9.6	0.21	ug/L		12/05/16 21:10	12/14/16 23:25	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 21:10	12/14/16 23:25	1
Thionazin	ND		0.96	0.30	ug/L		12/05/16 21:10	12/14/16 23:25	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 21:10	12/14/16 23:25	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 21:10	12/14/16 23:25	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 21:10	12/14/16 23:25	1
Propazine	ND		9.6	0.28	ug/L		12/05/16 21:10	12/14/16 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*81*		*49 - 171*	*12/05/16 21:10*	*12/14/16 23:25*	*1*
Triphenylphosphate	*89*		*60 - 154*	*12/05/16 21:10*	*12/14/16 23:25*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/05/16 15:38	12/09/16 11:07	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 11:07	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 11:07	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 11:07	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 11:07	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 11:07	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 11:07	1
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 11:07	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/05/16 15:38	12/09/16 11:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*88*		*39 - 135*	*12/05/16 15:38*	*12/09/16 11:07*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		12/05/16 10:22	12/05/16 17:55	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.064	mg/L		12/05/16 10:22	12/05/16 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:55*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*12/05/16 10:22*	*12/05/16 17:55*	*1*

Client Sample ID: MW-15A:120116
Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40**		0.80	0.42	mg/L			12/02/16 12:05	1
Nitrate as N	**0.37**		0.20	0.039	mg/L			12/02/16 12:05	1
Nitrite as N	ND		0.20	0.069	mg/L			12/02/16 12:05	1
Sulfate	**17**		0.50	0.13	mg/L			12/02/16 12:05	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.28	pg/L		12/06/16 13:53	12/09/16 09:58	1
2,3,7,8-TCDF	ND		9.5	0.16	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,7,8-PeCDD	ND		48	0.43	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,7,8-PeCDF	ND		48	0.32	pg/L		12/06/16 13:53	12/09/16 09:58	1
2,3,4,7,8-PeCDF	ND		48	0.35	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,4,7,8-HxCDD	ND		48	0.30	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,6,7,8-HxCDD	ND		48	0.28	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,7,8,9-HxCDD	ND		48	0.23	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,4,7,8-HxCDF	ND		48	0.33	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,6,7,8-HxCDF	ND		48	0.30	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,7,8,9-HxCDF	ND		48	0.31	pg/L		12/06/16 13:53	12/09/16 09:58	1
2,3,4,6,7,8-HxCDF	ND		48	0.33	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,4,6,7,8-HpCDD	ND		48	0.28	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.26	pg/L		12/06/16 13:53	12/09/16 09:58	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.29	pg/L		12/06/16 13:53	12/09/16 09:58	1
OCDD	**2.6**	**J B**	95	0.41	pg/L		12/06/16 13:53	12/09/16 09:58	1
OCDF	**1.1**	**J q**	95	0.34	pg/L		12/06/16 13:53	12/09/16 09:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-2,3,7,8-TCDF	*71*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-1,2,3,6,7,8-HxCDD	*96*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*101*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*97*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*
13C-OCDD	*110*		*40 - 135*	*12/06/16 13:53*	*12/09/16 09:58*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0031**		0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 11:22	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 11:22	1
Barium	**0.036**		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 11:22	1
Beryllium	ND		0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 11:22	1
Cadmium	ND		0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 11:22	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 11:22	1
Copper	**0.0056**		0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 11:22	1
Iron	**0.024**	**J**	0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 11:22	1
Lead	**0.00030**	**J**	0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 11:22	1
Manganese	**0.00078**	**J**	0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 11:22	1
Nickel	**0.0011**	**J**	0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 11:22	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 11:22	1
Silver	ND		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 11:22	1

Client Sample ID: MW-15A:120116

Lab Sample ID: 590-5117-3
Date Collected: 12/01/16 12:20
Matrix: Water
Date Received: 12/01/16 14:00

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 11:22	1
Vanadium	**0.0052**		0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 11:22	1
Zinc	**0.0067**	**J**	0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 11:22	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0030**		0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 15:19	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 15:19	1
Barium	**0.037**		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 15:19	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 15:19	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 15:19	1
Chromium	**0.00030**	**J**	0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 15:19	1
Copper	**0.0046**		0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 15:19	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 15:19	1
Lead	**0.000080**	**J**	0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 15:19	1
Manganese	ND		0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 15:19	1
Nickel	**0.00094**	**J**	0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 15:19	1
Selenium	**0.00033**	**J**	0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 15:19	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 15:19	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 15:19	1
Vanadium	**0.0053**		0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 15:19	1
Zinc	**0.0029**	**J**	0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 15:19	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:47	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:50	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:14	1
Chemical Oxygen Demand	**7.0**	**J**	20	4.0	mg/L			12/12/16 18:34	1
Total Organic Carbon	**4.3**		1.0	0.50	mg/L			12/12/16 19:37	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 14:50	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 14:50	1

Client Sample ID: MW-2A:120116

Lab Sample ID: 590-5117-4
Date Collected: 12/01/16 09:05
Matrix: Water
Date Received: 12/01/16 14:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 02:57	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 02:57	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 02:57	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 02:57	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 02:57	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 02:57	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 02:57	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 02:57	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 02:57	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 02:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 02:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 02:57	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 02:57	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 02:57	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 02:57	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 02:57	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 02:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 02:57	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 02:57	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 02:57	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 02:57	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 02:57	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 02:57	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 02:57	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 02:57	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 02:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 02:57	1
Acetone	ND		25	4.1	ug/L			12/03/16 02:57	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 02:57	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 02:57	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 02:57	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 02:57	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 02:57	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 02:57	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 02:57	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 02:57	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 02:57	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 02:57	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 02:57	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 02:57	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 02:57	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 02:57	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 02:57	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 02:57	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 02:57	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 02:57	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 02:57	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 02:57	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 02:57	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 02:57	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 02:57	1

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 02:57	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 02:57	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 02:57	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 02:57	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 02:57	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 02:57	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 02:57	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 02:57	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 02:57	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 02:57	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 02:57	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 02:57	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 02:57	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 02:57	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 02:57	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 02:57	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 02:57	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 02:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*70 - 125*		*12/03/16 02:57*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*12/03/16 02:57*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*12/03/16 02:57*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/03/16 02:57*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	24	J B	100	18	ug/L			12/03/16 02:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/03/16 02:57*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/08/16 02:39	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/08/16 02:39	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/08/16 02:39	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzoic acid	**0.73**	**J**	2.9	0.57	ug/L		12/05/16 16:00	12/08/16 02:39	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/08/16 02:39	1
Butyl benzyl phthalate	**0.22**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/08/16 02:39	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/08/16 02:39	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Di-n-butyl phthalate	**0.15**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/08/16 02:39	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/08/16 02:39	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/08/16 02:39	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 02:39	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 02:39	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/08/16 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*99*		*57 - 132*	*12/05/16 16:00*	*12/08/16 02:39*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*12/05/16 16:00*	*12/08/16 02:39*	*1*
2-Fluorophenol	*85*		*50 - 113*	*12/05/16 16:00*	*12/08/16 02:39*	*1*
Nitrobenzene-d5	*90*		*59 - 120*	*12/05/16 16:00*	*12/08/16 02:39*	*1*
Phenol-d5	*87*		*52 - 120*	*12/05/16 16:00*	*12/08/16 02:39*	*1*
Terphenyl-d14	*90*		*72 - 140*	*12/05/16 16:00*	*12/08/16 02:39*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 19:21	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0057	ug/L		12/06/16 11:10	12/08/16 06:20	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:20	1
4,4'-DDT	ND		0.029	0.0048	ug/L		12/06/16 11:10	12/08/16 06:20	1
Aldrin	ND		0.029	0.0067	ug/L		12/06/16 11:10	12/08/16 06:20	1
alpha-BHC	ND		0.029	0.0067	ug/L		12/06/16 11:10	12/08/16 06:20	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:20	1
beta-BHC	ND		0.048	0.011	ug/L		12/06/16 11:10	12/08/16 06:20	1
delta-BHC	ND		0.048	0.0095	ug/L		12/06/16 11:10	12/08/16 06:20	1
Dieldrin	ND		0.029	0.0048	ug/L		12/06/16 11:10	12/08/16 06:20	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:20	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:20	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:20	1
Endrin	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:20	1
Endrin aldehyde	ND		0.19	0.032	ug/L		12/06/16 11:10	12/08/16 06:20	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:20	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		12/06/16 11:10	12/08/16 06:20	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:20	1
Heptachlor	ND		0.019	0.0038	ug/L		12/06/16 11:10	12/08/16 06:20	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:20	1
Methoxychlor	ND		0.095	0.0019	ug/L		12/06/16 11:10	12/08/16 06:20	1
Toxaphene	ND		0.95	0.21	ug/L		12/06/16 11:10	12/08/16 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*12/06/16 11:10*	*12/08/16 06:20*	*1*
Tetrachloro-m-xylene	*68*		*40 - 113*	*12/06/16 11:10*	*12/08/16 06:20*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.091	0.056	ug/L		12/08/16 10:51	12/08/16 17:57	1
PCB-1221	ND		0.091	0.056	ug/L		12/08/16 10:51	12/08/16 17:57	1
PCB-1232	ND		0.091	0.056	ug/L		12/08/16 10:51	12/08/16 17:57	1
PCB-1242	ND		0.091	0.056	ug/L		12/08/16 10:51	12/08/16 17:57	1
PCB-1248	ND		0.091	0.056	ug/L		12/08/16 10:51	12/08/16 17:57	1
PCB-1254	ND		0.091	0.056	ug/L		12/08/16 10:51	12/08/16 17:57	1

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.091	0.039	ug/L		12/08/16 10:51	12/08/16 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*47*		*20 - 120*	*12/08/16 10:51*	*12/08/16 17:57*	*1*
DCB Decachlorobiphenyl (Surr)	*71*		*36 - 138*	*12/08/16 10:51*	*12/08/16 17:57*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		12/05/16 21:10	12/14/16 23:57	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 21:10	12/14/16 23:57	1
Bolstar	ND		0.95	0.30	ug/L		12/05/16 21:10	12/14/16 23:57	1
Chlorpyrifos	ND		1.4	0.34	ug/L		12/05/16 21:10	12/14/16 23:57	1
Coumaphos	ND	*	0.95	0.13	ug/L		12/05/16 21:10	12/14/16 23:57	1
Demeton, Total	ND		2.8	0.20	ug/L		12/05/16 21:10	12/14/16 23:57	1
Diazinon	ND		0.47	0.14	ug/L		12/05/16 21:10	12/14/16 23:57	1
Dichlorvos	ND	*	0.47	0.15	ug/L		12/05/16 21:10	12/14/16 23:57	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 21:10	12/14/16 23:57	1
Disulfoton	ND		0.95	0.31	ug/L		12/05/16 21:10	12/14/16 23:57	1
EPN	ND		1.1	0.14	ug/L		12/05/16 21:10	12/14/16 23:57	1
Famphur	ND		0.95	0.17	ug/L		12/05/16 21:10	12/14/16 23:57	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 21:10	12/14/16 23:57	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 21:10	12/14/16 23:57	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 21:10	12/14/16 23:57	1
Merphos	ND		4.7	0.17	ug/L		12/05/16 21:10	12/14/16 23:57	1
Methyl parathion	ND	*	3.8	0.13	ug/L		12/05/16 21:10	12/14/16 23:57	1
Mevinphos	ND		5.9	0.44	ug/L		12/05/16 21:10	12/14/16 23:57	1
Ethyl Parathion	ND		0.95	0.14	ug/L		12/05/16 21:10	12/14/16 23:57	1
Phorate	ND		1.1	0.15	ug/L		12/05/16 21:10	12/14/16 23:57	1
Ronnel	ND		9.5	0.11	ug/L		12/05/16 21:10	12/14/16 23:57	1
Simazine	ND		9.5	0.21	ug/L		12/05/16 21:10	12/14/16 23:57	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 21:10	12/14/16 23:57	1
Thionazin	ND		0.95	0.30	ug/L		12/05/16 21:10	12/14/16 23:57	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 21:10	12/14/16 23:57	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 21:10	12/14/16 23:57	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 21:10	12/14/16 23:57	1
Propazine	ND		9.5	0.28	ug/L		12/05/16 21:10	12/14/16 23:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*72*		*49 - 171*	*12/05/16 21:10*	*12/14/16 23:57*	*1*
Triphenylphosphate	*74*		*60 - 154*	*12/05/16 21:10*	*12/14/16 23:57*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/05/16 15:38	12/09/16 11:30	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 11:30	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 11:30	1
Dalapon	ND		1.9	0.86	ug/L		12/05/16 15:38	12/09/16 11:30	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 11:30	1
Dichlorprop	ND		3.8	0.61	ug/L		12/05/16 15:38	12/09/16 11:30	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 11:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		380	31	ug/L		12/05/16 15:38	12/09/16 11:30	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/05/16 15:38	12/09/16 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*12/05/16 15:38*	*12/09/16 11:30*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 18:12	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*12/05/16 10:22*	*12/05/16 18:12*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*12/05/16 10:22*	*12/05/16 18:12*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			12/02/16 12:17	1
Nitrate as N	**0.38**		0.20	0.039	mg/L			12/02/16 12:17	1
Nitrite as N	**24**		0.20	0.069	mg/L			12/02/16 12:17	1
Sulfate	**16**		0.50	0.13	mg/L			12/02/16 12:17	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.27	pg/L		12/07/16 16:59	12/09/16 16:37	1
2,3,7,8-TCDF	ND		9.5	0.15	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,7,8-PeCDD	ND		47	0.34	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,7,8-PeCDF	ND		47	0.34	pg/L		12/07/16 16:59	12/09/16 16:37	1
2,3,4,7,8-PeCDF	ND		47	0.37	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,4,7,8-HxCDD	ND		47	0.31	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,6,7,8-HxCDD	ND		47	0.28	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,7,8,9-HxCDD	ND		47	0.23	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,4,7,8-HxCDF	ND		47	0.29	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,6,7,8-HxCDF	ND		47	0.26	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,7,8,9-HxCDF	**0.30**	**J q**	47	0.27	pg/L		12/07/16 16:59	12/09/16 16:37	1
2,3,4,6,7,8-HxCDF	ND		47	0.28	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,4,6,7,8-HpCDD	**1.2**	**J B**	47	0.26	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,4,6,7,8-HpCDF	ND		47	0.23	pg/L		12/07/16 16:59	12/09/16 16:37	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.26	pg/L		12/07/16 16:59	12/09/16 16:37	1
OCDD	**3.3**	**J q B**	95	0.40	pg/L		12/07/16 16:59	12/09/16 16:37	1
OCDF	**1.8**	**J B**	95	0.35	pg/L		12/07/16 16:59	12/09/16 16:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-2,3,7,8-TCDF	*70*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-1,2,3,7,8-PeCDD	*84*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-1,2,3,4,7,8-HxCDF	*80*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*
13C-OCDD	*105*		*40 - 135*	*12/07/16 16:59*	*12/09/16 16:37*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 11:27	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 11:27	1
Barium	**0.043**		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 11:27	1
Beryllium	ND		0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 11:27	1
Cadmium	ND		0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 11:27	1
Chromium	ND		0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 11:27	1
Copper	**0.0046**		0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 11:27	1
Iron	**0.0071**	**J**	0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 11:27	1
Lead	ND		0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 11:27	1
Manganese	**0.00096**	**J**	0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 11:27	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 11:27	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 11:27	1
Silver	ND		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 11:27	1
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 11:27	1
Vanadium	**0.0080**		0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 11:27	1
Zinc	ND		0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 11:27	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 15:23	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 15:23	1
Barium	**0.043**		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 15:23	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 15:23	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 15:23	1
Chromium	**0.00015**	**J**	0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 15:23	1
Copper	**0.0038**		0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 15:23	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 15:23	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 15:23	1
Manganese	**0.00081**	**J**	0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 15:23	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 15:23	1
Selenium	**0.00050**	**J**	0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 15:23	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 15:23	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 15:23	1
Vanadium	**0.0080**		0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 15:23	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 15:23	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:49	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:39	1

Client Sample ID: MW-2A:120116

Lab Sample ID: 590-5117-4

Date Collected: 12/01/16 09:05

Matrix: Water

Date Received: 12/01/16 14:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:51	1
Ammonia (as N)	**0.19**		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:15	1
Chemical Oxygen Demand	**8.2**	**J**	20	4.0	mg/L			12/12/16 18:34	1
Total Organic Carbon	**3.4**		1.0	0.50	mg/L			12/12/16 20:32	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 14:50	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 14:50	1

Client Sample ID: MW-3:120116

Lab Sample ID: 590-5117-5

Date Collected: 12/01/16 10:11

Matrix: Water

Date Received: 12/01/16 14:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 03:19	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 03:19	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 03:19	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 03:19	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 03:19	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 03:19	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 03:19	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 03:19	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 03:19	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 03:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 03:19	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 03:19	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 03:19	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 03:19	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 03:19	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 03:19	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 03:19	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 03:19	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 03:19	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 03:19	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 03:19	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 03:19	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 03:19	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 03:19	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 03:19	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 03:19	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 03:19	1
Acetone	ND		25	4.1	ug/L			12/03/16 03:19	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 03:19	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 03:19	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 03:19	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 03:19	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 03:19	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 03:19	1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 03:19	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 03:19	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 03:19	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 03:19	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 03:19	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 03:19	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 03:19	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 03:19	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 03:19	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 03:19	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 03:19	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 03:19	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 03:19	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 03:19	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 03:19	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 03:19	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 03:19	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 03:19	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 03:19	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 03:19	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 03:19	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 03:19	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 03:19	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 03:19	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 03:19	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 03:19	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 03:19	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/03/16 03:19	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 03:19	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 03:19	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 03:19	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 03:19	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 03:19	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 03:19	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 03:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 125*		*12/03/16 03:19*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*12/03/16 03:19*	*1*
Dibromofluoromethane (Surr)	*116*		*80 - 120*		*12/03/16 03:19*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/03/16 03:19*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	22	J B	100	18	ug/L			12/03/16 03:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/03/16 03:19*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,4,6-Trichlorophenol	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
2-Chlorophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
2-Methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2-Nitroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
2-Nitrophenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
3 & 4 Methylphenol	ND		0.76	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/08/16 03:03	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.96	ug/L		12/05/16 16:00	12/08/16 03:03	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
4-Chloroaniline	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
4-Nitroaniline	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
4-Nitrophenol	ND		2.9	0.96	ug/L		12/05/16 16:00	12/08/16 03:03	1
Acenaphthene	ND		0.096	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Anthracene	ND		0.038	0.0096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzoic acid	ND		2.9	0.57	ug/L		12/05/16 16:00	12/08/16 03:03	1
Benzyl alcohol	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.1	ug/L		12/05/16 16:00	12/08/16 03:03	1
Butyl benzyl phthalate	**0.22**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/08/16 03:03	1
Carbazole	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/08/16 03:03	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Dibenzofuran	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Diethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.16**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/08/16 03:03	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/08/16 03:03	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/08/16 03:03	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Hexachlorobutadiene	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Hexachloroethane	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Isophorone	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Naphthalene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Nitrobenzene	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Pentachlorophenol	ND		0.67	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 03:03	1
Phenol	ND		0.57	0.096	ug/L		12/05/16 16:00	12/08/16 03:03	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/08/16 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*86*		*57 - 132*	*12/05/16 16:00*	*12/08/16 03:03*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/05/16 16:00*	*12/08/16 03:03*	*1*
2-Fluorophenol	*79*		*50 - 113*	*12/05/16 16:00*	*12/08/16 03:03*	*1*
Nitrobenzene-d5	*80*		*59 - 120*	*12/05/16 16:00*	*12/08/16 03:03*	*1*
Phenol-d5	*80*		*52 - 120*	*12/05/16 16:00*	*12/08/16 03:03*	*1*
Terphenyl-d14	*84*		*72 - 140*	*12/05/16 16:00*	*12/08/16 03:03*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 19:44	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		12/06/16 11:10	12/08/16 06:39	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:39	1
4,4'-DDT	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 06:39	1
Aldrin	ND		0.029	0.0068	ug/L		12/06/16 11:10	12/08/16 06:39	1
alpha-BHC	ND		0.029	0.0068	ug/L		12/06/16 11:10	12/08/16 06:39	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:39	1
beta-BHC	ND		0.049	0.012	ug/L		12/06/16 11:10	12/08/16 06:39	1
delta-BHC	ND		0.049	0.0097	ug/L		12/06/16 11:10	12/08/16 06:39	1
Dieldrin	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 06:39	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:39	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:39	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:39	1
Endrin	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:39	1
Endrin aldehyde	ND		0.19	0.033	ug/L		12/06/16 11:10	12/08/16 06:39	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:39	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 06:39	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:39	1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
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Lab Sample ID: 590-5117-5
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0039	ug/L		12/06/16 11:10	12/08/16 06:39	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:39	1
Methoxychlor	ND		0.097	0.0019	ug/L		12/06/16 11:10	12/08/16 06:39	1
Toxaphene	ND		0.97	0.21	ug/L		12/06/16 11:10	12/08/16 06:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*		*22 - 150*	*12/06/16 11:10*	*12/08/16 06:39*	*1*
Tetrachloro-m-xylene	*65*		*40 - 113*	*12/06/16 11:10*	*12/08/16 06:39*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.098	0.061	ug/L		12/08/16 10:51	12/08/16 18:18	1
PCB-1221	ND		0.098	0.061	ug/L		12/08/16 10:51	12/08/16 18:18	1
PCB-1232	ND		0.098	0.061	ug/L		12/08/16 10:51	12/08/16 18:18	1
PCB-1242	ND		0.098	0.061	ug/L		12/08/16 10:51	12/08/16 18:18	1
PCB-1248	ND		0.098	0.061	ug/L		12/08/16 10:51	12/08/16 18:18	1
PCB-1254	ND		0.098	0.061	ug/L		12/08/16 10:51	12/08/16 18:18	1
PCB-1260	ND		0.098	0.042	ug/L		12/08/16 10:51	12/08/16 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*47*		*20 - 120*	*12/08/16 10:51*	*12/08/16 18:18*	*1*
DCB Decachlorobiphenyl (Surr)	*77*		*36 - 138*	*12/08/16 10:51*	*12/08/16 18:18*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		12/05/16 21:10	12/15/16 00:28	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 21:10	12/15/16 00:28	1
Bolstar	ND		0.95	0.30	ug/L		12/05/16 21:10	12/15/16 00:28	1
Chlorpyrifos	ND		1.4	0.34	ug/L		12/05/16 21:10	12/15/16 00:28	1
Coumaphos	ND	*	0.95	0.13	ug/L		12/05/16 21:10	12/15/16 00:28	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 21:10	12/15/16 00:28	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 21:10	12/15/16 00:28	1
Dichlorvos	ND	*	0.48	0.15	ug/L		12/05/16 21:10	12/15/16 00:28	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 21:10	12/15/16 00:28	1
Disulfoton	ND		0.95	0.31	ug/L		12/05/16 21:10	12/15/16 00:28	1
EPN	ND		1.1	0.14	ug/L		12/05/16 21:10	12/15/16 00:28	1
Famphur	ND		0.95	0.17	ug/L		12/05/16 21:10	12/15/16 00:28	1
Fensulfothion	ND		2.4	0.52	ug/L		12/05/16 21:10	12/15/16 00:28	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 21:10	12/15/16 00:28	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 21:10	12/15/16 00:28	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 21:10	12/15/16 00:28	1
Methyl parathion	ND	*	3.8	0.13	ug/L		12/05/16 21:10	12/15/16 00:28	1
Mevinphos	ND		5.9	0.44	ug/L		12/05/16 21:10	12/15/16 00:28	1
Ethyl Parathion	ND		0.95	0.14	ug/L		12/05/16 21:10	12/15/16 00:28	1
Phorate	ND		1.1	0.15	ug/L		12/05/16 21:10	12/15/16 00:28	1
Ronnel	ND		9.5	0.11	ug/L		12/05/16 21:10	12/15/16 00:28	1
Simazine	ND		9.5	0.21	ug/L		12/05/16 21:10	12/15/16 00:28	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 21:10	12/15/16 00:28	1
Thionazin	ND		0.95	0.30	ug/L		12/05/16 21:10	12/15/16 00:28	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 21:10	12/15/16 00:28	1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 21:10	12/15/16 00:28	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 21:10	12/15/16 00:28	1
Propazine	ND		9.5	0.28	ug/L		12/05/16 21:10	12/15/16 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*81*		*49 - 171*	*12/05/16 21:10*	*12/15/16 00:28*	*1*
Triphenylphosphate	*90*		*60 - 154*	*12/05/16 21:10*	*12/15/16 00:28*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/05/16 15:38	12/09/16 11:53	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 11:53	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 11:53	1
Dalapon	ND		1.9	0.86	ug/L		12/05/16 15:38	12/09/16 11:53	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 11:53	1
Dichlorprop	ND		3.8	0.61	ug/L		12/05/16 15:38	12/09/16 11:53	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 11:53	1
MCPP	ND		380	31	ug/L		12/05/16 15:38	12/09/16 11:53	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/05/16 15:38	12/09/16 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*103*		*39 - 135*	*12/05/16 15:38*	*12/09/16 11:53*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 18:29	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*12/05/16 10:22*	*12/05/16 18:29*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*12/05/16 10:22*	*12/05/16 18:29*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42**		0.80	0.42	mg/L			12/02/16 12:39	1
Nitrate as N	**0.20**		0.20	0.039	mg/L			12/02/16 12:39	1
Nitrite as N	ND		0.20	0.069	mg/L			12/02/16 12:39	1
Sulfate	**15**		0.50	0.13	mg/L			12/02/16 12:39	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.24	pg/L		12/07/16 16:59	12/09/16 17:23	1
2,3,7,8-TCDF	ND		9.6	0.19	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,7,8-PeCDD	ND		48	0.37	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,7,8-PeCDF	ND		48	0.35	pg/L		12/07/16 16:59	12/09/16 17:23	1
2,3,4,7,8-PeCDF	ND		48	0.38	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,4,7,8-HxCDD	ND		48	0.29	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,6,7,8-HxCDD	ND		48	0.27	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,7,8,9-HxCDD	ND		48	0.22	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,4,7,8-HxCDF	ND		48	0.21	pg/L		12/07/16 16:59	12/09/16 17:23	1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	**0.45**	**J q**	48	0.19	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,7,8,9-HxCDF	ND		48	0.20	pg/L		12/07/16 16:59	12/09/16 17:23	1
2,3,4,6,7,8-HxCDF	ND		48	0.20	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,4,6,7,8-HpCDD	**0.82**	**J q B**	48	0.31	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,4,6,7,8-HpCDF	**1.2**	**J B**	48	0.25	pg/L		12/07/16 16:59	12/09/16 17:23	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.29	pg/L		12/07/16 16:59	12/09/16 17:23	1
OCDD	**2.8**	**J B**	96	0.32	pg/L		12/07/16 16:59	12/09/16 17:23	1
OCDF	**1.8**	**J q B**	96	0.34	pg/L		12/07/16 16:59	12/09/16 17:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*86*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-2,3,7,8-TCDF	*78*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-1,2,3,7,8-PeCDD	*93*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-1,2,3,4,7,8-HxCDF	*87*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*102*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*100*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*
13C-OCDD	*109*		*40 - 135*	*12/07/16 16:59*	*12/09/16 17:23*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0026**		0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 11:31	1
Antimony	**0.00016**	**J**	0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 11:31	1
Barium	**0.045**		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 11:31	1
Beryllium	ND		0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 11:31	1
Cadmium	ND		0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 11:31	1
Chromium	**0.00028**	**J**	0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 11:31	1
Copper	**0.0080**		0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 11:31	1
Iron	**0.43**		0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 11:31	1
Lead	**0.00088**		0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 11:31	1
Manganese	**0.0069**		0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 11:31	1
Nickel	**0.0020**	**J**	0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 11:31	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 11:31	1
Silver	**0.00096**		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 11:31	1
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 11:31	1
Vanadium	**0.0071**		0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 11:31	1
Zinc	**0.0040**	**J**	0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 11:31	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0024**		0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 15:28	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 15:28	1
Barium	**0.043**		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 15:28	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 15:28	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 15:28	1
Chromium	**0.00022**	**J**	0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 15:28	1
Copper	**0.0047**		0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 15:28	1
Iron	**0.0082**	**J**	0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 15:28	1
Lead	**0.000036**	**J**	0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 15:28	1
Manganese	**0.00083**	**J**	0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 15:28	1

Client Sample ID: MW-3:120116

Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0018**	**J**	0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 15:28	1
Selenium	**0.00035**	**J**	0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 15:28	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 15:28	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 15:28	1
Vanadium	**0.0062**		0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 15:28	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 15:28	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:51	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:51	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:16	1
Chemical Oxygen Demand	**6.9**	**J**	20	4.0	mg/L			12/12/16 18:34	1
Total Organic Carbon	**4.0**		1.0	0.50	mg/L			12/12/16 20:48	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 14:50	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 14:50	1

Client Sample ID: MW-5A:120116

Date Collected: 12/01/16 11:52
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/03/16 03:40	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/03/16 03:40	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/03/16 03:40	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/03/16 03:40	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/03/16 03:40	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/03/16 03:40	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/03/16 03:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/03/16 03:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 03:40	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/03/16 03:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/03/16 03:40	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/03/16 03:40	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/03/16 03:40	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/03/16 03:40	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/03/16 03:40	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/03/16 03:40	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/03/16 03:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/03/16 03:40	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-5A:120116
Date Collected: 12/01/16 11:52
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/03/16 03:40	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/03/16 03:40	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/16 03:40	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/03/16 03:40	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/03/16 03:40	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/03/16 03:40	1
2-Hexanone	ND		10	0.75	ug/L			12/03/16 03:40	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/03/16 03:40	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/03/16 03:40	1
Acetone	ND		25	4.1	ug/L			12/03/16 03:40	1
Benzene	ND		0.20	0.093	ug/L			12/03/16 03:40	1
Bromobenzene	ND		1.0	0.28	ug/L			12/03/16 03:40	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/03/16 03:40	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/03/16 03:40	1
Bromoform	ND		2.0	0.80	ug/L			12/03/16 03:40	1
Bromomethane	ND		5.0	0.22	ug/L			12/03/16 03:40	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/03/16 03:40	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/03/16 03:40	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/03/16 03:40	1
Chloroethane	ND		2.0	1.1	ug/L			12/03/16 03:40	1
Chloroform	ND		1.0	0.41	ug/L			12/03/16 03:40	1
Chloromethane	ND		3.0	0.22	ug/L			12/03/16 03:40	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/03/16 03:40	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/03/16 03:40	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/03/16 03:40	1
Dibromomethane	ND		1.0	0.50	ug/L			12/03/16 03:40	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/03/16 03:40	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/03/16 03:40	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/03/16 03:40	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/03/16 03:40	1
Hexane	ND		1.0	0.084	ug/L			12/03/16 03:40	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/03/16 03:40	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/03/16 03:40	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/03/16 03:40	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/03/16 03:40	1
Naphthalene	ND		2.0	0.63	ug/L			12/03/16 03:40	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/03/16 03:40	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/03/16 03:40	1
o-Xylene	ND		1.0	0.16	ug/L			12/03/16 03:40	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/03/16 03:40	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/03/16 03:40	1
Styrene	ND		1.0	0.10	ug/L			12/03/16 03:40	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/03/16 03:40	1
Tetrachloroethene	**0.99**	**J**	1.0	0.45	ug/L			12/03/16 03:40	1
Toluene	ND		1.0	0.31	ug/L			12/03/16 03:40	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/03/16 03:40	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/03/16 03:40	1
Trichloroethene	ND		1.0	0.44	ug/L			12/03/16 03:40	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/03/16 03:40	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-5A:120116
Date Collected: 12/01/16 11:52
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.20	0.13	ug/L			12/03/16 03:40	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/03/16 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 125*		*12/03/16 03:40*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/03/16 03:40*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/03/16 03:40*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/03/16 03:40*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**22**	**J B**	100	18	ug/L			12/03/16 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/03/16 03:40*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
1,2-Dichlorobenzene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
1,3-Dichlorobenzene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
1,4-Dichlorobenzene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
1-Methylnaphthalene	ND		0.059	0.029	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,4-Dichlorophenol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,4-Dimethylphenol	ND		2.0	0.29	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,4-Dinitrotoluene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2,6-Dinitrotoluene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2-Chloronaphthalene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
2-Chlorophenol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
2-Methylphenol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2-Nitroaniline	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
2-Nitrophenol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
3 & 4 Methylphenol	ND		0.78	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
3,3'-Dichlorobenzidine	ND		2.0	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
3-Nitroaniline	ND		0.39	0.12	ug/L		12/05/16 16:00	12/08/16 03:27	1
4,6-Dinitro-2-methylphenol	ND		3.9	0.98	ug/L		12/05/16 16:00	12/08/16 03:27	1
4-Bromophenyl phenyl ether	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
4-Chloro-3-methylphenol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
4-Chloroaniline	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
4-Chlorophenyl phenyl ether	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
4-Nitroaniline	ND		0.59	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
4-Nitrophenol	ND		2.9	0.98	ug/L		12/05/16 16:00	12/08/16 03:27	1
Acenaphthene	ND		0.098	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Acenaphthylene	ND		0.078	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Anthracene	ND		0.039	0.0098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Benzo[a]anthracene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-5A:120116
Date Collected: 12/01/16 11:52
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.039	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Benzo[b]fluoranthene	ND		0.078	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Benzo[g,h,i]perylene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Benzo[k]fluoranthene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Benzoic acid	ND		2.9	0.59	ug/L		12/05/16 16:00	12/08/16 03:27	1
Benzyl alcohol	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
bis (2-chloroisopropyl) ether	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Bis(2-chloroethoxy)methane	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Bis(2-chloroethyl)ether	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Bis(2-ethylhexyl) phthalate	ND		2.9	1.2	ug/L		12/05/16 16:00	12/08/16 03:27	1
Butyl benzyl phthalate	ND		0.59	0.20	ug/L		12/05/16 16:00	12/08/16 03:27	1
Carbazole	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Chrysene	ND		0.039	0.013	ug/L		12/05/16 16:00	12/08/16 03:27	1
Dibenz(a,h)anthracene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Dibenzofuran	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Diethyl phthalate	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Dimethyl phthalate	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		12/05/16 16:00	12/08/16 03:27	1
Di-n-octyl phthalate	ND		0.39	0.18	ug/L		12/05/16 16:00	12/08/16 03:27	1
Fluoranthene	ND		0.049	0.013	ug/L		12/05/16 16:00	12/08/16 03:27	1
Fluorene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Hexachlorobenzene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Hexachlorobutadiene	ND		0.59	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Hexachlorocyclopentadiene	ND		2.0	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Hexachloroethane	ND		0.59	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Indeno[1,2,3-cd]pyrene	ND		0.059	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Isophorone	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Naphthalene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Nitrobenzene	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
N-Nitrosodi-n-propylamine	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
N-Nitrosodiphenylamine	ND		0.39	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Pentachlorophenol	ND		0.69	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Phenanthrene	ND		0.078	0.020	ug/L		12/05/16 16:00	12/08/16 03:27	1
Phenol	ND		0.59	0.098	ug/L		12/05/16 16:00	12/08/16 03:27	1
Pyrene	ND		0.059	0.013	ug/L		12/05/16 16:00	12/08/16 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*80*		*57 - 132*	*12/05/16 16:00*	*12/08/16 03:27*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/05/16 16:00*	*12/08/16 03:27*	*1*
2-Fluorophenol	*76*		*50 - 113*	*12/05/16 16:00*	*12/08/16 03:27*	*1*
Nitrobenzene-d5	*76*		*59 - 120*	*12/05/16 16:00*	*12/08/16 03:27*	*1*
Phenol-d5	*76*		*52 - 120*	*12/05/16 16:00*	*12/08/16 03:27*	*1*
Terphenyl-d14	*81*		*72 - 140*	*12/05/16 16:00*	*12/08/16 03:27*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 20:30	1

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Lab Sample ID: 590-5117-6
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		12/06/16 11:10	12/08/16 06:58	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:58	1
4,4'-DDT	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 06:58	1
Aldrin	ND		0.029	0.0068	ug/L		12/06/16 11:10	12/08/16 06:58	1
alpha-BHC	ND		0.029	0.0068	ug/L		12/06/16 11:10	12/08/16 06:58	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:58	1
beta-BHC	ND		0.049	0.012	ug/L		12/06/16 11:10	12/08/16 06:58	1
delta-BHC	ND		0.049	0.0097	ug/L		12/06/16 11:10	12/08/16 06:58	1
Dieldrin	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 06:58	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:58	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:58	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:58	1
Endrin	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:58	1
Endrin aldehyde	ND		0.19	0.033	ug/L		12/06/16 11:10	12/08/16 06:58	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/06/16 11:10	12/08/16 06:58	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		12/06/16 11:10	12/08/16 06:58	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:58	1
Heptachlor	ND		0.019	0.0039	ug/L		12/06/16 11:10	12/08/16 06:58	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/06/16 11:10	12/08/16 06:58	1
Methoxychlor	ND		0.097	0.0019	ug/L		12/06/16 11:10	12/08/16 06:58	1
Toxaphene	ND		0.97	0.21	ug/L		12/06/16 11:10	12/08/16 06:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*81*		*22 - 150*	*12/06/16 11:10*	*12/08/16 06:58*	*1*
Tetrachloro-m-xylene	*68*		*40 - 113*	*12/06/16 11:10*	*12/08/16 06:58*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.096	0.059	ug/L		12/08/16 10:51	12/08/16 18:39	1
PCB-1221	ND		0.096	0.059	ug/L		12/08/16 10:51	12/08/16 18:39	1
PCB-1232	ND		0.096	0.059	ug/L		12/08/16 10:51	12/08/16 18:39	1
PCB-1242	ND		0.096	0.059	ug/L		12/08/16 10:51	12/08/16 18:39	1
PCB-1248	ND		0.096	0.059	ug/L		12/08/16 10:51	12/08/16 18:39	1
PCB-1254	ND		0.096	0.059	ug/L		12/08/16 10:51	12/08/16 18:39	1
PCB-1260	ND		0.096	0.041	ug/L		12/08/16 10:51	12/08/16 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*20 - 120*	*12/08/16 10:51*	*12/08/16 18:39*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*36 - 138*	*12/08/16 10:51*	*12/08/16 18:39*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 21:10	12/15/16 01:00	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 21:10	12/15/16 01:00	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 21:10	12/15/16 01:00	1
Chlorpyrifos	ND		1.5	0.35	ug/L		12/05/16 21:10	12/15/16 01:00	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 21:10	12/15/16 01:00	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 21:10	12/15/16 01:00	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 21:10	12/15/16 01:00	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 21:10	12/15/16 01:00	1

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Lab Sample ID: 590-5117-6
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.43	ug/L		12/05/16 21:10	12/15/16 01:00	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 21:10	12/15/16 01:00	1
EPN	ND		1.2	0.14	ug/L		12/05/16 21:10	12/15/16 01:00	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 21:10	12/15/16 01:00	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 21:10	12/15/16 01:00	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 21:10	12/15/16 01:00	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 21:10	12/15/16 01:00	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 21:10	12/15/16 01:00	1
Methyl parathion	ND	*	3.9	0.14	ug/L		12/05/16 21:10	12/15/16 01:00	1
Mevinphos	ND		6.0	0.45	ug/L		12/05/16 21:10	12/15/16 01:00	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 21:10	12/15/16 01:00	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 21:10	12/15/16 01:00	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 21:10	12/15/16 01:00	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 21:10	12/15/16 01:00	1
Sulfotepp	ND		1.5	0.16	ug/L		12/05/16 21:10	12/15/16 01:00	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 21:10	12/15/16 01:00	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 21:10	12/15/16 01:00	1
Trichloronate	ND		1.5	0.23	ug/L		12/05/16 21:10	12/15/16 01:00	1
Ethoprop	ND		1.5	0.17	ug/L		12/05/16 21:10	12/15/16 01:00	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 21:10	12/15/16 01:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*89*		*49 - 171*	*12/05/16 21:10*	*12/15/16 01:00*	*1*
Triphenylphosphate	*85*		*60 - 154*	*12/05/16 21:10*	*12/15/16 01:00*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		12/05/16 15:38	12/09/16 12:16	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 12:16	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 12:16	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 12:16	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 12:16	1
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 12:16	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 12:16	1
MCPP	ND		380	32	ug/L		12/05/16 15:38	12/09/16 12:16	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		12/05/16 15:38	12/09/16 12:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*107*		*39 - 135*	*12/05/16 15:38*	*12/09/16 12:16*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 10:22	12/05/16 18:45	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*12/05/16 10:22*	*12/05/16 18:45*	*1*
n-Triacontane-d62	*99*		*50 - 150*	*12/05/16 10:22*	*12/05/16 18:45*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-5A:120116
Date Collected: 12/01/16 11:52
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Lab Sample ID: 590-5117-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**		0.80	0.42	mg/L			12/02/16 12:50	1
Nitrate as N	**5.8**		0.20	0.039	mg/L			12/02/16 12:50	1
Nitrite as N	ND		0.20	0.069	mg/L			12/02/16 12:50	1
Sulfate	**45**		0.50	0.13	mg/L			12/02/16 12:50	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.21	pg/L		12/07/16 16:59	12/09/16 18:10	1
2,3,7,8-TCDF	ND		9.9	0.15	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,7,8-PeCDD	ND		50	0.40	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,7,8-PeCDF	ND		50	0.25	pg/L		12/07/16 16:59	12/09/16 18:10	1
2,3,4,7,8-PeCDF	ND		50	0.27	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,4,7,8-HxCDD	ND		50	0.22	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,6,7,8-HxCDD	ND		50	0.20	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,7,8,9-HxCDD	ND		50	0.17	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,4,7,8-HxCDF	ND		50	0.25	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,6,7,8-HxCDF	ND		50	0.22	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,7,8,9-HxCDF	ND		50	0.23	pg/L		12/07/16 16:59	12/09/16 18:10	1
2,3,4,6,7,8-HxCDF	**0.24**	**J q**	50	0.24	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,4,6,7,8-HpCDD	**0.98**	**J B**	50	0.26	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,4,6,7,8-HpCDF	**0.89**	**J q B**	50	0.23	pg/L		12/07/16 16:59	12/09/16 18:10	1
1,2,3,4,7,8,9-HpCDF	**0.35**	**J**	50	0.26	pg/L		12/07/16 16:59	12/09/16 18:10	1
OCDD	**3.0**	**J q B**	99	0.34	pg/L		12/07/16 16:59	12/09/16 18:10	1
OCDF	**2.1**	**J B**	99	0.30	pg/L		12/07/16 16:59	12/09/16 18:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*90*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-2,3,7,8-TCDF	*84*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-1,2,3,7,8-PeCDD	*100*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-1,2,3,7,8-PeCDF	*90*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-1,2,3,6,7,8-HxCDD	*103*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-1,2,3,4,7,8-HxCDF	*93*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*108*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*105*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*
13C-OCDD	*115*		*40 - 135*	*12/07/16 16:59*	*12/09/16 18:10*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 11:36	1
Antimony	**0.00019**	**J**	0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 11:36	1
Barium	**0.19**		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 11:36	1
Beryllium	ND		0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 11:36	1
Cadmium	ND		0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 11:36	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 11:36	1
Copper	**0.0013**	**J**	0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 11:36	1
Iron	ND		0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 11:36	1
Lead	ND		0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 11:36	1
Manganese	ND		0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 11:36	1
Nickel	**0.00075**	**J**	0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 11:36	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 11:36	1
Silver	ND		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 11:36	1

Client Sample ID: MW-5A:120116

Date Collected: 12/01/16 11:52
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-6
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 11:36	1
Vanadium	**0.0020**	**J**	0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 11:36	1
Zinc	ND		0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 11:36	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0013**		0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 15:32	1
Antimony	**0.00018**	**J**	0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 15:32	1
Barium	**0.18**		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 15:32	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 15:32	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 15:32	1
Chromium	**0.00025**	**J**	0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 15:32	1
Copper	**0.0013**	**J**	0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 15:32	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 15:32	1
Lead	**0.000054**	**J**	0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 15:32	1
Manganese	ND		0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 15:32	1
Nickel	**0.00074**	**J**	0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 15:32	1
Selenium	**0.00044**	**J**	0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 15:32	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 15:32	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 15:32	1
Vanadium	**0.0019**	**J**	0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 15:32	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 15:32	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:54	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**0.011**		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:52	1
Ammonia (as N)	ND		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:17	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/12/16 18:34	1
Total Organic Carbon	**1.5**		1.0	0.50	mg/L			12/12/16 21:05	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**0.00**				MPN/100mL			12/01/16 14:50	1
Escherichia coli	**0.00**				MPN/100mL			12/01/16 14:50	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-9880/4
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/02/16 17:37	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/02/16 17:37	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/02/16 17:37	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/02/16 17:37	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/02/16 17:37	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/02/16 17:37	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/02/16 17:37	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/02/16 17:37	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/02/16 17:37	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/02/16 17:37	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/02/16 17:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/02/16 17:37	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/02/16 17:37	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/02/16 17:37	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/02/16 17:37	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/02/16 17:37	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/02/16 17:37	1
2-Hexanone	ND		10	0.75	ug/L			12/02/16 17:37	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/02/16 17:37	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/02/16 17:37	1
Acetone	ND		25	4.1	ug/L			12/02/16 17:37	1
Benzene	ND		0.20	0.093	ug/L			12/02/16 17:37	1
Bromobenzene	ND		1.0	0.28	ug/L			12/02/16 17:37	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/02/16 17:37	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/02/16 17:37	1
Bromoform	ND		2.0	0.80	ug/L			12/02/16 17:37	1
Bromomethane	ND		5.0	0.22	ug/L			12/02/16 17:37	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/02/16 17:37	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/02/16 17:37	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/02/16 17:37	1
Chloroethane	ND		2.0	1.1	ug/L			12/02/16 17:37	1
Chloroform	ND		1.0	0.41	ug/L			12/02/16 17:37	1
Chloromethane	ND		3.0	0.22	ug/L			12/02/16 17:37	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/02/16 17:37	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/02/16 17:37	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/02/16 17:37	1
Dibromomethane	ND		1.0	0.50	ug/L			12/02/16 17:37	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/02/16 17:37	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/02/16 17:37	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/02/16 17:37	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/02/16 17:37	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-9880/4
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/02/16 17:37	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/02/16 17:37	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/02/16 17:37	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/02/16 17:37	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/02/16 17:37	1
Naphthalene	ND		2.0	0.63	ug/L			12/02/16 17:37	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/02/16 17:37	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/02/16 17:37	1
o-Xylene	ND		1.0	0.16	ug/L			12/02/16 17:37	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/02/16 17:37	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/02/16 17:37	1
Styrene	ND		1.0	0.10	ug/L			12/02/16 17:37	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/02/16 17:37	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/02/16 17:37	1
Toluene	ND		1.0	0.31	ug/L			12/02/16 17:37	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/02/16 17:37	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/02/16 17:37	1
Trichloroethene	ND		1.0	0.44	ug/L			12/02/16 17:37	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/02/16 17:37	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/02/16 17:37	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/02/16 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/02/16 17:37*	*1*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*12/02/16 17:37*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/02/16 17:37*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/02/16 17:37*	*1*

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	20.0		ug/L		100	75 - 124
1,1,1-Trichloroethane	20.0	20.7		ug/L		103	71 - 130
1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	66 - 122
1,1,2-Trichloroethane	20.0	20.3		ug/L		102	76 - 120
1,1,2-Trichlorotrifluoroethane	20.0	21.6		ug/L		108	70 - 127
1,1-Dichloroethane	20.0	19.7		ug/L		98	79 - 121
1,1-Dichloroethene	20.0	20.0		ug/L		100	69 - 127
1,1-Dichloropropene	20.0	20.5		ug/L		103	76 - 125
1,2,3-Trichlorobenzene	20.0	21.3		ug/L		106	60 - 125
1,2,3-Trichloropropane	20.0	19.8		ug/L		99	60 - 124
1,2,4-Trichlorobenzene	20.0	22.0		ug/L		110	66 - 124
1,2,4-Trimethylbenzene	20.0	20.9		ug/L		105	77 - 120
1,2-Dibromo-3-Chloropropane	20.0	20.1		ug/L		101	36 - 140
1,2-Dichlorobenzene	20.0	21.1		ug/L		105	78 - 120
1,2-Dichloroethane	20.0	20.4		ug/L		102	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	20.0	19.9		ug/L		99	76 - 121
1,3,5-Trimethylbenzene	20.0	21.5		ug/L		107	75 - 122
1,3-Dichlorobenzene	20.0	20.1		ug/L		101	77 - 120
1,3-Dichloropropane	20.0	19.1		ug/L		96	75 - 120
1,4-Dichlorobenzene	20.0	21.1		ug/L		105	77 - 121
2,2-Dichloropropane	20.0	22.5		ug/L		113	49 - 147
2-Butanone (MEK)	100	102		ug/L		102	40 - 150
2-Chlorotoluene	20.0	20.7		ug/L		104	75 - 121
2-Hexanone	100	103		ug/L		103	46 - 146
4-Chlorotoluene	20.0	21.0		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	60 - 127
Acetone	100	89.0		ug/L		89	20 - 150
Benzene	20.0	19.2		ug/L		96	80 - 120
Bromobenzene	20.0	20.6		ug/L		103	74 - 121
Bromochloromethane	20.0	19.4		ug/L		97	70 - 126
Bromodichloromethane	20.0	20.3		ug/L		102	67 - 125
Bromoform	20.0	19.0		ug/L		95	60 - 122
Bromomethane	20.0	19.4		ug/L		97	45 - 150
Carbon disulfide	20.0	19.1		ug/L		95	67 - 129
Carbon tetrachloride	20.0	19.9		ug/L		99	68 - 134
Chlorobenzene	20.0	20.1		ug/L		100	79 - 125
Chloroethane	20.0	18.5		ug/L		93	48 - 150
Chloroform	20.0	20.1		ug/L		101	73 - 126
Chloromethane	20.0	20.1		ug/L		101	51 - 150
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	76 - 121
cis-1,3-Dichloropropene	20.0	21.0		ug/L		105	72 - 120
Dibromochloromethane	20.0	21.1		ug/L		106	72 - 120
Dibromomethane	20.0	19.8		ug/L		99	71 - 120
Dichlorodifluoromethane	20.0	17.5		ug/L		87	32 - 150
Dichlorofluoromethane	20.0	21.2		ug/L		106	60 - 140
Ethylbenzene	20.0	20.3		ug/L		102	80 - 120
Hexachlorobutadiene	20.0	21.2		ug/L		106	62 - 132
Hexane	20.0	21.2		ug/L		106	68 - 125
Isopropylbenzene	20.0	20.5		ug/L		103	77 - 123
m,p-Xylene	20.0	20.2		ug/L		101	80 - 120
Methyl tert-butyl ether	20.0	20.4		ug/L		102	71 - 128
Methylene Chloride	20.0	20.6		ug/L		103	20 - 150
Naphthalene	20.0	20.8		ug/L		104	63 - 124
n-Butylbenzene	20.0	21.7		ug/L		109	71 - 120
N-Propylbenzene	20.0	20.7		ug/L		104	76 - 120
o-Xylene	20.0	20.5		ug/L		102	80 - 120
p-Isopropyltoluene	20.0	21.7		ug/L		108	77 - 120
sec-Butylbenzene	20.0	21.4		ug/L		107	74 - 121
Styrene	20.0	20.4		ug/L		102	73 - 120
tert-Butylbenzene	20.0	21.5		ug/L		108	79 - 120
Tetrachloroethene	20.0	20.7		ug/L		104	71 - 132
Toluene	20.0	19.7		ug/L		99	80 - 123
trans-1,2-Dichloroethene	20.0	19.9		ug/L		100	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9880/1002
Matrix: Water
Analysis Batch: 9880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	20.0	21.2		ug/L		106	70 - 121
Trichloroethene	20.0	18.6		ug/L		93	75 - 129
Trichlorofluoromethane	20.0	20.8		ug/L		104	60 - 140
Vinyl chloride	20.0	19.0		ug/L		95	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-9881/4
Matrix: Water
Analysis Batch: 9881

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	20.8	J	100	18	ug/L			12/02/16 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*		*12/02/16 17:37*	*1*

Lab Sample ID: LCS 590-9881/1003
Matrix: Water
Analysis Batch: 9881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	1070		ug/L		107	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitrophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/05/16 16:00	12/07/16 18:08	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitrophenol	ND		3.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthene	ND		0.10	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Anthracene	0.0104	J	0.040	0.010	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzoic acid	ND		3.0	0.60	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		12/05/16 16:00	12/07/16 18:08	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		12/05/16 16:00	12/07/16 18:08	1
Carbazole	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Chrysene	ND		0.040	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Diethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluoranthene	ND		0.050	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluorene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Isophorone	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Naphthalene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pentachlorophenol	ND		0.70	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenanthrene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pyrene	ND		0.060	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*78*		*57 - 132*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorophenol	*74*		*50 - 113*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Phenol-d5	*85*		*52 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Terphenyl-d14	*93*		*72 - 140*	*12/05/16 16:00*	*12/07/16 18:08*	*1*

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	40 - 115
1,2-Dichlorobenzene	2.00	1.55		ug/L		77	44 - 119
1,3-Dichlorobenzene	2.00	1.49		ug/L		74	34 - 116
1,4-Dichlorobenzene	2.00	1.41		ug/L		70	40 - 118
1-Methylnaphthalene	2.00	1.90		ug/L		95	54 - 119
2,4,5-Trichlorophenol	2.00	2.28		ug/L		114	56 - 122
2,4,6-Trichlorophenol	2.00	2.36		ug/L		118	55 - 134
2,4-Dichlorophenol	2.00	2.17		ug/L		108	50 - 125
2,4-Dimethylphenol	2.00	1.96	J	ug/L		98	20 - 106
2,4-Dinitrophenol	4.00	3.65	J	ug/L		91	24 - 139
2,4-Dinitrotoluene	2.00	2.60		ug/L		130	40 - 143
2,6-Dinitrotoluene	2.00	2.37		ug/L		118	45 - 134
2-Chloronaphthalene	2.00	2.05		ug/L		102	55 - 125
2-Chlorophenol	2.00	1.88		ug/L		94	57 - 125
2-Methylnaphthalene	2.00	1.84		ug/L		92	56 - 117
2-Methylphenol	2.00	1.99		ug/L		99	53 - 118
2-Nitroaniline	2.00	2.40		ug/L		120	58 - 124
2-Nitrophenol	2.00	1.88		ug/L		94	20 - 150
3 & 4 Methylphenol	2.00	1.94		ug/L		97	54 - 112
3,3'-Dichlorobenzidine	4.00	3.35		ug/L		84	20 - 121
3-Nitroaniline	2.00	2.20		ug/L		110	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.55	J	ug/L		89	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	2.06		ug/L		103	62 - 132
4-Chloro-3-methylphenol	2.00	2.43		ug/L		121	56 - 133
4-Chloroaniline	2.00	1.49		ug/L		74	20 - 110
4-Chlorophenyl phenyl ether	2.00	2.11		ug/L		105	59 - 125
4-Nitroaniline	2.00	2.30		ug/L		115	40 - 118
4-Nitrophenol	4.00	4.79		ug/L		120	20 - 150
Acenaphthene	2.00	2.19		ug/L		109	55 - 113
Acenaphthylene	2.00	2.16		ug/L		108	24 - 135
Anthracene	2.00	1.79		ug/L		90	20 - 125
Benzo[a]anthracene	2.00	1.98		ug/L		99	49 - 115
Benzo[a]pyrene	2.00	1.70		ug/L		85	20 - 115
Benzo[b]fluoranthene	2.00	2.25		ug/L		112	63 - 129
Benzo[g,h,i]perylene	2.00	2.08		ug/L		104	58 - 127
Benzo[k]fluoranthene	2.00	1.97		ug/L		98	60 - 134
Benzoic acid	4.00	2.96	J	ug/L		74	20 - 150
Benzyl alcohol	2.00	1.63		ug/L		81	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.81		ug/L		90	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.90		ug/L		95	59 - 125
Bis(2-chloroethyl)ether	2.00	1.85		ug/L		93	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.19	J	ug/L		110	22 - 150
Butyl benzyl phthalate	2.00	2.43		ug/L		121	46 - 150
Carbazole	2.00	2.43		ug/L		122	68 - 142
Chrysene	2.00	2.04		ug/L		102	57 - 131
Dibenz(a,h)anthracene	2.00	2.16		ug/L		108	56 - 124
Dibenzofuran	2.00	2.25		ug/L		113	60 - 125
Diethyl phthalate	2.00	2.56		ug/L		128	60 - 134
Dimethyl phthalate	2.00	2.42		ug/L		121	65 - 134
Di-n-butyl phthalate	2.00	2.39		ug/L		120	67 - 140
Di-n-octyl phthalate	2.00	2.27		ug/L		113	55 - 150
Fluoranthene	2.00	2.16		ug/L		108	70 - 135
Fluorene	2.00	2.29		ug/L		115	57 - 125
Hexachlorobenzene	2.00	2.09		ug/L		104	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.640	J	ug/L		32	20 - 110
Hexachloroethane	2.00	1.11		ug/L		55	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.41		ug/L		121	54 - 124
Isophorone	2.00	2.00		ug/L		100	64 - 125
Naphthalene	2.00	1.91		ug/L		96	56 - 119
Nitrobenzene	2.00	1.98		ug/L		99	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.88		ug/L		94	54 - 120
N-Nitrosodiphenylamine	2.00	1.75		ug/L		87	40 - 124
Pentachlorophenol	4.00	3.86		ug/L		96	30 - 122
Phenanthrene	2.00	2.06		ug/L		103	57 - 125
Phenol	2.00	1.97		ug/L		99	53 - 113
Pyrene	2.00	2.12		ug/L		106	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*102*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	85		50 - 120
2-Fluorophenol	83		50 - 113
Nitrobenzene-d5	88		59 - 120
Phenol-d5	83		52 - 120
Terphenyl-d14	96		72 - 140

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.56		ug/L		78	40 - 115	8	20
1,2-Dichlorobenzene			2.00	1.72		ug/L		86	44 - 119	11	20
1,3-Dichlorobenzene			2.00	1.66		ug/L		83	34 - 116	11	29
1,4-Dichlorobenzene			2.00	1.55		ug/L		77	40 - 118	9	20
1-Methylnaphthalene			2.00	2.06		ug/L		103	54 - 119	8	20
2,4,5-Trichlorophenol			2.00	2.32		ug/L		116	56 - 122	2	20
2,4,6-Trichlorophenol			2.00	2.21		ug/L		111	55 - 134	7	20
2,4-Dichlorophenol			2.00	2.11		ug/L		106	50 - 125	3	26
2,4-Dimethylphenol			2.00	1.81	J	ug/L		90	20 - 106	8	35
2,4-Dinitrophenol			4.00	3.79	J	ug/L		95	24 - 139	4	35
2,4-Dinitrotoluene			2.00	2.65		ug/L		133	40 - 143	2	29
2,6-Dinitrotoluene			2.00	2.35		ug/L		118	45 - 134	1	31
2-Chloronaphthalene			2.00	2.08		ug/L		104	55 - 125	2	20
2-Chlorophenol			2.00	2.11		ug/L		105	57 - 125	11	20
2-Methylnaphthalene			2.00	2.02		ug/L		101	56 - 117	9	20
2-Methylphenol			2.00	2.13		ug/L		106	53 - 118	7	33
2-Nitroaniline			2.00	2.47		ug/L		124	58 - 124	3	20
2-Nitrophenol			2.00	1.91		ug/L		95	20 - 150	2	35
3 & 4 Methylphenol			2.00	2.10		ug/L		105	54 - 112	8	20
3,3'-Dichlorobenzidine			4.00	2.88		ug/L		72	20 - 121	15	35
3-Nitroaniline			2.00	2.22		ug/L		111	22 - 124	1	35
4,6-Dinitro-2-methylphenol			4.00	3.85	J	ug/L		96	20 - 150	8	30
4-Bromophenyl phenyl ether			2.00	2.01		ug/L		101	62 - 132	2	20
4-Chloro-3-methylphenol			2.00	2.42		ug/L		121	56 - 133	0	20
4-Chloroaniline			2.00	1.35		ug/L		68	20 - 110	9	35
4-Chlorophenyl phenyl ether			2.00	2.16		ug/L		108	59 - 125	3	20
4-Nitroaniline			2.00	2.19		ug/L		110	40 - 118	5	20
4-Nitrophenol			4.00	5.45		ug/L		136	20 - 150	13	29
Acenaphthene			2.00	2.20		ug/L		110	55 - 113	1	20
Acenaphthylene			2.00	2.13		ug/L		106	24 - 135	2	20
Anthracene			2.00	1.74		ug/L		87	20 - 125	3	26
Benzo[a]anthracene			2.00	1.95		ug/L		98	49 - 115	1	20
Benzo[a]pyrene			2.00	1.65		ug/L		83	20 - 115	3	35
Benzo[b]fluoranthene			2.00	2.35		ug/L		117	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	2.21		ug/L		110	58 - 127	6	20
Benzo[k]fluoranthene			2.00	2.09		ug/L		104	60 - 134	6	20
Benzoic acid			4.00	3.19		ug/L		80	20 - 150	8	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol			2.00	1.86		ug/L		93	52 - 124	14	20
bis (2-chloroisopropyl) ether			2.00	1.93		ug/L		97	44 - 123	7	20
Bis(2-chloroethoxy)methane			2.00	2.09		ug/L		104	59 - 125	9	20
Bis(2-chloroethyl)ether			2.00	2.14		ug/L		107	55 - 125	14	20
Bis(2-ethylhexyl) phthalate			2.00	2.13	J	ug/L		107	22 - 150	3	20
Butyl benzyl phthalate			2.00	2.43		ug/L		121	46 - 150	0	20
Carbazole			2.00	2.49		ug/L		124	68 - 142	2	20
Chrysene			2.00	2.01		ug/L		100	57 - 131	2	20
Dibenz(a,h)anthracene			2.00	2.26		ug/L		113	56 - 124	5	20
Dibenzofuran			2.00	2.31		ug/L		115	60 - 125	2	20
Diethyl phthalate			2.00	2.46		ug/L		123	60 - 134	4	20
Dimethyl phthalate			2.00	2.44		ug/L		122	65 - 134	1	20
Di-n-butyl phthalate			2.00	2.38		ug/L		119	67 - 140	1	20
Di-n-octyl phthalate			2.00	2.40		ug/L		120	55 - 150	6	20
Fluoranthene			2.00	2.18		ug/L		109	70 - 135	1	20
Fluorene			2.00	2.39		ug/L		120	57 - 125	4	20
Hexachlorobenzene			2.00	2.09		ug/L		104	55 - 135	0	20
Hexachlorobutadiene			2.00	1.15		ug/L		58	25 - 125	13	31
Hexachlorocyclopentadiene			2.00	0.668	J	ug/L		33	20 - 110	4	35
Hexachloroethane			2.00	1.21		ug/L		60	24 - 125	9	35
Indeno[1,2,3-cd]pyrene			2.00	2.29		ug/L		114	54 - 124	5	20
Isophorone			2.00	2.17		ug/L		109	64 - 125	8	20
Naphthalene			2.00	2.04		ug/L		102	56 - 119	7	20
Nitrobenzene			2.00	2.16		ug/L		108	62 - 125	9	20
N-Nitrosodi-n-propylamine			2.00	2.13		ug/L		106	54 - 120	12	20
N-Nitrosodiphenylamine			2.00	1.83		ug/L		92	40 - 124	5	20
Pentachlorophenol			4.00	3.85		ug/L		96	30 - 122	0	35
Phenanthrene			2.00	2.10		ug/L		105	57 - 125	2	20
Phenol			2.00	2.01		ug/L		101	53 - 113	2	20
Pyrene			2.00	2.18		ug/L		109	64 - 128	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*57 - 132*
2-Fluorobiphenyl	*88*		*50 - 120*
2-Fluorophenol	*90*		*50 - 113*
Nitrobenzene-d5	*96*		*59 - 120*
Phenol-d5	*91*		*52 - 120*
Terphenyl-d14	*98*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-9920/2-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9920

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 12:07	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-9920/3-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.130		ug/L		104	60 - 140

Lab Sample ID: LCSD 590-9920/4-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.129		ug/L		103	60 - 140	1	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-233926/1-A
Matrix: Water
Analysis Batch: 234120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233926

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		12/06/16 11:10	12/08/16 04:25	1
4,4'-DDE	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 04:25	1
4,4'-DDT	ND		0.030	0.0050	ug/L		12/06/16 11:10	12/08/16 04:25	1
Aldrin	ND		0.030	0.0070	ug/L		12/06/16 11:10	12/08/16 04:25	1
alpha-BHC	ND		0.030	0.0070	ug/L		12/06/16 11:10	12/08/16 04:25	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 04:25	1
beta-BHC	ND		0.050	0.012	ug/L		12/06/16 11:10	12/08/16 04:25	1
delta-BHC	ND		0.050	0.010	ug/L		12/06/16 11:10	12/08/16 04:25	1
Dieldrin	ND		0.030	0.0050	ug/L		12/06/16 11:10	12/08/16 04:25	1
Endosulfan I	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 04:25	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 04:25	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 04:25	1
Endrin	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 04:25	1
Endrin aldehyde	ND		0.20	0.034	ug/L		12/06/16 11:10	12/08/16 04:25	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/06/16 11:10	12/08/16 04:25	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		12/06/16 11:10	12/08/16 04:25	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 04:25	1
Heptachlor	ND		0.020	0.0040	ug/L		12/06/16 11:10	12/08/16 04:25	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		12/06/16 11:10	12/08/16 04:25	1
Methoxychlor	ND		0.10	0.0020	ug/L		12/06/16 11:10	12/08/16 04:25	1
Toxaphene	ND		1.0	0.22	ug/L		12/06/16 11:10	12/08/16 04:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*76*		*22 - 150*	*12/06/16 11:10*	*12/08/16 04:25*	*1*
Tetrachloro-m-xylene	*63*		*40 - 113*	*12/06/16 11:10*	*12/08/16 04:25*	*1*

Lab Sample ID: LCS 580-233926/2-A
Matrix: Water
Analysis Batch: 234120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.161		ug/L		81	32 - 133

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-233926/2-A
Matrix: Water
Analysis Batch: 234120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDE	0.200	0.140		ug/L		70	30 - 138
4,4'-DDT	0.200	0.164		ug/L		82	34 - 131
Aldrin	0.200	0.147		ug/L		74	35 - 124
alpha-BHC	0.200	0.160		ug/L		80	39 - 126
alpha-Chlordane	0.200	0.157		ug/L		78	37 - 133
beta-BHC	0.200	0.159		ug/L		79	38 - 114
delta-BHC	0.200	0.171		ug/L		85	20 - 138
Dieldrin	0.200	0.161		ug/L		80	39 - 140
Endosulfan I	0.200	0.157		ug/L		78	23 - 142
Endosulfan II	0.200	0.161		ug/L		80	20 - 150
Endosulfan sulfate	0.200	0.155		ug/L		77	36 - 130
Endrin	0.200	0.182		ug/L		91	32 - 130
Endrin aldehyde	0.200	0.167	J	ug/L		84	37 - 139
Endrin ketone	0.200	0.158		ug/L		79	32 - 136
gamma-BHC (Lindane)	0.200	0.163		ug/L		82	40 - 121
gamma-Chlordane	0.200	0.157		ug/L		79	38 - 136
Heptachlor	0.200	0.160		ug/L		80	39 - 129
Heptachlor epoxide	0.200	0.161		ug/L		81	34 - 135
Methoxychlor	0.200	0.166		ug/L		83	33 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*81*		*22 - 150*
Tetrachloro-m-xylene	*69*		*40 - 113*

Lab Sample ID: LCSD 580-233926/3-A
Matrix: Water
Analysis Batch: 234120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233926

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.176		ug/L		88	32 - 133	9	35
4,4'-DDE	0.200	0.153		ug/L		77	30 - 138	9	35
4,4'-DDT	0.200	0.177		ug/L		89	34 - 131	8	35
Aldrin	0.200	0.157		ug/L		79	35 - 124	7	35
alpha-BHC	0.200	0.178		ug/L		89	39 - 126	11	35
alpha-Chlordane	0.200	0.166		ug/L		83	37 - 133	6	35
beta-BHC	0.200	0.174		ug/L		87	38 - 114	9	35
delta-BHC	0.200	0.182		ug/L		91	20 - 138	7	35
Dieldrin	0.200	0.172		ug/L		86	39 - 140	7	35
Endosulfan I	0.200	0.168		ug/L		84	23 - 142	7	35
Endosulfan II	0.200	0.171		ug/L		85	20 - 150	6	35
Endosulfan sulfate	0.200	0.165		ug/L		83	36 - 130	7	35
Endrin	0.200	0.196		ug/L		98	32 - 130	7	35
Endrin aldehyde	0.200	0.188	J	ug/L		94	37 - 139	12	35
Endrin ketone	0.200	0.170		ug/L		85	32 - 136	7	35
gamma-BHC (Lindane)	0.200	0.175		ug/L		87	40 - 121	7	35
gamma-Chlordane	0.200	0.162		ug/L		81	38 - 136	3	35
Heptachlor	0.200	0.167		ug/L		84	39 - 129	5	35
Heptachlor epoxide	0.200	0.171		ug/L		85	34 - 135	6	35

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-233926/3-A
Matrix: Water
Analysis Batch: 234120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233926

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methoxychlor			0.200	0.181		ug/L		90	33 - 139	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*84*		*22 - 150*
Tetrachloro-m-xylene	*71*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-9949/1-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9949

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1221	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1232	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1242	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1248	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1254	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1260	ND		0.10	0.043	ug/L		12/08/16 10:51	12/08/16 13:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*20 - 120*	*12/08/16 10:51*	*12/08/16 13:10*	*1*
DCB Decachlorobiphenyl (Surr)	*87*		*36 - 138*	*12/08/16 10:51*	*12/08/16 13:10*	*1*

Lab Sample ID: LCS 590-9949/2-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9949

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016			1.60	1.12		ug/L		70	23 - 140
PCB-1260			1.60	1.09		ug/L		68	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*52*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*77*		*36 - 138*

Lab Sample ID: LCSD 590-9949/3-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9949

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.09		ug/L		68	23 - 140	2	35
PCB-1260			1.60	1.07		ug/L		67	22 - 139	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*48*		*20 - 120*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 590-9949/3-A
Matrix: Water
Analysis Batch: 9953

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9949

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	78		36 - 138

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-354313/1-A
Matrix: Water
Analysis Batch: 355621

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354313

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		12/05/16 21:10	12/14/16 19:45	1
Azinphos-methyl	ND		2.5	0.17	ug/L		12/05/16 21:10	12/14/16 19:45	1
Bolstar	ND		1.0	0.31	ug/L		12/05/16 21:10	12/14/16 19:45	1
Chlorpyrifos	ND		1.5	0.36	ug/L		12/05/16 21:10	12/14/16 19:45	1
Coumaphos	ND		1.0	0.14	ug/L		12/05/16 21:10	12/14/16 19:45	1
Demeton, Total	ND		3.0	0.21	ug/L		12/05/16 21:10	12/14/16 19:45	1
Diazinon	ND		0.50	0.15	ug/L		12/05/16 21:10	12/14/16 19:45	1
Dichlorvos	ND		0.50	0.16	ug/L		12/05/16 21:10	12/14/16 19:45	1
Dimethoate	ND		1.5	0.45	ug/L		12/05/16 21:10	12/14/16 19:45	1
Disulfoton	ND		1.0	0.32	ug/L		12/05/16 21:10	12/14/16 19:45	1
EPN	ND		1.2	0.15	ug/L		12/05/16 21:10	12/14/16 19:45	1
Famphur	ND		1.0	0.18	ug/L		12/05/16 21:10	12/14/16 19:45	1
Fensulfothion	ND		2.5	0.54	ug/L		12/05/16 21:10	12/14/16 19:45	1
Fenthion	ND		2.5	0.15	ug/L		12/05/16 21:10	12/14/16 19:45	1
Malathion	ND		2.0	0.13	ug/L		12/05/16 21:10	12/14/16 19:45	1
Merphos	ND		5.0	0.17	ug/L		12/05/16 21:10	12/14/16 19:45	1
Methyl parathion	ND		4.0	0.14	ug/L		12/05/16 21:10	12/14/16 19:45	1
Mevinphos	ND		6.2	0.46	ug/L		12/05/16 21:10	12/14/16 19:45	1
Ethyl Parathion	ND		1.0	0.14	ug/L		12/05/16 21:10	12/14/16 19:45	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 21:10	12/14/16 19:45	1
Ronnel	ND		10	0.12	ug/L		12/05/16 21:10	12/14/16 19:45	1
Simazine	ND		10	0.22	ug/L		12/05/16 21:10	12/14/16 19:45	1
Sulfotepp	ND		1.5	0.17	ug/L		12/05/16 21:10	12/14/16 19:45	1
Thionazin	ND		1.0	0.31	ug/L		12/05/16 21:10	12/14/16 19:45	1
Tokuthion	ND		1.6	0.12	ug/L		12/05/16 21:10	12/14/16 19:45	1
Trichloronate	ND		1.5	0.24	ug/L		12/05/16 21:10	12/14/16 19:45	1
Ethoprop	ND		1.5	0.18	ug/L		12/05/16 21:10	12/14/16 19:45	1
Propazine	ND		10	0.29	ug/L		12/05/16 21:10	12/14/16 19:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	79		49 - 171	12/05/16 21:10	12/14/16 19:45	1
Triphenylphosphate	85		60 - 154	12/05/16 21:10	12/14/16 19:45	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-354313/2-A
Matrix: Water
Analysis Batch: 355621

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	3.36	J	ug/L		84	52 - 115
Azinphos-methyl	4.00	4.38		ug/L		110	59 - 115
Chlorpyrifos	4.00	3.72		ug/L		93	54 - 115
Coumaphos	4.00	4.26		ug/L		107	63 - 118
Demeton, Total	4.00	3.20		ug/L		80	44 - 115
Diazinon	4.00	3.60		ug/L		90	47 - 115
Dichlorvos	4.00	4.36		ug/L		109	53 - 128
Dimethoate	4.00	2.26		ug/L		57	42 - 115
Disulfoton	4.00	3.46		ug/L		86	45 - 115
EPN	4.00	3.85		ug/L		96	56 - 115
Famphur	4.00	3.71		ug/L		93	62 - 115
Fensulfothion	4.00	3.46		ug/L		87	50 - 115
Fenthion	4.00	3.77		ug/L		94	55 - 115
Malathion	4.00	3.26		ug/L		81	52 - 115
Merphos	4.00	2.88	J	ug/L		72	31 - 115
Methyl parathion	4.00	4.26		ug/L		107	58 - 115
Mevinphos	4.00	2.82	J	ug/L		70	42 - 115
Ethyl Parathion	4.00	3.89		ug/L		97	55 - 115
Phorate	4.00	2.92		ug/L		73	40 - 115
Ronnel	4.00	3.94	J	ug/L		99	55 - 115
Simazine	4.00	2.64	J	ug/L		66	39 - 115
Sulfotepp	4.00	3.70		ug/L		92	53 - 115
Thionazin	4.00	3.67		ug/L		92	54 - 115
Trichloronate	4.00	3.59		ug/L		90	48 - 115
Ethoprop	4.00	3.75		ug/L		94	50 - 115
BolstarFamphur	8.00	7.84		ug/L		98	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*79*		*49 - 171*
Triphenylphosphate	*87*		*60 - 154*

Lab Sample ID: LCSD 280-354313/3-A
Matrix: Water
Analysis Batch: 355621

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354313

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	3.59	J	ug/L		90	52 - 115	7	45
Azinphos-methyl	4.00	4.88	*	ug/L		122	59 - 115	11	20
Chlorpyrifos	4.00	4.47		ug/L		112	54 - 115	19	24
Coumaphos	4.00	4.88	*	ug/L		122	63 - 118	13	20
Demeton, Total	4.00	3.70		ug/L		93	44 - 115	15	38
Diazinon	4.00	3.95		ug/L		99	47 - 115	9	37
Dichlorvos	4.00	5.29	*	ug/L		132	53 - 128	19	37
Dimethoate	4.00	2.38		ug/L		59	42 - 115	5	38
Disulfoton	4.00	3.83		ug/L		96	45 - 115	10	31
EPN	4.00	4.32		ug/L		108	56 - 115	11	20

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCSD 280-354313/3-A
Matrix: Water
Analysis Batch: 355621

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354313

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Famphur			4.00	3.97		ug/L		99	62 - 115	7	20
Fensulfothion			4.00	3.71		ug/L		93	50 - 115	7	27
Fenthion			4.00	4.40		ug/L		110	55 - 115	15	22
Malathion			4.00	3.69		ug/L		92	52 - 115	12	20
Merphos			4.00	3.29	J	ug/L		82	31 - 115	13	25
Methyl parathion			4.00	4.75	*	ug/L		119	58 - 115	11	20
Mevinphos			4.00	3.18	J	ug/L		79	42 - 115	12	27
Ethyl Parathion			4.00	4.49		ug/L		112	55 - 115	14	20
Phorate			4.00	3.33		ug/L		83	40 - 115	13	32
Ronnel			4.00	4.58	J	ug/L		114	55 - 115	15	28
Simazine			4.00	2.90	J	ug/L		73	39 - 115	9	53
Sulfotepp			4.00	4.12		ug/L		103	53 - 115	11	27
Thionazin			4.00	4.15		ug/L		104	54 - 115	12	27
Trichloronate			4.00	4.24		ug/L		106	48 - 115	17	26
Ethoprop			4.00	4.29		ug/L		107	50 - 115	14	29
BolstarFamphur			8.00	8.72		ug/L		109		11	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*93*		*49 - 171*
Triphenylphosphate	*99*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-354292/1-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		12/05/16 15:38	12/09/16 05:24	1
2,4-D	ND		4.0	0.21	ug/L		12/05/16 15:38	12/09/16 05:24	1
2,4-DB	ND		4.0	0.36	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dalapon	ND		2.0	0.91	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dicamba	ND		2.0	0.15	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dichlorprop	ND		4.0	0.65	ug/L		12/05/16 15:38	12/09/16 05:24	1
MCPA	ND		400	17	ug/L		12/05/16 15:38	12/09/16 05:24	1
MCPP	ND		400	33	ug/L		12/05/16 15:38	12/09/16 05:24	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		12/05/16 15:38	12/09/16 05:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*	*12/05/16 15:38*	*12/09/16 05:24*	*1*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-354292/2-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354292

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.73		ug/L		75	45 - 135
2,4-D	5.00	3.98	J	ug/L		80	46 - 126
2,4-DB	5.00	3.81	J	ug/L		76	18 - 135
Dalapon	5.00	4.19		ug/L		84	52 - 119
Dicamba	5.00	4.25		ug/L		85	50 - 128
Dichlorprop	5.00	3.86	J	ug/L		77	44 - 121
MCPA	500	382	J	ug/L		76	43 - 118
MCPP	500	409		ug/L		82	45 - 121
Silvex (2,4,5-TP)	5.00	3.92		ug/L		78	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*

Lab Sample ID: LCSD 280-354292/3-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354292

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.83		ug/L		77	45 - 135	2	30
2,4-D	5.00	4.05		ug/L		81	46 - 126	2	30
2,4-DB	5.00	3.41	J	ug/L		68	18 - 135	11	30
Dalapon	5.00	4.19		ug/L		84	52 - 119	0	30
Dicamba	5.00	4.36		ug/L		87	50 - 128	3	30
Dichlorprop	5.00	3.98	J	ug/L		80	44 - 121	3	30
MCPA	500	386	J	ug/L		77	43 - 118	1	30
MCPP	500	418		ug/L		84	45 - 121	2	30
Silvex (2,4,5-TP)	5.00	3.97		ug/L		79	48 - 127	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*97*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-9886/1-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.0407	J	0.12	0.040	mg/L		12/05/16 10:22	12/05/16 11:46	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 10:22	12/05/16 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*12/05/16 10:22*	*12/05/16 11:46*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/05/16 10:22*	*12/05/16 11:46*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-9886/2-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.38		mg/L		85	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.53		mg/L		96	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*89*		*50 - 150*
n-Triacontane-d62	*90*		*50 - 150*

Lab Sample ID: LCSD 590-9886/3-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 9886

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.61	1.32		mg/L		82	50 - 150	4	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.51		mg/L		94	50 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*86*		*50 - 150*
n-Triacontane-d62	*94*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-9856/1015
Matrix: Water
Analysis Batch: 9856

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			12/02/16 13:12	1
Sulfate	ND		0.50	0.13	mg/L			12/02/16 13:12	1

Lab Sample ID: LCS 590-9856/1014
Matrix: Water
Analysis Batch: 9856

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	12.1		mg/L		97	90 - 110
Sulfate	12.5	12.4		mg/L		99	90 - 110

Lab Sample ID: 590-5117-1 MS
Matrix: Water
Analysis Batch: 9856

Client Sample ID: MW-7D:120116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.2		11.4	11.9		mg/L		94	80 - 120
Sulfate	4.7		11.4	15.6		mg/L		95	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5117-1 MSD — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9856

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.2		11.4	12.0		mg/L		95	80 - 120	1	10
Sulfate	4.7		11.4	16.2		mg/L		101	80 - 120	4	10

Lab Sample ID: 590-5117-1 DU — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9856

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	1.2		1.17		mg/L		0.2	18.8
Sulfate	4.7		4.71		mg/L		0.5	15.7

Lab Sample ID: MB 590-9857/1015 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/02/16 13:12	1
Nitrite as N	ND		0.20	0.069	mg/L			12/02/16 13:12	1

Lab Sample ID: LCS 590-9857/1014 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.84		mg/L		97	90 - 110
Nitrite as N	5.00	4.75		mg/L		95	90 - 110

Lab Sample ID: 590-5117-1 MS — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.27		4.55	4.56		mg/L		94	80 - 120
Nitrite as N	ND		4.55	4.39		mg/L		97	80 - 120

Lab Sample ID: 590-5117-1 MSD — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9857

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.27		4.55	4.73		mg/L		98	80 - 120	4	12.1
Nitrite as N	ND		4.55	4.55		mg/L		100	80 - 120	4	10

Lab Sample ID: 590-5117-1 DU — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9857

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.27		0.273		mg/L		2	13.1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5117-1 DU
Matrix: Water
Analysis Batch: 9857

Client Sample ID: MW-7D:120116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	ND			ND		mg/L				NC	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-140834/1-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140834

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.27	pg/L		12/06/16 13:53	12/09/16 02:17	1
2,3,7,8-TCDF	ND		10	0.24	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8-PeCDD	ND		50	0.47	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8-PeCDF	0.398	J q	50	0.28	pg/L		12/06/16 13:53	12/09/16 02:17	1
2,3,4,7,8-PeCDF	ND		50	0.30	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,7,8-HxCDD	ND		50	0.29	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,6,7,8-HxCDD	ND		50	0.27	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8,9-HxCDD	ND		50	0.22	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,7,8-HxCDF	ND		50	0.38	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,6,7,8-HxCDF	ND		50	0.34	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,7,8,9-HxCDF	0.844	J q	50	0.36	pg/L		12/06/16 13:53	12/09/16 02:17	1
2,3,4,6,7,8-HxCDF	0.691	J	50	0.37	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,6,7,8-HpCDD	1.24	J	50	0.27	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,6,7,8-HpCDF	0.805	J q	50	0.34	pg/L		12/06/16 13:53	12/09/16 02:17	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.39	pg/L		12/06/16 13:53	12/09/16 02:17	1
OCDD	4.08	J	100	0.38	pg/L		12/06/16 13:53	12/09/16 02:17	1
OCDF	ND		100	0.44	pg/L		12/06/16 13:53	12/09/16 02:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*79*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,6,7,8-HxCDD	*75*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*76*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*
13C-OCDD	*92*		*40 - 135*	*12/06/16 13:53*	*12/09/16 02:17*	*1*

Lab Sample ID: LCS 320-140834/2-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD			200	189		pg/L		95	64 - 142		
2,3,7,8-TCDF			200	209		pg/L		104	71 - 142		
1,2,3,7,8-PeCDD			1000	1010		pg/L		101	71 - 140		
1,2,3,7,8-PeCDF			1000	1020		pg/L		102	76 - 135		
2,3,4,7,8-PeCDF			1000	1060		pg/L		106	74 - 137		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-140834/2-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	977		pg/L		98	56 - 146		
1,2,3,6,7,8-HxCDD			1000	1030		pg/L		103	73 - 144		
1,2,3,7,8,9-HxCDD			1000	972		pg/L		97	71 - 151		
1,2,3,4,7,8-HxCDF			1000	1010		pg/L		101	75 - 131		
1,2,3,6,7,8-HxCDF			1000	1050		pg/L		105	76 - 133		
1,2,3,7,8,9-HxCDF			1000	1020		pg/L		102	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1090		pg/L		109	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	989		pg/L		99	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	994		pg/L		99	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	950		pg/L		95	83 - 130		
OCDD			2000	1880		pg/L		94	80 - 132		
OCDF			2000	1860		pg/L		93	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*80*		*40 - 135*
13C-2,3,7,8-TCDF	*74*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*86*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*86*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*90*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*
13C-OCDD	*99*		*40 - 135*

Lab Sample ID: LCSD 320-140834/3-A
Matrix: Water
Analysis Batch: 141370

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 140834

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	200		pg/L		100	64 - 142	5	20
2,3,7,8-TCDF			200	217		pg/L		108	71 - 142	4	20
1,2,3,7,8-PeCDD			1000	1050		pg/L		105	71 - 140	4	20
1,2,3,7,8-PeCDF			1000	1050		pg/L		105	76 - 135	4	20
2,3,4,7,8-PeCDF			1000	1070		pg/L		107	74 - 137	1	20
1,2,3,4,7,8-HxCDD			1000	1030		pg/L		103	56 - 146	6	20
1,2,3,6,7,8-HxCDD			1000	1060		pg/L		106	73 - 144	2	20
1,2,3,7,8,9-HxCDD			1000	1010		pg/L		101	71 - 151	4	20
1,2,3,4,7,8-HxCDF			1000	1060		pg/L		106	75 - 131	5	20
1,2,3,6,7,8-HxCDF			1000	1080		pg/L		108	76 - 133	3	20
1,2,3,7,8,9-HxCDF			1000	1070		pg/L		107	77 - 142	5	20
2,3,4,6,7,8-HxCDF			1000	1150		pg/L		115	80 - 137	5	20
1,2,3,4,6,7,8-HpCDD			1000	1060		pg/L		106	78 - 139	7	20
1,2,3,4,6,7,8-HpCDF			1000	1060		pg/L		106	79 - 133	7	20
1,2,3,4,7,8,9-HpCDF			1000	1020		pg/L		102	83 - 130	7	20
OCDD			2000	2010		pg/L		100	80 - 132	6	20
OCDF			2000	2000		pg/L		100	72 - 140	7	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	*79*		*40 - 135*
13C-2,3,7,8-TCDF	*73*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*93*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*
13C-OCDD	*100*		*40 - 135*

Lab Sample ID: MB 320-141107/1-A
Matrix: Water
Analysis Batch: 141543

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141107

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.24	pg/L		12/07/16 16:59	12/09/16 14:19	1
2,3,7,8-TCDF	ND		10	0.16	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,7,8-PeCDD	ND		50	0.36	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,7,8-PeCDF	ND		50	0.23	pg/L		12/07/16 16:59	12/09/16 14:19	1
2,3,4,7,8-PeCDF	ND		50	0.25	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,4,7,8-HxCDD	ND		50	0.26	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,6,7,8-HxCDD	ND		50	0.23	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,7,8,9-HxCDD	ND		50	0.20	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,4,7,8-HxCDF	0.505	J q	50	0.24	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,6,7,8-HxCDF	ND		50	0.22	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,7,8,9-HxCDF	ND		50	0.23	pg/L		12/07/16 16:59	12/09/16 14:19	1
2,3,4,6,7,8-HxCDF	ND		50	0.24	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,4,6,7,8-HpCDD	1.04	J	50	0.26	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,4,6,7,8-HpCDF	0.500	J q	50	0.26	pg/L		12/07/16 16:59	12/09/16 14:19	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.30	pg/L		12/07/16 16:59	12/09/16 14:19	1
OCDD	2.94	J q	100	0.47	pg/L		12/07/16 16:59	12/09/16 14:19	1
OCDF	1.94	J	100	0.39	pg/L		12/07/16 16:59	12/09/16 14:19	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	*86*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-1,2,3,7,8-PeCDD	*91*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*96*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*95*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*
13C-OCDD	*102*		*40 - 135*	*12/07/16 16:59*	*12/09/16 14:19*	*1*

Lab Sample ID: LCS 320-141107/2-A
Matrix: Water
Analysis Batch: 141543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	193		pg/L		97	64 - 142
2,3,7,8-TCDF	200	210		pg/L		105	71 - 142
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	71 - 140
1,2,3,7,8-PeCDF	1000	1010		pg/L		101	76 - 135
2,3,4,7,8-PeCDF	1000	1030		pg/L		103	74 - 137

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-141107/2-A
Matrix: Water
Analysis Batch: 141543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141107

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	955		pg/L		95	56 - 146		
1,2,3,6,7,8-HxCDD			1000	1010		pg/L		101	73 - 144		
1,2,3,7,8,9-HxCDD			1000	915		pg/L		91	71 - 151		
1,2,3,4,7,8-HxCDF			1000	1010		pg/L		101	75 - 131		
1,2,3,6,7,8-HxCDF			1000	1040		pg/L		104	76 - 133		
1,2,3,7,8,9-HxCDF			1000	986		pg/L		99	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1070		pg/L		107	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	985		pg/L		99	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	991		pg/L		99	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	954		pg/L		95	83 - 130		
OCDD			2000	1860		pg/L		93	80 - 132		
OCDF			2000	1860		pg/L		93	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*92*		*40 - 135*
13C-2,3,7,8-TCDF	*85*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*98*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*90*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*101*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*93*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*105*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*103*		*40 - 135*
13C-OCDD	*110*		*40 - 135*

Lab Sample ID: LCSD 320-141107/3-A
Matrix: Water
Analysis Batch: 141543

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 141107

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	195		pg/L		98	64 - 142	1	20
2,3,7,8-TCDF			200	209		pg/L		104	71 - 142	1	20
1,2,3,7,8-PeCDD			1000	1020		pg/L		102	71 - 140	0	20
1,2,3,7,8-PeCDF			1000	1040		pg/L		104	76 - 135	2	20
2,3,4,7,8-PeCDF			1000	1030		pg/L		103	74 - 137	0	20
1,2,3,4,7,8-HxCDD			1000	933		pg/L		93	56 - 146	2	20
1,2,3,6,7,8-HxCDD			1000	1010		pg/L		101	73 - 144	0	20
1,2,3,7,8,9-HxCDD			1000	938		pg/L		94	71 - 151	3	20
1,2,3,4,7,8-HxCDF			1000	1010		pg/L		101	75 - 131	1	20
1,2,3,6,7,8-HxCDF			1000	1040		pg/L		104	76 - 133	0	20
1,2,3,7,8,9-HxCDF			1000	1040		pg/L		104	77 - 142	5	20
2,3,4,6,7,8-HxCDF			1000	1100		pg/L		110	80 - 137	3	20
1,2,3,4,6,7,8-HpCDD			1000	1010		pg/L		101	78 - 139	2	20
1,2,3,4,6,7,8-HpCDF			1000	1030		pg/L		103	79 - 133	4	20
1,2,3,4,7,8,9-HpCDF			1000	1000		pg/L		100	83 - 130	5	20
OCDD			2000	1960		pg/L		98	80 - 132	6	20
OCDF			2000	1960		pg/L		98	72 - 140	6	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	90		40 - 135
13C-2,3,7,8-TCDF	85		40 - 135
13C-1,2,3,7,8-PeCDD	97		40 - 135
13C-1,2,3,7,8-PeCDF	90		40 - 135
13C-1,2,3,6,7,8-HxCDD	100		40 - 135
13C-1,2,3,4,7,8-HxCDF	91		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	102		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	99		40 - 135
13C-OCDD	108		40 - 135

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-234414/11-A
Matrix: Water
Analysis Batch: 234558

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0955		mg/L		95	85 - 115
Antimony	0.100	0.0931		mg/L		93	85 - 115
Barium	0.100	0.0942		mg/L		94	85 - 115
Beryllium	0.100	0.0926		mg/L		93	85 - 115
Cadmium	0.100	0.0962		mg/L		96	85 - 115
Chromium	0.100	0.0959		mg/L		96	85 - 115
Copper	0.100	0.0942		mg/L		94	85 - 115
Iron	10.0	9.69		mg/L		97	85 - 115
Lead	0.100	0.0966		mg/L		97	85 - 115
Manganese	0.100	0.0972		mg/L		97	85 - 115
Nickel	0.100	0.0941		mg/L		94	85 - 115
Selenium	0.100	0.0977		mg/L		98	85 - 115
Silver	0.100	0.0963		mg/L		96	85 - 115
Thallium	0.100	0.0978		mg/L		98	85 - 115
Vanadium	0.100	0.0965		mg/L		96	85 - 115
Zinc	0.100	0.0941		mg/L		94	85 - 115

Lab Sample ID: LCSD 580-234414/12-A
Matrix: Water
Analysis Batch: 234558

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0961		mg/L		96	85 - 115	1	20
Antimony	0.100	0.0936		mg/L		94	85 - 115	0	20
Barium	0.100	0.0944		mg/L		94	85 - 115	0	20
Beryllium	0.100	0.0920		mg/L		92	85 - 115	1	20
Cadmium	0.100	0.0965		mg/L		97	85 - 115	0	20
Chromium	0.100	0.0938		mg/L		94	85 - 115	2	20
Copper	0.100	0.0952		mg/L		95	85 - 115	1	20
Iron	10.0	9.53		mg/L		95	85 - 115	2	20
Lead	0.100	0.0963		mg/L		96	85 - 115	0	20
Manganese	0.100	0.0963		mg/L		96	85 - 115	1	20
Nickel	0.100	0.0953		mg/L		95	85 - 115	1	20
Selenium	0.100	0.0985		mg/L		98	85 - 115	1	20
Silver	0.100	0.0965		mg/L		97	85 - 115	0	20
Thallium	0.100	0.0965		mg/L		96	85 - 115	1	20
Vanadium	0.100	0.0945		mg/L		95	85 - 115	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-234414/12-A
Matrix: Water
Analysis Batch: 234558

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234414

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc			0.100	0.0946		mg/L		95	85 - 115	1	20

Lab Sample ID: MB 580-234526/14-A
Matrix: Water
Analysis Batch: 234617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/14/16 15:22	12/15/16 10:19	1
Antimony	ND		0.00040	0.000080	mg/L		12/14/16 15:22	12/15/16 10:19	1
Barium	ND		0.0012	0.000054	mg/L		12/14/16 15:22	12/15/16 10:19	1
Beryllium	ND		0.00040	0.00010	mg/L		12/14/16 15:22	12/15/16 10:19	1
Cadmium	ND		0.00040	0.000028	mg/L		12/14/16 15:22	12/15/16 10:19	1
Chromium	ND		0.00040	0.00014	mg/L		12/14/16 15:22	12/15/16 10:19	1
Copper	ND		0.0020	0.00060	mg/L		12/14/16 15:22	12/15/16 10:19	1
Iron	ND		0.040	0.0058	mg/L		12/14/16 15:22	12/15/16 10:19	1
Lead	ND		0.00040	0.000034	mg/L		12/14/16 15:22	12/15/16 10:19	1
Manganese	ND		0.0020	0.00035	mg/L		12/14/16 15:22	12/15/16 10:19	1
Nickel	ND		0.0030	0.00040	mg/L		12/14/16 15:22	12/15/16 10:19	1
Selenium	ND		0.0010	0.00030	mg/L		12/14/16 15:22	12/15/16 10:19	1
Silver	ND		0.00040	0.000030	mg/L		12/14/16 15:22	12/15/16 10:19	1
Thallium	ND		0.0010	0.00014	mg/L		12/14/16 15:22	12/15/16 10:19	1
Vanadium	ND		0.0040	0.00098	mg/L		12/14/16 15:22	12/15/16 10:19	1
Zinc	ND		0.0070	0.0019	mg/L		12/14/16 15:22	12/15/16 10:19	1

Lab Sample ID: LCS 580-234526/15-A
Matrix: Water
Analysis Batch: 234617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234526

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			0.100	0.0931		mg/L		93	85 - 115
Antimony			0.100	0.0919		mg/L		92	85 - 115
Barium			0.100	0.0938		mg/L		94	85 - 115
Beryllium			0.100	0.0926		mg/L		93	85 - 115
Cadmium			0.100	0.0934		mg/L		93	85 - 115
Chromium			0.100	0.0933		mg/L		93	85 - 115
Copper			0.100	0.0933		mg/L		93	85 - 115
Iron			10.0	9.36		mg/L		94	85 - 115
Lead			0.100	0.0942		mg/L		94	85 - 115
Manganese			0.100	0.0929		mg/L		93	85 - 115
Nickel			0.100	0.0932		mg/L		93	85 - 115
Selenium			0.100	0.0940		mg/L		94	85 - 115
Silver			0.100	0.0949		mg/L		95	85 - 115
Thallium			0.100	0.0949		mg/L		95	85 - 115
Vanadium			0.100	0.0931		mg/L		93	85 - 115
Zinc			0.100	0.0911		mg/L		91	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-234526/16-A
Matrix: Water
Analysis Batch: 234617

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234526

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0942		mg/L		94	85 - 115	1	20
Antimony	0.100	0.0942		mg/L		94	85 - 115	3	20
Barium	0.100	0.0956		mg/L		96	85 - 115	2	20
Beryllium	0.100	0.0939		mg/L		94	85 - 115	1	20
Cadmium	0.100	0.0943		mg/L		94	85 - 115	1	20
Chromium	0.100	0.0955		mg/L		96	85 - 115	2	20
Copper	0.100	0.0946		mg/L		95	85 - 115	1	20
Iron	10.0	9.49		mg/L		95	85 - 115	1	20
Lead	0.100	0.0968		mg/L		97	85 - 115	3	20
Manganese	0.100	0.0943		mg/L		94	85 - 115	1	20
Nickel	0.100	0.0951		mg/L		95	85 - 115	2	20
Selenium	0.100	0.0954		mg/L		95	85 - 115	1	20
Silver	0.100	0.0954		mg/L		95	85 - 115	1	20
Thallium	0.100	0.0972		mg/L		97	85 - 115	2	20
Vanadium	0.100	0.0946		mg/L		95	85 - 115	2	20
Zinc	0.100	0.0930		mg/L		93	85 - 115	2	20

Lab Sample ID: MB 580-233919/7-C
Matrix: Water
Analysis Batch: 234558

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 234414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/13/16 13:28	12/14/16 14:20	1
Antimony	ND		0.00040	0.000080	mg/L		12/13/16 13:28	12/14/16 14:20	1
Barium	ND		0.0012	0.000054	mg/L		12/13/16 13:28	12/14/16 14:20	1
Beryllium	ND		0.00040	0.00010	mg/L		12/13/16 13:28	12/14/16 14:20	1
Cadmium	ND		0.00040	0.000028	mg/L		12/13/16 13:28	12/14/16 14:20	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/16 13:28	12/14/16 14:20	1
Copper	ND		0.0020	0.00060	mg/L		12/13/16 13:28	12/14/16 14:20	1
Iron	ND		0.040	0.0058	mg/L		12/13/16 13:28	12/14/16 14:20	1
Lead	ND		0.00040	0.000034	mg/L		12/13/16 13:28	12/14/16 14:20	1
Manganese	ND		0.0020	0.00035	mg/L		12/13/16 13:28	12/14/16 14:20	1
Nickel	ND		0.0030	0.00040	mg/L		12/13/16 13:28	12/14/16 14:20	1
Selenium	ND		0.0010	0.00030	mg/L		12/13/16 13:28	12/14/16 14:20	1
Silver	ND		0.00040	0.000030	mg/L		12/13/16 13:28	12/14/16 14:20	1
Thallium	ND		0.0010	0.00014	mg/L		12/13/16 13:28	12/14/16 14:20	1
Vanadium	ND		0.0040	0.00098	mg/L		12/13/16 13:28	12/14/16 14:20	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/16 13:28	12/14/16 14:20	1

Lab Sample ID: 590-5117-2 MS
Matrix: Water
Analysis Batch: 234558

Client Sample ID: MW-7B:120116
Prep Type: Dissolved
Prep Batch: 234414

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00041	J	0.100	0.0949		mg/L		94	70 - 130
Antimony	0.00062		0.100	0.0911		mg/L		91	70 - 130
Barium	0.051		0.100	0.143		mg/L		92	70 - 130
Beryllium	ND		0.100	0.0926		mg/L		93	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5117-2 MS
Matrix: Water
Analysis Batch: 234558

Client Sample ID: MW-7B:120116
Prep Type: Dissolved
Prep Batch: 234414

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.000037	J	0.100	0.0967		mg/L		97	70 - 130
Chromium	0.0013		0.100	0.0950		mg/L		94	70 - 130
Copper	0.0014	J	0.100	0.0940		mg/L		93	70 - 130
Iron	0.012	J	10.0	9.45		mg/L		94	70 - 130
Lead	ND		0.100	0.0948		mg/L		95	70 - 130
Manganese	0.0010	J	0.100	0.0957		mg/L		95	70 - 130
Nickel	0.0018	J	0.100	0.0933		mg/L		91	70 - 130
Selenium	0.00052	J	0.100	0.0968		mg/L		96	70 - 130
Silver	ND		0.100	0.0964		mg/L		96	70 - 130
Thallium	ND		0.100	0.0960		mg/L		96	70 - 130
Vanadium	0.0025	J	0.100	0.0968		mg/L		94	70 - 130
Zinc	0.043		0.100	0.133		mg/L		90	70 - 130

Lab Sample ID: 590-5117-2 MSD
Matrix: Water
Analysis Batch: 234558

Client Sample ID: MW-7B:120116
Prep Type: Dissolved
Prep Batch: 234414

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.00041	J	0.100	0.0960		mg/L		96	70 - 130	1	20
Antimony	0.00062		0.100	0.0939		mg/L		93	70 - 130	3	20
Barium	0.051		0.100	0.145		mg/L		94	70 - 130	2	20
Beryllium	ND		0.100	0.0933		mg/L		93	70 - 130	1	20
Cadmium	0.000037	J	0.100	0.0985		mg/L		98	70 - 130	2	20
Chromium	0.0013		0.100	0.0967		mg/L		95	70 - 130	2	20
Copper	0.0014	J	0.100	0.0950		mg/L		94	70 - 130	1	20
Iron	0.012	J	10.0	9.64		mg/L		96	70 - 130	2	20
Lead	ND		0.100	0.0962		mg/L		96	70 - 130	1	20
Manganese	0.0010	J	0.100	0.0970		mg/L		96	70 - 130	1	20
Nickel	0.0018	J	0.100	0.0941		mg/L		92	70 - 130	1	20
Selenium	0.00052	J	0.100	0.0981		mg/L		98	70 - 130	1	20
Silver	ND		0.100	0.0976		mg/L		98	70 - 130	1	20
Thallium	ND		0.100	0.0979		mg/L		98	70 - 130	2	20
Vanadium	0.0025	J	0.100	0.0981		mg/L		96	70 - 130	1	20
Zinc	0.043		0.100	0.134		mg/L		90	70 - 130	0	20

Lab Sample ID: 590-5117-2 DU
Matrix: Water
Analysis Batch: 234558

Client Sample ID: MW-7B:120116
Prep Type: Dissolved
Prep Batch: 234414

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.00041	J	0.000394	J	mg/L		4	20
Antimony	0.00062		0.000638		mg/L		3	20
Barium	0.051		0.0501		mg/L		2	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	0.000037	J	0.0000350	J	mg/L		5	20
Chromium	0.0013		0.00126		mg/L		0.5	20
Copper	0.0014	J	0.00132	J	mg/L		7	20
Iron	0.012	J	0.00780	J F5	mg/L		46	20
Lead	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5117-2 DU — **Client Sample ID: MW-7B:120116**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234558 — **Prep Batch: 234414**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Manganese	0.0010	J		0.000838	J	mg/L				20	20
Nickel	0.0018	J		0.00168	J	mg/L				4	20
Selenium	0.00052	J		0.000442	J	mg/L				17	20
Silver	ND			ND		mg/L				NC	20
Thallium	ND			ND		mg/L				NC	20
Vanadium	0.0025	J		0.00236	J	mg/L				4	20
Zinc	0.043			0.0419		mg/L				3	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: LCS 580-234390/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234390**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00195		mg/L		97	85 - 115		

Lab Sample ID: LCSD 580-234390/12-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234390**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00199		mg/L		100	85 - 115	2	20

Lab Sample ID: MB 580-234409/22-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:07	1

Lab Sample ID: LCS 580-234409/23-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00203		mg/L		101	85 - 115		

Lab Sample ID: LCSD 580-234409/24-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00201		mg/L		101	85 - 115	1	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 590-5117-1 MS — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00200		mg/L		100	70 - 130

Lab Sample ID: 590-5117-1 MSD — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00204		mg/L		102	70 - 130	2	20

Lab Sample ID: MB 580-233919/7-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234390**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:34	12/13/16 15:18	1

Lab Sample ID: 590-5117-1 MS — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234390**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00196		mg/L		98	70 - 130

Lab Sample ID: 590-5117-1 MSD — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234390**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00190		mg/L		95	70 - 130	3	20

Lab Sample ID: 590-5117-1 DU — **Client Sample ID: MW-7D:120116**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234390**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-392768/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392979 — **Prep Batch: 392768**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/08/16 10:53	12/08/16 17:35	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 490-392768/2-A
Matrix: Water
Analysis Batch: 392979

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 392768

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.106		mg/L		106	90 - 110

Lab Sample ID: LCSD 490-392768/3-A
Matrix: Water
Analysis Batch: 392979

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 392768

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.106		mg/L		106	90 - 110	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-391941/1-A
Matrix: Water
Analysis Batch: 394011

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 391941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		12/06/16 09:08	12/13/16 11:05	1

Lab Sample ID: LCS 490-391941/2-A
Matrix: Water
Analysis Batch: 394011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	4.63		mg/L		93	90 - 110

Lab Sample ID: 590-5117-6 MS
Matrix: Water
Analysis Batch: 394011

Client Sample ID: MW-5A:120116
Prep Type: Total/NA
Prep Batch: 391941

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		5.00	4.71		mg/L		94	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-393766/3
Matrix: Water
Analysis Batch: 393766

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/12/16 18:34	1

Lab Sample ID: LCS 490-393766/4
Matrix: Water
Analysis Batch: 393766

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.2		mg/L		96	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-393766/5
Matrix: Water
Analysis Batch: 393766

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	50.4		mg/L		101	90 - 110	4	20

Lab Sample ID: 590-5117-1 MS
Matrix: Water
Analysis Batch: 393766

Client Sample ID: MW-7D:120116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	4.3	J F1	50.0	48.1	F1	mg/L		88	90 - 110		

Method: SM 5310C - TOC

Lab Sample ID: MB 490-393976/2
Matrix: Water
Analysis Batch: 393976

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			12/12/16 15:33	1

Lab Sample ID: LCS 490-393976/6
Matrix: Water
Analysis Batch: 393976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.1		mg/L		101	90 - 110		
TOC Result 1			10.0	10.2		mg/L		102	90 - 110		
TOC Result 2			10.0	10.0		mg/L		100	90 - 110		

Lab Sample ID: 590-5117-6 MS
Matrix: Water
Analysis Batch: 393976

Client Sample ID: MW-5A:120116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	1.5		20.0	21.4		mg/L		99	75 - 122		
TOC Result 1	1.5		20.0	21.6		mg/L		100	75 - 122		
TOC Result 2	1.5		20.0	21.2		mg/L		99	75 - 122		

Lab Sample ID: 590-5117-6 MSD
Matrix: Water
Analysis Batch: 393976

Client Sample ID: MW-5A:120116
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	1.5		20.0	20.9		mg/L		97	75 - 122	2	20
TOC Result 1	1.5		20.0	21.1		mg/L		98	75 - 122	2	20
TOC Result 2	1.5		20.0	20.8		mg/L		96	75 - 122	2	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7D:120116

Date Collected: 12/01/16 09:10
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 01:53	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 01:53	MRS	TAL SPK
Total/NA	Prep	3520C			1049.6 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 01:26	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 18:13	NMI	TAL SPK
Total/NA	Prep	3510C			247.7 mL	2.5 mL	233926	12/06/16 11:10	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234120	12/08/16 05:22	DCV	TAL SEA
Total/NA	Prep	3510C			262.6 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 16:56	NMI	TAL SPK
Total/NA	Prep	3510C			960.3 mL	2 mL	354313	12/05/16 21:10	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355621	12/14/16 21:20	TEM	TAL DEN
Total/NA	Prep	8151A			1028.8 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 10:21	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			246.4 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 17:21	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9856	12/02/16 14:08	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9857	12/02/16 14:08	MRS	TAL SPK
Total/NA	Prep	8290			999.8 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 08:26	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234414	12/13/16 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234558	12/14/16 15:14	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234526	12/14/16 15:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234617	12/15/16 11:13	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234390	12/13/16 12:34	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:25	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:58	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 17:38	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392768	12/08/16 10:53	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392979	12/08/16 17:48	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391941	12/06/16 09:08	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394011	12/13/16 11:11	BLM	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393766	12/12/16 18:34	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	393976	12/12/16 19:03	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9850	12/01/16 14:50	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-7B:120116

Date Collected: 12/01/16 10:31
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 02:14	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 02:14	MRS	TAL SPK
Total/NA	Prep	3520C			1040.1 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 01:50	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 18:36	NMI	TAL SPK
Total/NA	Prep	3510C			254.4 mL	2.5 mL	233926	12/06/16 11:10	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234120	12/08/16 05:41	DCV	TAL SEA
Total/NA	Prep	3510C			206.2 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 17:16	NMI	TAL SPK
Total/NA	Prep	3510C			1048.9 mL	2 mL	354313	12/05/16 21:10	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355621	12/14/16 21:51	TEM	TAL DEN
Total/NA	Prep	8151A			1045.5 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 10:44	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			228.5 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 17:38	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9856	12/02/16 11:54	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9857	12/02/16 11:54	MRS	TAL SPK
Total/NA	Prep	8290			1040.1 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 09:12	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234414	12/13/16 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234558	12/14/16 14:25	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234526	12/14/16 15:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234617	12/15/16 11:18	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234390	12/13/16 12:34	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:34	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:59	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 17:45	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392768	12/08/16 10:53	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392979	12/08/16 17:49	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391941	12/06/16 09:08	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394011	12/13/16 11:13	BLM	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393766	12/12/16 18:34	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	393976	12/12/16 19:21	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9850	12/01/16 14:50	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-15A:120116

Date Collected: 12/01/16 12:20
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 02:36	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 02:36	MRS	TAL SPK
Total/NA	Prep	3520C			1008.7 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 02:15	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 18:59	NMI	TAL SPK
Total/NA	Prep	3510C			261.1 mL	2.5 mL	233926	12/06/16 11:10	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234120	12/08/16 06:01	DCV	TAL SEA
Total/NA	Prep	3510C			251.7 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 17:37	NMI	TAL SPK
Total/NA	Prep	3510C			1042.6 mL	2 mL	354313	12/05/16 21:10	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355621	12/14/16 23:25	TEM	TAL DEN
Total/NA	Prep	8151A			1045.6 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 11:07	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			236.2 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 17:55	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9856	12/02/16 12:05	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9857	12/02/16 12:05	MRS	TAL SPK
Total/NA	Prep	8290			1050.8 mL	20 uL	140834	12/06/16 13:53	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141370	12/09/16 09:58	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234414	12/13/16 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234558	12/14/16 15:19	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234526	12/14/16 15:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234617	12/15/16 11:22	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234390	12/13/16 12:34	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:36	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:59	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 17:47	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392768	12/08/16 10:53	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392979	12/08/16 17:50	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391941	12/06/16 09:08	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394011	12/13/16 11:14	BLM	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393766	12/12/16 18:34	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	393976	12/12/16 19:37	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9850	12/01/16 14:50	SJK	TAL SPK

Client Sample ID: MW-2A:120116
Date Collected: 12/01/16 09:05
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 02:57	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 02:57	MRS	TAL SPK
Total/NA	Prep	3520C			1051.9 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 02:39	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 19:21	NMI	TAL SPK
Total/NA	Prep	3510C			262.4 mL	2.5 mL	233926	12/06/16 11:10	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234120	12/08/16 06:20	DCV	TAL SEA
Total/NA	Prep	3510C			275.8 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 17:57	NMI	TAL SPK
Total/NA	Prep	3510C			1054.3 mL	2 mL	354313	12/05/16 21:10	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355621	12/14/16 23:57	TEM	TAL DEN
Total/NA	Prep	8151A			1057.3 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 11:30	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			250.5 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 18:12	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9856	12/02/16 12:17	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9857	12/02/16 12:17	MRS	TAL SPK
Total/NA	Prep	8290			1056.8 mL	20 uL	141107	12/07/16 16:59	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141543	12/09/16 16:37	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234414	12/13/16 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234558	12/14/16 15:23	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234526	12/14/16 15:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234617	12/15/16 11:27	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234390	12/13/16 12:34	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:39	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:59	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 17:49	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392768	12/08/16 10:53	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392979	12/08/16 17:51	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391941	12/06/16 09:08	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394011	12/13/16 11:15	BLM	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393766	12/12/16 18:34	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	393976	12/12/16 20:32	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9850	12/01/16 14:50	SJK	TAL SPK

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-3:120116
Date Collected: 12/01/16 10:11
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 03:19	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 03:19	MRS	TAL SPK
Total/NA	Prep	3520C			1046.8 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 03:03	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 19:44	NMI	TAL SPK
Total/NA	Prep	3510C			257.3 mL	2.5 mL	233926	12/06/16 11:10	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234120	12/08/16 06:39	DCV	TAL SEA
Total/NA	Prep	3510C			256.1 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 18:18	NMI	TAL SPK
Total/NA	Prep	3510C			1052.1 mL	2 mL	354313	12/05/16 21:10	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355621	12/15/16 00:28	TEM	TAL DEN
Total/NA	Prep	8151A			1057.5 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 11:53	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			252.1 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 18:29	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9856	12/02/16 12:39	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9857	12/02/16 12:39	MRS	TAL SPK
Total/NA	Prep	8290			1046.1 mL	20 uL	141107	12/07/16 16:59	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141543	12/09/16 17:23	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234414	12/13/16 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234558	12/14/16 15:28	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234526	12/14/16 15:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234617	12/15/16 11:31	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234390	12/13/16 12:34	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:46	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:59	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 17:51	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392768	12/08/16 10:53	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392979	12/08/16 17:51	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391941	12/06/16 09:08	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394011	12/13/16 11:16	BLM	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393766	12/12/16 18:34	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	393976	12/12/16 20:48	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9850	12/01/16 14:50	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Client Sample ID: MW-5A:120116

Date Collected: 12/01/16 11:52
Date Received: 12/01/16 14:00

Lab Sample ID: 590-5117-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9880	12/03/16 03:40	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9881	12/03/16 03:40	MRS	TAL SPK
Total/NA	Prep	3520C			1021.4 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 03:27	D1R	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 20:30	NMI	TAL SPK
Total/NA	Prep	3510C			257.6 mL	2.5 mL	233926	12/06/16 11:10	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234120	12/08/16 06:58	DCV	TAL SEA
Total/NA	Prep	3510C			261.7 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 18:39	NMI	TAL SPK
Total/NA	Prep	3510C			1032.7 mL	2 mL	354313	12/05/16 21:10	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355621	12/15/16 01:00	TEM	TAL DEN
Total/NA	Prep	8151A			1044 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 12:16	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			248 mL	2 mL	9886	12/05/16 10:22	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 18:45	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9856	12/02/16 12:50	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9857	12/02/16 12:50	MRS	TAL SPK
Total/NA	Prep	8290			1009.6 mL	20 uL	141107	12/07/16 16:59	DXD	TAL SAC
Total/NA	Analysis	8290A		1			141543	12/09/16 18:10	ALM	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234414	12/13/16 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234558	12/14/16 15:32	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234526	12/14/16 15:22	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234617	12/15/16 11:36	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233919	12/06/16 10:31	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234390	12/13/16 12:34	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 15:48	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:59	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 17:54	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392768	12/08/16 10:53	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392979	12/08/16 17:52	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	391941	12/06/16 09:08	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394011	12/13/16 11:17	BLM	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393766	12/12/16 18:34	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	393976	12/12/16 21:05	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9850	12/01/16 14:50	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / JWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.3
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-7D:120116	120116	~~0910~~	G	Water	N		x	x	x	x	x	x	x	x	x	x	x	x	x	23	
MW-7B:120116		1031		Water																	
MW-15A:120116		1220		Water																	
MW-2A:120116		0905		Water																	
MW-3:120116		1011		Water																	
MW-5A:120116		1152		Water																	
				Water																	

590-5117 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	12/1/16 1400	GET	Sherila Krach	12/1/16 1400	TAL-SPK
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		3.3°C, 2.0°C, 1.4°C, 2.6°C, 2.1°C, 4.7°C IR003

12/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / JWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
MW-7D: 120116	12/1/16	0910	G	Water	N		X	X	X	23	
MW-7B: 120116		1031		Water							
MW-15A: 120116		1220		Water							
MW-2A: 120116		0905		Water							
MW-3: 120116		1011		Water							
MW-5A: 120116		1152		Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	12/1/16 1400	GEI	Theresa Krach	12/1/16 1400	TASpok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3°, 4.0°, 1.4°, 2.0°, 4.4°, 4.7° IR003

12/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2339.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5117-1
Address: 4955 Yarrow Street,	Due Date Requested: 12/13/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

590-5117 Chain of Custody

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total N	Special Instructions/Note:
			Preservation Code:							
MW-7D:120116 (590-5117-1)	12/1/16	09:10 Pacific		Water			X	X	4	
MW-7B:120116 (590-5117-2)	12/1/16	10:31 Pacific		Water			X	X	3	
MW-15A:120116 (590-5117-3)	12/1/16	12:20 Pacific		Water			X	X	4	
MW-2A:120116 (590-5117-4)	12/1/16	09:05 Pacific		Water			X	X	4	
MW-3:120116 (590-5117-5)	12/1/16	10:11 Pacific		Water			X	X	4	
MW-5A:120116 (590-5117-6)	12/1/16	11:52 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Shenda Knaly	12/2/16 1030	TAL SPK			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2, 3.6, 5.2 IRS CF-0.2 transfered SPK 12-5-16

12/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2340.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5117-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/15/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7D:120116 (590-5117-1)	12/1/16	09:10 Pacific		Water			X	2	
MW-7B:120116 (590-5117-2)	12/1/16	10:31 Pacific		Water			X	2	
MW-15A:120116 (590-5117-3)	12/1/16	12:20 Pacific		Water			X	2	
MW-2A:120116 (590-5117-4)	12/1/16	09:05 Pacific		Water			X	2	
MW-3:120116 (590-5117-5)	12/1/16	10:11 Pacific		Water			X	2	
MW-5A:120116 (590-5117-6)	12/1/16	11:52 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Knapp	12/2/16 1035	TAPCX	Ali Zeighami	12/3/16	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.7

12/20/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM



590-5117 Chain of Custody

Cooler Received/Opened On 12/3/2016 @0925

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 2437 (last 4 digits, FedEx) Courier: FEDEX

IR Gun ID_14740456_____ pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 1.6 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: IFrnt

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) PN

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
5117

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-2341.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-5117-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/13/2016			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-7D:120116 (590-5117-1)	12/1/16	09:10 Pacific		Water			X	X	X	X	3	
MW-7B:120116 (590-5117-2)	12/1/16	10:31 Pacific		Water			X	X	X	X	3	
MW-15A:120116 (590-5117-3)	12/1/16	12:20 Pacific		Water			X	X	X	X	3	
MW-2A:120116 (590-5117-4)	12/1/16	09:05 Pacific		Water			X	X	X	X	3	
MW-3:120116 (590-5117-5)	12/1/16	10:11 Pacific		Water			X	X	X	X	3	
MW-5A:120116 (590-5117-6)	12/1/16	11:52 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheela Shah	12/2/16 1500	TAL Spok	[signature]	12-3-16 0925	TAN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2337.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5117-1
Address: 5755 8th Street East,	Due Date Requested: 12/13/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-7D:120116 (590-5117-1)	12/1/16	09:10 Pacific		Water			X	X	X	X	X	X	6	
MW-7B:120116 (590-5117-2)	12/1/16	10:31 Pacific		Water			X	X	X	X	X	X	6	
MW-15A:120116 (590-5117-3)	12/1/16	12:20 Pacific		Water			X	X	X	X	X	X	6	
MW-2A:120116 (590-5117-4)	12/1/16	09:05 Pacific		Water			X	X	X	X	X	X	6	
MW-3:120116 (590-5117-5)	12/1/16	10:11 Pacific		Water			X	X	X	X	X	X	6	
MW-5A:120116 (590-5117-6)	12/1/16	11:52 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sherila Kraty	12/2/16 1030	TA-Spk	M. Bonnie McDermott	12/3/16 1105	TA-Sea
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		MM AE Cooler 1 Cooler 2, 1,

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5117-1

Login Number: 5117
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5117-1

Login Number: 5117
List Number: 2
Creator: Woodworth, Sean P

List Source: TestAmerica Denver
List Creation: 12/03/16 11:55 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5117-1

Login Number: 5117
List Number: 4
Creator: West, Derrick D

List Source: TestAmerica Nashville
List Creation: 12/05/16 05:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5117-1

Login Number: 5117
List Number: 5
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 12/06/16 09:19 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5117-1

Login Number: 5117
List Number: 3
Creator: Torres, Terri L

List Source: TestAmerica Seattle
List Creation: 12/05/16 02:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5117-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5117-1	MW-7D:120116	76	71	81	75	88	77	94	91
590-5117-2	MW-7B:120116	78	75	85	79	98	84	104	99
590-5117-3	MW-15A:120116	77	71	83	77	96	83	101	97
590-5117-4	MW-2A:120116	76	70	84	75	90	80	94	91
590-5117-5	MW-3:120116	86	78	93	84	97	87	102	100
590-5117-6	MW-5A:120116	90	84	100	90	103	93	108	105
LCS 320-140834/2-A	Lab Control Sample	80	74	86	78	86	79	90	89
LCS 320-141107/2-A	Lab Control Sample	92	85	98	90	101	93	105	103
LCSD 320-140834/3-A	Lab Control Sample Dup	79	73	85	77	87	81	93	90
LCSD 320-141107/3-A	Lab Control Sample Dup	90	85	97	90	100	91	102	99
MB 320-140834/1-A	Method Blank	79	76	83	77	75	61	86	76
MB 320-141107/1-A	Method Blank	86	81	91	84	97	86	96	95

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5117-1	MW-7D:120116	104
590-5117-2	MW-7B:120116	114
590-5117-3	MW-15A:120116	110
590-5117-4	MW-2A:120116	105
590-5117-5	MW-3:120116	109
590-5117-6	MW-5A:120116	115
LCS 320-140834/2-A	Lab Control Sample	99
LCS 320-141107/2-A	Lab Control Sample	110
LCSD 320-140834/3-A	Lab Control Sample Dup	100
LCSD 320-141107/3-A	Lab Control Sample Dup	108
MB 320-140834/1-A	Method Blank	92
MB 320-141107/1-A	Method Blank	102

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5134-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/28/2016 10:06:20 AM

Randee Arrington, Project Manager II
(509)924-9200
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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Job ID: 590-5134-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/5/2016 12:45 PM; the samples arrived in good condition.

Air - GC/MS VOA
Method TO-15: Surrogate 4-Bromofluorobenzene recovery for the following sample was outside control limits: LFB-4:120216 (590-5134-4). Evidence of matrix interference is present; Sample was re-analyzed with concurring results..

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5134-1	LFB-17:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-2	LFB-16:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-3	LFB-15:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-4	LFB-4:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-5	LFB-3:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-6	LFB-10:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-7	LFB-11:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-8	LFB-8:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-9	LFB-9:120216	Air	12/02/16 00:00	12/05/16 12:45
590-5134-10	LFB-5:120216	Air	12/02/16 00:00	12/05/16 12:45

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-17:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.28**	**J**	0.53	0.11	ppb v/v			12/14/16 22:10	1.75
1,1,2,2-Tetrachloroethane	ND		0.70	0.12	ppb v/v			12/14/16 22:10	1.75
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.70	0.29	ppb v/v			12/14/16 22:10	1.75
1,1,2-Trichloroethane	ND		0.70	0.12	ppb v/v			12/14/16 22:10	1.75
1,1-Dichloroethane	**0.65**		0.53	0.13	ppb v/v			12/14/16 22:10	1.75
1,1-Dichloroethene	ND		1.4	0.23	ppb v/v			12/14/16 22:10	1.75
1,2-Dibromoethane (EDB)	ND		1.4	0.13	ppb v/v			12/14/16 22:10	1.75
Allyl chloride	ND		1.4	0.19	ppb v/v			12/14/16 22:10	1.75
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**4.2**		0.70	0.27	ppb v/v			12/14/16 22:10	1.75
1,2-Dichlorobenzene	**0.31**	**J**	0.70	0.23	ppb v/v			12/14/16 22:10	1.75
1,2-Dichloroethane	ND		1.4	0.15	ppb v/v			12/14/16 22:10	1.75
1,2-Dichloropropane	ND		0.70	0.42	ppb v/v			12/14/16 22:10	1.75
1,3,5-Trimethylbenzene	ND		0.70	0.22	ppb v/v			12/14/16 22:10	1.75
1,3-Dichlorobenzene	**0.27**	**J**	0.70	0.19	ppb v/v			12/14/16 22:10	1.75
1,4-Dichlorobenzene	**14**		0.70	0.26	ppb v/v			12/14/16 22:10	1.75
2-Hexanone	ND		0.70	0.15	ppb v/v			12/14/16 22:10	1.75
1,3-Butadiene	ND		1.4	0.27	ppb v/v			12/14/16 22:10	1.75
4-Ethyltoluene	ND		0.70	0.33	ppb v/v			12/14/16 22:10	1.75
Benzene	**2.2**		0.70	0.14	ppb v/v			12/14/16 22:10	1.75
Bromodichloromethane	ND		0.53	0.12	ppb v/v			12/14/16 22:10	1.75
Bromoform	ND		0.70	0.12	ppb v/v			12/14/16 22:10	1.75
Bromomethane	ND		1.4	0.59	ppb v/v			12/14/16 22:10	1.75
Carbon disulfide	**0.23**	**J**	1.4	0.14	ppb v/v			12/14/16 22:10	1.75
Carbon tetrachloride	ND		1.4	0.11	ppb v/v			12/14/16 22:10	1.75
Chlorobenzene	**0.44**	**J**	0.53	0.11	ppb v/v			12/14/16 22:10	1.75
Chloroethane	ND		1.4	0.54	ppb v/v			12/14/16 22:10	1.75
Chloroform	ND		0.53	0.17	ppb v/v			12/14/16 22:10	1.75
Chloromethane	**0.37**	**J**	1.4	0.34	ppb v/v			12/14/16 22:10	1.75
cis-1,2-Dichloroethene	**2.8**		0.70	0.16	ppb v/v			12/14/16 22:10	1.75
cis-1,3-Dichloropropene	ND		0.70	0.18	ppb v/v			12/14/16 22:10	1.75
Dibromochloromethane	ND		0.70	0.14	ppb v/v			12/14/16 22:10	1.75
Dichlorodifluoromethane	**13**		0.70	0.25	ppb v/v			12/14/16 22:10	1.75
Ethylbenzene	**5.0**		0.70	0.11	ppb v/v			12/14/16 22:10	1.75
Gasoline Range Organics (C6-C12)	**2300**		180	70	ppb v/v			12/14/16 22:10	1.75
m,p-Xylene	**3.5**		1.4	0.18	ppb v/v			12/14/16 22:10	1.75
Methylene Chloride	ND		0.70	0.13	ppb v/v			12/14/16 22:10	1.75
o-Xylene	**1.6**		0.70	0.095	ppb v/v			12/14/16 22:10	1.75
Styrene	**0.57**	**J**	0.70	0.10	ppb v/v			12/14/16 22:10	1.75
Tetrachloroethene	**37**		0.70	0.089	ppb v/v			12/14/16 22:10	1.75
Toluene	**1.9**		0.70	0.089	ppb v/v			12/14/16 22:10	1.75
2-Chlorotoluene	ND		0.70	0.14	ppb v/v			12/14/16 22:10	1.75
trans-1,2-Dichloroethene	ND		0.70	0.18	ppb v/v			12/14/16 22:10	1.75
trans-1,3-Dichloropropene	ND		0.70	0.15	ppb v/v			12/14/16 22:10	1.75
Cyclohexane	**1.1**		0.70	0.15	ppb v/v			12/14/16 22:10	1.75
Trichloroethene	**3.4**		0.70	0.18	ppb v/v			12/14/16 22:10	1.75
Trichlorofluoromethane	**9.5**		0.70	0.34	ppb v/v			12/14/16 22:10	1.75
Vinyl chloride	**0.28**	**J**	0.70	0.21	ppb v/v			12/14/16 22:10	1.75
n-Heptane	**1.8**		1.4	0.11	ppb v/v			12/14/16 22:10	1.75

Client Sample ID: LFB-17:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	**7.3**		1.4	0.13	ppb v/v			12/14/16 22:10	1.75
Isopropylbenzene	**10**		1.4	0.18	ppb v/v			12/14/16 22:10	1.75
Methyl-t-Butyl Ether (MTBE)	ND		1.4	0.21	ppb v/v			12/14/16 22:10	1.75
Propylene	**49**		0.70	0.17	ppb v/v			12/14/16 22:10	1.75
Tetrahydrofuran	**6.2**		1.4	0.37	ppb v/v			12/14/16 22:10	1.75
2,2,4-Trimethylpentane	**0.73**		0.70	0.12	ppb v/v			12/14/16 22:10	1.75
Vinyl bromide	ND		1.4	0.45	ppb v/v			12/14/16 22:10	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0015**	**J**	0.0029	0.00062	mg/m3			12/14/16 22:10	1.75
1,1,2,2-Tetrachloroethane	ND		0.0048	0.00083	mg/m3			12/14/16 22:10	1.75
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0054	0.0022	mg/m3			12/14/16 22:10	1.75
1,1,2-Trichloroethane	ND		0.0038	0.00064	mg/m3			12/14/16 22:10	1.75
1,1-Dichloroethane	**0.0026**		0.0021	0.00051	mg/m3			12/14/16 22:10	1.75
1,1-Dichloroethene	ND		0.0056	0.00090	mg/m3			12/14/16 22:10	1.75
1,2-Dibromoethane (EDB)	ND		0.011	0.0010	mg/m3			12/14/16 22:10	1.75
Allyl chloride	ND		0.0044	0.00061	mg/m3			12/14/16 22:10	1.75
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.029**		0.0049	0.0019	mg/m3			12/14/16 22:10	1.75
1,2-Dichlorobenzene	**0.0019**	**J**	0.0042	0.0014	mg/m3			12/14/16 22:10	1.75
1,2-Dichloroethane	ND		0.0057	0.00062	mg/m3			12/14/16 22:10	1.75
1,2-Dichloropropane	ND		0.0032	0.0019	mg/m3			12/14/16 22:10	1.75
1,3,5-Trimethylbenzene	ND		0.0034	0.0011	mg/m3			12/14/16 22:10	1.75
1,3-Dichlorobenzene	**0.0016**	**J**	0.0042	0.0012	mg/m3			12/14/16 22:10	1.75
1,4-Dichlorobenzene	**0.087**		0.0042	0.0016	mg/m3			12/14/16 22:10	1.75
2-Hexanone	ND		0.0029	0.00062	mg/m3			12/14/16 22:10	1.75
1,3-Butadiene	ND		0.0031	0.00059	mg/m3			12/14/16 22:10	1.75
4-Ethyltoluene	ND		0.0034	0.0016	mg/m3			12/14/16 22:10	1.75
Benzene	**0.0069**		0.0022	0.00044	mg/m3			12/14/16 22:10	1.75
Bromodichloromethane	ND		0.0035	0.00077	mg/m3			12/14/16 22:10	1.75
Bromoform	ND		0.0072	0.0013	mg/m3			12/14/16 22:10	1.75
Bromomethane	ND		0.0054	0.0023	mg/m3			12/14/16 22:10	1.75
Carbon disulfide	**0.00071**	**J**	0.0044	0.00043	mg/m3			12/14/16 22:10	1.75
Carbon tetrachloride	ND		0.0088	0.00070	mg/m3			12/14/16 22:10	1.75
Chlorobenzene	**0.0020**	**J**	0.0024	0.00052	mg/m3			12/14/16 22:10	1.75
Chloroethane	ND		0.0037	0.0014	mg/m3			12/14/16 22:10	1.75
Chloroform	ND		0.0026	0.00081	mg/m3			12/14/16 22:10	1.75
Chloromethane	**0.00075**	**J**	0.0029	0.00071	mg/m3			12/14/16 22:10	1.75
cis-1,2-Dichloroethene	**0.011**		0.0028	0.00062	mg/m3			12/14/16 22:10	1.75
cis-1,3-Dichloropropene	ND		0.0032	0.00083	mg/m3			12/14/16 22:10	1.75
Dibromochloromethane	ND		0.0060	0.0012	mg/m3			12/14/16 22:10	1.75
Dichlorodifluoromethane	**0.064**		0.0035	0.0013	mg/m3			12/14/16 22:10	1.75
Ethylbenzene	**0.022**		0.0030	0.00048	mg/m3			12/14/16 22:10	1.75
Gasoline Range Organics (C6-C12)	**9.2**		0.72	0.29	mg/m3			12/14/16 22:10	1.75
m,p-Xylene	**0.015**		0.0061	0.00076	mg/m3			12/14/16 22:10	1.75
Methylene Chloride	ND		0.0024	0.00044	mg/m3			12/14/16 22:10	1.75
o-Xylene	**0.0069**		0.0030	0.00041	mg/m3			12/14/16 22:10	1.75
Styrene	**0.0024**	**J**	0.0030	0.00044	mg/m3			12/14/16 22:10	1.75
Tetrachloroethene	**0.25**		0.0047	0.00061	mg/m3			12/14/16 22:10	1.75
Toluene	**0.0072**		0.0026	0.00034	mg/m3			12/14/16 22:10	1.75

Client Sample ID: LFB-17:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.0036	0.00072	mg/m3			12/14/16 22:10	1.75
trans-1,2-Dichloroethene	ND		0.0028	0.00069	mg/m3			12/14/16 22:10	1.75
trans-1,3-Dichloropropene	ND		0.0032	0.00070	mg/m3			12/14/16 22:10	1.75
Cyclohexane	**0.0037**		0.0024	0.00051	mg/m3			12/14/16 22:10	1.75
Trichloroethene	**0.018**		0.0038	0.00099	mg/m3			12/14/16 22:10	1.75
Trichlorofluoromethane	**0.054**		0.0039	0.0019	mg/m3			12/14/16 22:10	1.75
Vinyl chloride	**0.00071**	**J**	0.0018	0.00054	mg/m3			12/14/16 22:10	1.75
n-Heptane	**0.0076**		0.0057	0.00045	mg/m3			12/14/16 22:10	1.75
Hexane	**0.026**		0.0049	0.00046	mg/m3			12/14/16 22:10	1.75
Isopropylbenzene	**0.050**		0.0069	0.00086	mg/m3			12/14/16 22:10	1.75
Methyl-t-Butyl Ether (MTBE)	ND		0.0050	0.00076	mg/m3			12/14/16 22:10	1.75
Propylene	**0.085**		0.0012	0.00030	mg/m3			12/14/16 22:10	1.75
Tetrahydrofuran	**0.018**		0.0041	0.0011	mg/m3			12/14/16 22:10	1.75
2,2,4-Trimethylpentane	**0.0034**		0.0033	0.00058	mg/m3			12/14/16 22:10	1.75
Vinyl bromide	ND		0.0061	0.0020	mg/m3			12/14/16 22:10	1.75

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*12/14/16 22:10*	*1.75*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*12/14/16 22:10*	*1.75*
Toluene-d8 (Surr)	*98*		*70 - 130*		*12/14/16 22:10*	*1.75*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		3.5	0.76	ppb v/v			12/24/16 02:35	1.75
1,2,4-Trimethylbenzene	**0.50**	**J**	1.4	0.28	ppb v/v			12/24/16 02:35	1.75
2-Butanone (MEK)	ND		1.4	0.35	ppb v/v			12/24/16 02:35	1.75
4-Methyl-2-pentanone (MIBK)	ND		0.70	0.24	ppb v/v			12/24/16 02:35	1.75
Acetone	**4.8**	**J**	8.8	0.31	ppb v/v			12/24/16 02:35	1.75
Benzyl chloride	ND		1.4	0.29	ppb v/v			12/24/16 02:35	1.75
Hexachlorobutadiene	ND		3.5	0.76	ppb v/v			12/24/16 02:35	1.75
Vinyl acetate	ND		1.4	0.25	ppb v/v			12/24/16 02:35	1.75
1,4-Dioxane	**0.60**	**J**	1.4	0.18	ppb v/v			12/24/16 02:35	1.75
Methyl methacrylate	ND		1.4	0.27	ppb v/v			12/24/16 02:35	1.75
Naphthalene	ND		1.4	0.98	ppb v/v			12/24/16 02:35	1.75
Ethanol	**6.4**		1.8	0.32	ppb v/v			12/24/16 02:35	1.75
2-Propanol	**1.7**	**J**	3.5	0.41	ppb v/v			12/24/16 02:35	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.026	0.0056	mg/m3			12/24/16 02:35	1.75
1,2,4-Trimethylbenzene	**0.0025**	**J**	0.0069	0.0014	mg/m3			12/24/16 02:35	1.75
2-Butanone (MEK)	ND		0.0041	0.0010	mg/m3			12/24/16 02:35	1.75
4-Methyl-2-pentanone (MIBK)	ND		0.0029	0.00097	mg/m3			12/24/16 02:35	1.75
Acetone	**0.011**	**J**	0.021	0.00074	mg/m3			12/24/16 02:35	1.75
Benzyl chloride	ND		0.0072	0.0015	mg/m3			12/24/16 02:35	1.75
Hexachlorobutadiene	ND		0.037	0.0081	mg/m3			12/24/16 02:35	1.75
Vinyl acetate	ND		0.0049	0.00089	mg/m3			12/24/16 02:35	1.75
1,4-Dioxane	**0.0022**	**J**	0.0050	0.00064	mg/m3			12/24/16 02:35	1.75
Methyl methacrylate	ND		0.0057	0.0011	mg/m3			12/24/16 02:35	1.75
Naphthalene	ND		0.0073	0.0052	mg/m3			12/24/16 02:35	1.75
Ethanol	**0.012**		0.0033	0.00059	mg/m3			12/24/16 02:35	1.75
2-Propanol	**0.0041**	**J**	0.0086	0.0010	mg/m3			12/24/16 02:35	1.75

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		12/24/16 02:35	1.75
4-Bromofluorobenzene (Surr)	105		70 - 130		12/24/16 02:35	1.75
Toluene-d8 (Surr)	105		70 - 130		12/24/16 02:35	1.75

Client Sample ID: LFB-16:120216

Lab Sample ID: 590-5134-2

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.080**	**J**	0.30	0.065	ppb v/v			12/14/16 23:06	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/14/16 23:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			12/14/16 23:06	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/14/16 23:06	1
1,1-Dichloroethane	**0.26**	**J**	0.30	0.072	ppb v/v			12/14/16 23:06	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/14/16 23:06	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/14/16 23:06	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/14/16 23:06	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**2.1**		0.40	0.16	ppb v/v			12/14/16 23:06	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/14/16 23:06	1
1,2-Dichloroethane	**0.17**	**J**	0.80	0.088	ppb v/v			12/14/16 23:06	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/14/16 23:06	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/14/16 23:06	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/14/16 23:06	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/14/16 23:06	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/14/16 23:06	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/14/16 23:06	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/14/16 23:06	1
Benzene	**0.11**	**J**	0.40	0.079	ppb v/v			12/14/16 23:06	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/14/16 23:06	1
Bromoform	ND		0.40	0.070	ppb v/v			12/14/16 23:06	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/14/16 23:06	1
Carbon disulfide	**0.72**	**J**	0.80	0.078	ppb v/v			12/14/16 23:06	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/14/16 23:06	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/14/16 23:06	1
Chloroethane	**0.49**	**J**	0.80	0.31	ppb v/v			12/14/16 23:06	1
Chloroform	ND		0.30	0.095	ppb v/v			12/14/16 23:06	1
Chloromethane	**3.0**		0.80	0.20	ppb v/v			12/14/16 23:06	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/14/16 23:06	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/14/16 23:06	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/14/16 23:06	1
Dichlorodifluoromethane	**1.6**		0.40	0.15	ppb v/v			12/14/16 23:06	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			12/14/16 23:06	1
Gasoline Range Organics (C6-C12)	**220**		100	40	ppb v/v			12/14/16 23:06	1
m,p-Xylene	**0.17**	**J**	0.80	0.10	ppb v/v			12/14/16 23:06	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			12/14/16 23:06	1
o-Xylene	**0.067**	**J**	0.40	0.054	ppb v/v			12/14/16 23:06	1
Styrene	**0.061**	**J**	0.40	0.059	ppb v/v			12/14/16 23:06	1
Tetrachloroethene	**11**		0.40	0.051	ppb v/v			12/14/16 23:06	1
Toluene	**0.12**	**J**	0.40	0.051	ppb v/v			12/14/16 23:06	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/14/16 23:06	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/14/16 23:06	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/14/16 23:06	1

Client Sample ID: LFB-16:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	ND		0.40	0.084	ppb v/v			12/14/16 23:06	1
Trichloroethene	ND		0.40	0.11	ppb v/v			12/14/16 23:06	1
Trichlorofluoromethane	**3.9**		0.40	0.20	ppb v/v			12/14/16 23:06	1
Vinyl chloride	**0.27**	**J**	0.40	0.12	ppb v/v			12/14/16 23:06	1
n-Heptane	**0.10**	**J**	0.80	0.063	ppb v/v			12/14/16 23:06	1
Hexane	**0.12**	**J**	0.80	0.075	ppb v/v			12/14/16 23:06	1
Isopropylbenzene	**0.36**	**J**	0.80	0.10	ppb v/v			12/14/16 23:06	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/14/16 23:06	1
Propylene	**0.63**		0.40	0.099	ppb v/v			12/14/16 23:06	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/14/16 23:06	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/14/16 23:06	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/14/16 23:06	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.00043**	**J**	0.0016	0.00035	mg/m3			12/14/16 23:06	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/14/16 23:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			12/14/16 23:06	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/14/16 23:06	1
1,1-Dichloroethane	**0.0010**	**J**	0.0012	0.00029	mg/m3			12/14/16 23:06	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/14/16 23:06	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/14/16 23:06	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/14/16 23:06	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.015**		0.0028	0.0011	mg/m3			12/14/16 23:06	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/14/16 23:06	1
1,2-Dichloroethane	**0.00069**	**J**	0.0032	0.00036	mg/m3			12/14/16 23:06	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/14/16 23:06	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/14/16 23:06	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/14/16 23:06	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/14/16 23:06	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/14/16 23:06	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/14/16 23:06	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/14/16 23:06	1
Benzene	**0.00036**	**J**	0.0013	0.00025	mg/m3			12/14/16 23:06	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/14/16 23:06	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/14/16 23:06	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/14/16 23:06	1
Carbon disulfide	**0.0022**	**J**	0.0025	0.00024	mg/m3			12/14/16 23:06	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/14/16 23:06	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/14/16 23:06	1
Chloroethane	**0.0013**	**J**	0.0021	0.00081	mg/m3			12/14/16 23:06	1
Chloroform	ND		0.0015	0.00046	mg/m3			12/14/16 23:06	1
Chloromethane	**0.0061**		0.0017	0.00041	mg/m3			12/14/16 23:06	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/14/16 23:06	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/14/16 23:06	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/14/16 23:06	1
Dichlorodifluoromethane	**0.0080**		0.0020	0.00072	mg/m3			12/14/16 23:06	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			12/14/16 23:06	1
Gasoline Range Organics (C6-C12)	**0.90**		0.41	0.16	mg/m3			12/14/16 23:06	1
m,p-Xylene	**0.00074**	**J**	0.0035	0.00043	mg/m3			12/14/16 23:06	1

Client Sample ID: LFB-16:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.0014	0.00025	mg/m3			12/14/16 23:06	1
o-Xylene	**0.00029**	**J**	0.0017	0.00023	mg/m3			12/14/16 23:06	1
Styrene	**0.00026**	**J**	0.0017	0.00025	mg/m3			12/14/16 23:06	1
Tetrachloroethene	**0.072**		0.0027	0.00035	mg/m3			12/14/16 23:06	1
Toluene	**0.00045**	**J**	0.0015	0.00019	mg/m3			12/14/16 23:06	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/14/16 23:06	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/14/16 23:06	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/14/16 23:06	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/14/16 23:06	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			12/14/16 23:06	1
Trichlorofluoromethane	**0.022**		0.0022	0.0011	mg/m3			12/14/16 23:06	1
Vinyl chloride	**0.00070**	**J**	0.0010	0.00031	mg/m3			12/14/16 23:06	1
n-Heptane	**0.00042**	**J**	0.0033	0.00026	mg/m3			12/14/16 23:06	1
Hexane	**0.00043**	**J**	0.0028	0.00026	mg/m3			12/14/16 23:06	1
Isopropylbenzene	**0.0018**	**J**	0.0039	0.00049	mg/m3			12/14/16 23:06	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/14/16 23:06	1
Propylene	**0.0011**		0.00069	0.00017	mg/m3			12/14/16 23:06	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/14/16 23:06	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/14/16 23:06	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/14/16 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*12/14/16 23:06*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*12/14/16 23:06*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*12/14/16 23:06*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.2	0.48	ppb v/v			12/24/16 03:35	1.12
1,2,4-Trimethylbenzene	ND		0.90	0.18	ppb v/v			12/24/16 03:35	1.12
2-Butanone (MEK)	**0.47**	**J**	0.90	0.22	ppb v/v			12/24/16 03:35	1.12
4-Methyl-2-pentanone (MIBK)	ND		0.45	0.15	ppb v/v			12/24/16 03:35	1.12
Acetone	**2.7**	**J**	5.6	0.20	ppb v/v			12/24/16 03:35	1.12
Benzyl chloride	ND		0.90	0.18	ppb v/v			12/24/16 03:35	1.12
Hexachlorobutadiene	ND		2.2	0.48	ppb v/v			12/24/16 03:35	1.12
Vinyl acetate	ND		0.90	0.16	ppb v/v			12/24/16 03:35	1.12
1,4-Dioxane	ND		0.90	0.11	ppb v/v			12/24/16 03:35	1.12
Methyl methacrylate	**0.36**	**J**	0.90	0.18	ppb v/v			12/24/16 03:35	1.12
Naphthalene	ND		0.90	0.63	ppb v/v			12/24/16 03:35	1.12
Ethanol	**1.0**	**J**	1.1	0.20	ppb v/v			12/24/16 03:35	1.12
2-Propanol	**0.35**	**J**	2.2	0.26	ppb v/v			12/24/16 03:35	1.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.017	0.0036	mg/m3			12/24/16 03:35	1.12
1,2,4-Trimethylbenzene	ND		0.0044	0.00089	mg/m3			12/24/16 03:35	1.12
2-Butanone (MEK)	**0.0014**	**J**	0.0026	0.00066	mg/m3			12/24/16 03:35	1.12
4-Methyl-2-pentanone (MIBK)	ND		0.0018	0.00062	mg/m3			12/24/16 03:35	1.12
Acetone	**0.0065**	**J**	0.013	0.00047	mg/m3			12/24/16 03:35	1.12
Benzyl chloride	ND		0.0046	0.00095	mg/m3			12/24/16 03:35	1.12
Hexachlorobutadiene	ND		0.024	0.0052	mg/m3			12/24/16 03:35	1.12
Vinyl acetate	ND		0.0032	0.00057	mg/m3			12/24/16 03:35	1.12

Client Sample ID: LFB-16:120216

Lab Sample ID: 590-5134-2

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.0032	0.00041	mg/m3			12/24/16 03:35	1.12
Methyl methacrylate	**0.0015**	**J**	0.0037	0.00072	mg/m3			12/24/16 03:35	1.12
Naphthalene	ND		0.0047	0.0033	mg/m3			12/24/16 03:35	1.12
Ethanol	**0.0019**	**J**	0.0021	0.00038	mg/m3			12/24/16 03:35	1.12
2-Propanol	**0.00085**	**J**	0.0055	0.00064	mg/m3			12/24/16 03:35	1.12

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*12/24/16 03:35*	*1.12*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*12/24/16 03:35*	*1.12*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/24/16 03:35*	*1.12*

Client Sample ID: LFB-15:120216

Lab Sample ID: 590-5134-3

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.25**	**J**	0.30	0.065	ppb v/v			12/14/16 23:53	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/14/16 23:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			12/14/16 23:53	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/14/16 23:53	1
1,1-Dichloroethane	**1.2**		0.30	0.072	ppb v/v			12/14/16 23:53	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/14/16 23:53	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/14/16 23:53	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/14/16 23:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**10**		0.40	0.16	ppb v/v			12/14/16 23:53	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/14/16 23:53	1
1,2-Dichloroethane	**0.60**	**J**	0.80	0.088	ppb v/v			12/14/16 23:53	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/14/16 23:53	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/14/16 23:53	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/14/16 23:53	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/14/16 23:53	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/14/16 23:53	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/14/16 23:53	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/14/16 23:53	1
Benzene	**0.29**	**J**	0.40	0.079	ppb v/v			12/14/16 23:53	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/14/16 23:53	1
Bromoform	ND		0.40	0.070	ppb v/v			12/14/16 23:53	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/14/16 23:53	1
Carbon disulfide	**5.0**		0.80	0.078	ppb v/v			12/14/16 23:53	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/14/16 23:53	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/14/16 23:53	1
Chloroethane	**2.5**		0.80	0.31	ppb v/v			12/14/16 23:53	1
Chloroform	ND		0.30	0.095	ppb v/v			12/14/16 23:53	1
Chloromethane	**19**		0.80	0.20	ppb v/v			12/14/16 23:53	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/14/16 23:53	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/14/16 23:53	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/14/16 23:53	1
Dichlorodifluoromethane	**8.9**		0.40	0.15	ppb v/v			12/14/16 23:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-15:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.40	0.063	ppb v/v			12/14/16 23:53	1
Gasoline Range Organics (C6-C12)	500		100	40	ppb v/v			12/14/16 23:53	1
m,p-Xylene	0.16	J	0.80	0.10	ppb v/v			12/14/16 23:53	1
Methylene Chloride	0.081	J	0.40	0.072	ppb v/v			12/14/16 23:53	1
o-Xylene	0.062	J	0.40	0.054	ppb v/v			12/14/16 23:53	1
Styrene	ND		0.40	0.059	ppb v/v			12/14/16 23:53	1
Tetrachloroethene	17		0.40	0.051	ppb v/v			12/14/16 23:53	1
Toluene	0.28	J	0.40	0.051	ppb v/v			12/14/16 23:53	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/14/16 23:53	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/14/16 23:53	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/14/16 23:53	1
Cyclohexane	ND		0.40	0.084	ppb v/v			12/14/16 23:53	1
Trichloroethene	0.29	J	0.40	0.11	ppb v/v			12/14/16 23:53	1
Trichlorofluoromethane	12		0.40	0.20	ppb v/v			12/14/16 23:53	1
Vinyl chloride	1.3		0.40	0.12	ppb v/v			12/14/16 23:53	1
n-Heptane	0.37	J	0.80	0.063	ppb v/v			12/14/16 23:53	1
Hexane	0.31	J	0.80	0.075	ppb v/v			12/14/16 23:53	1
Isopropylbenzene	0.68	J	0.80	0.10	ppb v/v			12/14/16 23:53	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/14/16 23:53	1
Propylene	2.1		0.40	0.099	ppb v/v			12/14/16 23:53	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/14/16 23:53	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/14/16 23:53	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/14/16 23:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.0014	J	0.0016	0.00035	mg/m3			12/14/16 23:53	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/14/16 23:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			12/14/16 23:53	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/14/16 23:53	1
1,1-Dichloroethane	0.0049		0.0012	0.00029	mg/m3			12/14/16 23:53	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/14/16 23:53	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/14/16 23:53	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/14/16 23:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.070		0.0028	0.0011	mg/m3			12/14/16 23:53	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/14/16 23:53	1
1,2-Dichloroethane	0.0024	J	0.0032	0.00036	mg/m3			12/14/16 23:53	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/14/16 23:53	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/14/16 23:53	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/14/16 23:53	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/14/16 23:53	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/14/16 23:53	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/14/16 23:53	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/14/16 23:53	1
Benzene	0.00092	J	0.0013	0.00025	mg/m3			12/14/16 23:53	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/14/16 23:53	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/14/16 23:53	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/14/16 23:53	1
Carbon disulfide	0.016		0.0025	0.00024	mg/m3			12/14/16 23:53	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/14/16 23:53	1

Client Sample ID: LFB-15:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/14/16 23:53	1
Chloroethane	**0.0066**		0.0021	0.00081	mg/m3			12/14/16 23:53	1
Chloroform	ND		0.0015	0.00046	mg/m3			12/14/16 23:53	1
Chloromethane	**0.038**		0.0017	0.00041	mg/m3			12/14/16 23:53	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/14/16 23:53	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/14/16 23:53	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/14/16 23:53	1
Dichlorodifluoromethane	**0.044**		0.0020	0.00072	mg/m3			12/14/16 23:53	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			12/14/16 23:53	1
Gasoline Range Organics (C6-C12)	**2.1**		0.41	0.16	mg/m3			12/14/16 23:53	1
m,p-Xylene	**0.00071**	**J**	0.0035	0.00043	mg/m3			12/14/16 23:53	1
Methylene Chloride	**0.00028**	**J**	0.0014	0.00025	mg/m3			12/14/16 23:53	1
o-Xylene	**0.00027**	**J**	0.0017	0.00023	mg/m3			12/14/16 23:53	1
Styrene	ND		0.0017	0.00025	mg/m3			12/14/16 23:53	1
Tetrachloroethene	**0.12**		0.0027	0.00035	mg/m3			12/14/16 23:53	1
Toluene	**0.0010**	**J**	0.0015	0.00019	mg/m3			12/14/16 23:53	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/14/16 23:53	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/14/16 23:53	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/14/16 23:53	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/14/16 23:53	1
Trichloroethene	**0.0016**	**J**	0.0021	0.00056	mg/m3			12/14/16 23:53	1
Trichlorofluoromethane	**0.067**		0.0022	0.0011	mg/m3			12/14/16 23:53	1
Vinyl chloride	**0.0034**		0.0010	0.00031	mg/m3			12/14/16 23:53	1
n-Heptane	**0.0015**	**J**	0.0033	0.00026	mg/m3			12/14/16 23:53	1
Hexane	**0.0011**	**J**	0.0028	0.00026	mg/m3			12/14/16 23:53	1
Isopropylbenzene	**0.0034**	**J**	0.0039	0.00049	mg/m3			12/14/16 23:53	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/14/16 23:53	1
Propylene	**0.0036**		0.00069	0.00017	mg/m3			12/14/16 23:53	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/14/16 23:53	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/14/16 23:53	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/14/16 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*12/14/16 23:53*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*12/14/16 23:53*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*12/14/16 23:53*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.6	0.55	ppb v/v			12/24/16 04:35	1.28
1,2,4-Trimethylbenzene	ND		1.0	0.21	ppb v/v			12/24/16 04:35	1.28
2-Butanone (MEK)	ND		1.0	0.25	ppb v/v			12/24/16 04:35	1.28
4-Methyl-2-pentanone (MIBK)	ND		0.51	0.17	ppb v/v			12/24/16 04:35	1.28
Acetone	**2.4**	**J**	6.4	0.23	ppb v/v			12/24/16 04:35	1.28
Benzyl chloride	ND		1.0	0.21	ppb v/v			12/24/16 04:35	1.28
Hexachlorobutadiene	ND		2.6	0.55	ppb v/v			12/24/16 04:35	1.28
Vinyl acetate	ND		1.0	0.19	ppb v/v			12/24/16 04:35	1.28
1,4-Dioxane	ND		1.0	0.13	ppb v/v			12/24/16 04:35	1.28
Methyl methacrylate	ND		1.0	0.20	ppb v/v			12/24/16 04:35	1.28

Client Sample ID: LFB-15:120216

Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.72	ppb v/v			12/24/16 04:35	1.28
Ethanol	**1.1**	**J**	1.3	0.23	ppb v/v			12/24/16 04:35	1.28
2-Propanol	**0.41**	**J**	2.6	0.30	ppb v/v			12/24/16 04:35	1.28

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.019	0.0041	mg/m3			12/24/16 04:35	1.28
1,2,4-Trimethylbenzene	ND		0.0050	0.0010	mg/m3			12/24/16 04:35	1.28
2-Butanone (MEK)	ND		0.0030	0.00075	mg/m3			12/24/16 04:35	1.28
4-Methyl-2-pentanone (MIBK)	ND		0.0021	0.00071	mg/m3			12/24/16 04:35	1.28
Acetone	**0.0056**	**J**	0.015	0.00054	mg/m3			12/24/16 04:35	1.28
Benzyl chloride	ND		0.0053	0.0011	mg/m3			12/24/16 04:35	1.28
Hexachlorobutadiene	ND		0.027	0.0059	mg/m3			12/24/16 04:35	1.28
Vinyl acetate	ND		0.0036	0.00065	mg/m3			12/24/16 04:35	1.28
1,4-Dioxane	ND		0.0037	0.00047	mg/m3			12/24/16 04:35	1.28
Methyl methacrylate	ND		0.0042	0.00082	mg/m3			12/24/16 04:35	1.28
Naphthalene	ND		0.0054	0.0038	mg/m3			12/24/16 04:35	1.28
Ethanol	**0.0020**	**J**	0.0024	0.00043	mg/m3			12/24/16 04:35	1.28
2-Propanol	**0.0010**	**J**	0.0063	0.00074	mg/m3			12/24/16 04:35	1.28

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*12/24/16 04:35*	*1.28*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*12/24/16 04:35*	*1.28*
Toluene-d8 (Surr)	*104*		*70 - 130*		*12/24/16 04:35*	*1.28*

Client Sample ID: LFB-4:120216

Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.5	1.2	ppb v/v			12/15/16 00:36	18.4
1,1,2,2-Tetrachloroethane	ND		7.4	1.3	ppb v/v			12/15/16 00:36	18.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.4	3.0	ppb v/v			12/15/16 00:36	18.4
1,1,2-Trichloroethane	ND		7.4	1.2	ppb v/v			12/15/16 00:36	18.4
1,1-Dichloroethane	**1.8**	**J**	5.5	1.3	ppb v/v			12/15/16 00:36	18.4
1,1-Dichloroethene	ND		15	2.4	ppb v/v			12/15/16 00:36	18.4
1,2-Dibromoethane (EDB)	ND		15	1.4	ppb v/v			12/15/16 00:36	18.4
Allyl chloride	ND		15	2.0	ppb v/v			12/15/16 00:36	18.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**120**		7.4	2.9	ppb v/v			12/15/16 00:36	18.4
1,2-Dichlorobenzene	ND		7.4	2.4	ppb v/v			12/15/16 00:36	18.4
1,2-Dichloroethane	**3.2**	**J**	15	1.6	ppb v/v			12/15/16 00:36	18.4
1,2-Dichloropropane	ND		7.4	4.4	ppb v/v			12/15/16 00:36	18.4
1,3,5-Trimethylbenzene	**38**		7.4	2.3	ppb v/v			12/15/16 00:36	18.4
1,3-Dichlorobenzene	ND		7.4	2.0	ppb v/v			12/15/16 00:36	18.4
1,4-Dichlorobenzene	**40**		7.4	2.7	ppb v/v			12/15/16 00:36	18.4
2-Hexanone	ND		7.4	1.6	ppb v/v			12/15/16 00:36	18.4
1,3-Butadiene	ND		15	2.8	ppb v/v			12/15/16 00:36	18.4
4-Ethyltoluene	**8.4**		7.4	3.4	ppb v/v			12/15/16 00:36	18.4
Benzene	**34**		7.4	1.5	ppb v/v			12/15/16 00:36	18.4
Bromodichloromethane	ND		5.5	1.2	ppb v/v			12/15/16 00:36	18.4

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-4:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		7.4	1.3	ppb v/v			12/15/16 00:36	18.4
Bromomethane	ND		15	6.2	ppb v/v			12/15/16 00:36	18.4
Carbon disulfide	**7.2**	**J**	15	1.4	ppb v/v			12/15/16 00:36	18.4
Carbon tetrachloride	ND		15	1.2	ppb v/v			12/15/16 00:36	18.4
Chlorobenzene	**38**		5.5	1.2	ppb v/v			12/15/16 00:36	18.4
Chloroethane	**13**	**J**	15	5.7	ppb v/v			12/15/16 00:36	18.4
Chloroform	ND		5.5	1.7	ppb v/v			12/15/16 00:36	18.4
Chloromethane	**36**		15	3.6	ppb v/v			12/15/16 00:36	18.4
cis-1,2-Dichloroethene	**19**		7.4	1.6	ppb v/v			12/15/16 00:36	18.4
cis-1,3-Dichloropropene	ND		7.4	1.9	ppb v/v			12/15/16 00:36	18.4
Dibromochloromethane	ND		7.4	1.5	ppb v/v			12/15/16 00:36	18.4
Dichlorodifluoromethane	**110**		7.4	2.7	ppb v/v			12/15/16 00:36	18.4
Ethylbenzene	**830**		7.4	1.2	ppb v/v			12/15/16 00:36	18.4
Gasoline Range Organics (C6-C12)	**130000**		1800	740	ppb v/v			12/15/16 00:36	18.4
m,p-Xylene	**300**		15	1.8	ppb v/v			12/15/16 00:36	18.4
Methylene Chloride	ND		7.4	1.3	ppb v/v			12/15/16 00:36	18.4
o-Xylene	**61**		7.4	0.99	ppb v/v			12/15/16 00:36	18.4
Styrene	ND		7.4	1.1	ppb v/v			12/15/16 00:36	18.4
Tetrachloroethene	**1.3**	**J**	7.4	0.94	ppb v/v			12/15/16 00:36	18.4
Toluene	**23**		7.4	0.94	ppb v/v			12/15/16 00:36	18.4
2-Chlorotoluene	ND		7.4	1.5	ppb v/v			12/15/16 00:36	18.4
trans-1,2-Dichloroethene	ND		7.4	1.8	ppb v/v			12/15/16 00:36	18.4
trans-1,3-Dichloropropene	ND		7.4	1.6	ppb v/v			12/15/16 00:36	18.4
Cyclohexane	**96**		7.4	1.5	ppb v/v			12/15/16 00:36	18.4
Trichloroethene	**11**		7.4	1.9	ppb v/v			12/15/16 00:36	18.4
Trichlorofluoromethane	ND		7.4	3.6	ppb v/v			12/15/16 00:36	18.4
Vinyl chloride	**290**		7.4	2.2	ppb v/v			12/15/16 00:36	18.4
n-Heptane	**97**		15	1.2	ppb v/v			12/15/16 00:36	18.4
Hexane	**200**		15	1.4	ppb v/v			12/15/16 00:36	18.4
Isopropylbenzene	**71**		15	1.8	ppb v/v			12/15/16 00:36	18.4
Methyl-t-Butyl Ether (MTBE)	ND		15	2.2	ppb v/v			12/15/16 00:36	18.4
Propylene	**670**		7.4	1.8	ppb v/v			12/15/16 00:36	18.4
Tetrahydrofuran	**91**		15	3.9	ppb v/v			12/15/16 00:36	18.4
2,2,4-Trimethylpentane	**8.2**		7.4	1.3	ppb v/v			12/15/16 00:36	18.4
Vinyl bromide	ND		15	4.7	ppb v/v			12/15/16 00:36	18.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.030	0.0065	mg/m3			12/15/16 00:36	18.4
1,1,2,2-Tetrachloroethane	ND		0.051	0.0087	mg/m3			12/15/16 00:36	18.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.056	0.023	mg/m3			12/15/16 00:36	18.4
1,1,2-Trichloroethane	ND		0.040	0.0067	mg/m3			12/15/16 00:36	18.4
1,1-Dichloroethane	**0.0072**	**J**	0.022	0.0054	mg/m3			12/15/16 00:36	18.4
1,1-Dichloroethene	ND		0.058	0.0094	mg/m3			12/15/16 00:36	18.4
1,2-Dibromoethane (EDB)	ND		0.11	0.011	mg/m3			12/15/16 00:36	18.4
Allyl chloride	ND		0.046	0.0064	mg/m3			12/15/16 00:36	18.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.81**		0.051	0.020	mg/m3			12/15/16 00:36	18.4
1,2-Dichlorobenzene	ND		0.044	0.014	mg/m3			12/15/16 00:36	18.4
1,2-Dichloroethane	**0.013**	**J**	0.060	0.0066	mg/m3			12/15/16 00:36	18.4
1,2-Dichloropropane	ND		0.034	0.020	mg/m3			12/15/16 00:36	18.4

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-4:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**0.19**		0.036	0.011	mg/m3			12/15/16 00:36	18.4
1,3-Dichlorobenzene	ND		0.044	0.012	mg/m3			12/15/16 00:36	18.4
1,4-Dichlorobenzene	**0.24**		0.044	0.016	mg/m3			12/15/16 00:36	18.4
2-Hexanone	ND		0.030	0.0066	mg/m3			12/15/16 00:36	18.4
1,3-Butadiene	ND		0.033	0.0062	mg/m3			12/15/16 00:36	18.4
4-Ethyltoluene	**0.041**		0.036	0.017	mg/m3			12/15/16 00:36	18.4
Benzene	**0.11**		0.024	0.0046	mg/m3			12/15/16 00:36	18.4
Bromodichloromethane	ND		0.037	0.0081	mg/m3			12/15/16 00:36	18.4
Bromoform	ND		0.076	0.013	mg/m3			12/15/16 00:36	18.4
Bromomethane	ND		0.057	0.024	mg/m3			12/15/16 00:36	18.4
Carbon disulfide	**0.022**	**J**	0.046	0.0045	mg/m3			12/15/16 00:36	18.4
Carbon tetrachloride	ND		0.093	0.0074	mg/m3			12/15/16 00:36	18.4
Chlorobenzene	**0.17**		0.025	0.0054	mg/m3			12/15/16 00:36	18.4
Chloroethane	**0.035**	**J**	0.039	0.015	mg/m3			12/15/16 00:36	18.4
Chloroform	ND		0.027	0.0085	mg/m3			12/15/16 00:36	18.4
Chloromethane	**0.074**		0.030	0.0075	mg/m3			12/15/16 00:36	18.4
cis-1,2-Dichloroethene	**0.077**		0.029	0.0065	mg/m3			12/15/16 00:36	18.4
cis-1,3-Dichloropropene	ND		0.033	0.0087	mg/m3			12/15/16 00:36	18.4
Dibromochloromethane	ND		0.063	0.012	mg/m3			12/15/16 00:36	18.4
Dichlorodifluoromethane	**0.55**		0.036	0.013	mg/m3			12/15/16 00:36	18.4
Ethylbenzene	**3.6**		0.032	0.0050	mg/m3			12/15/16 00:36	18.4
Gasoline Range Organics (C6-C12)	**530**		7.5	3.0	mg/m3			12/15/16 00:36	18.4
m,p-Xylene	**1.3**		0.064	0.0080	mg/m3			12/15/16 00:36	18.4
Methylene Chloride	ND		0.026	0.0046	mg/m3			12/15/16 00:36	18.4
o-Xylene	**0.27**		0.032	0.0043	mg/m3			12/15/16 00:36	18.4
Styrene	ND		0.031	0.0046	mg/m3			12/15/16 00:36	18.4
Tetrachloroethene	**0.0090**	**J**	0.050	0.0064	mg/m3			12/15/16 00:36	18.4
Toluene	**0.086**		0.028	0.0035	mg/m3			12/15/16 00:36	18.4
2-Chlorotoluene	ND		0.038	0.0076	mg/m3			12/15/16 00:36	18.4
trans-1,2-Dichloroethene	ND		0.029	0.0073	mg/m3			12/15/16 00:36	18.4
trans-1,3-Dichloropropene	ND		0.033	0.0073	mg/m3			12/15/16 00:36	18.4
Cyclohexane	**0.33**		0.025	0.0053	mg/m3			12/15/16 00:36	18.4
Trichloroethene	**0.061**		0.040	0.010	mg/m3			12/15/16 00:36	18.4
Trichlorofluoromethane	ND		0.041	0.020	mg/m3			12/15/16 00:36	18.4
Vinyl chloride	**0.74**		0.019	0.0056	mg/m3			12/15/16 00:36	18.4
n-Heptane	**0.40**		0.060	0.0048	mg/m3			12/15/16 00:36	18.4
Hexane	**0.69**		0.052	0.0049	mg/m3			12/15/16 00:36	18.4
Isopropylbenzene	**0.35**		0.072	0.0090	mg/m3			12/15/16 00:36	18.4
Methyl-t-Butyl Ether (MTBE)	ND		0.053	0.0080	mg/m3			12/15/16 00:36	18.4
Propylene	**1.2**		0.013	0.0031	mg/m3			12/15/16 00:36	18.4
Tetrahydrofuran	**0.27**		0.043	0.011	mg/m3			12/15/16 00:36	18.4
2,2,4-Trimethylpentane	**0.038**		0.034	0.0061	mg/m3			12/15/16 00:36	18.4
Vinyl bromide	ND		0.064	0.021	mg/m3			12/15/16 00:36	18.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*12/15/16 00:36*	*18.4*
4-Bromofluorobenzene (Surr)	*154*	*X*	*70 - 130*		*12/15/16 00:36*	*18.4*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/15/16 00:36*	*18.4*

Client Sample ID: LFB-4:120216

Lab Sample ID: 590-5134-4

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		37	8.0	ppb v/v			12/24/16 21:20	18.4
1,2,4-Trimethylbenzene	**81**		15	3.0	ppb v/v			12/24/16 21:20	18.4
2-Butanone (MEK)	ND		15	3.7	ppb v/v			12/24/16 21:20	18.4
4-Methyl-2-pentanone (MIBK)	ND		7.4	2.5	ppb v/v			12/24/16 21:20	18.4
Acetone	**10**	**J**	92	3.3	ppb v/v			12/24/16 21:20	18.4
Benzyl chloride	ND		15	3.0	ppb v/v			12/24/16 21:20	18.4
Hexachlorobutadiene	ND		37	7.9	ppb v/v			12/24/16 21:20	18.4
Vinyl acetate	ND		15	2.7	ppb v/v			12/24/16 21:20	18.4
1,4-Dioxane	ND		15	1.9	ppb v/v			12/24/16 21:20	18.4
Methyl methacrylate	ND		15	2.9	ppb v/v			12/24/16 21:20	18.4
Naphthalene	ND		15	10	ppb v/v			12/24/16 21:20	18.4
Ethanol	ND		18	3.3	ppb v/v			12/24/16 21:20	18.4
2-Propanol	**18**	**J**	37	4.3	ppb v/v			12/24/16 21:20	18.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.27	0.059	mg/m3			12/24/16 21:20	18.4
1,2,4-Trimethylbenzene	**0.40**		0.072	0.015	mg/m3			12/24/16 21:20	18.4
2-Butanone (MEK)	ND		0.043	0.011	mg/m3			12/24/16 21:20	18.4
4-Methyl-2-pentanone (MIBK)	ND		0.030	0.010	mg/m3			12/24/16 21:20	18.4
Acetone	**0.024**	**J**	0.22	0.0078	mg/m3			12/24/16 21:20	18.4
Benzyl chloride	ND		0.076	0.016	mg/m3			12/24/16 21:20	18.4
Hexachlorobutadiene	ND		0.39	0.085	mg/m3			12/24/16 21:20	18.4
Vinyl acetate	ND		0.052	0.0094	mg/m3			12/24/16 21:20	18.4
1,4-Dioxane	ND		0.053	0.0067	mg/m3			12/24/16 21:20	18.4
Methyl methacrylate	ND		0.060	0.012	mg/m3			12/24/16 21:20	18.4
Naphthalene	ND		0.077	0.054	mg/m3			12/24/16 21:20	18.4
Ethanol	ND		0.035	0.0062	mg/m3			12/24/16 21:20	18.4
2-Propanol	**0.045**	**J**	0.090	0.011	mg/m3			12/24/16 21:20	18.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*12/24/16 21:20*	*18.4*
4-Bromofluorobenzene (Surr)	*209*	*X*	*70 - 130*		*12/24/16 21:20*	*18.4*
Toluene-d8 (Surr)	*97*		*70 - 130*		*12/24/16 21:20*	*18.4*

Client Sample ID: LFB-3:120216

Lab Sample ID: 590-5134-5

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		11	2.3	ppb v/v			12/15/16 01:20	35
1,1,2,2-Tetrachloroethane	ND		14	2.4	ppb v/v			12/15/16 01:20	35
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		14	5.7	ppb v/v			12/15/16 01:20	35
1,1,2-Trichloroethane	ND		14	2.3	ppb v/v			12/15/16 01:20	35
1,1-Dichloroethane	ND		11	2.5	ppb v/v			12/15/16 01:20	35
1,1-Dichloroethene	ND		28	4.5	ppb v/v			12/15/16 01:20	35
1,2-Dibromoethane (EDB)	ND		28	2.6	ppb v/v			12/15/16 01:20	35
Allyl chloride	ND		28	3.9	ppb v/v			12/15/16 01:20	35
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**28**		14	5.4	ppb v/v			12/15/16 01:20	35
1,2-Dichlorobenzene	ND		14	4.6	ppb v/v			12/15/16 01:20	35

Client Sample ID: LFB-3:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		28	3.1	ppb v/v			12/15/16 01:20	35
1,2-Dichloropropane	ND		14	8.4	ppb v/v			12/15/16 01:20	35
1,3,5-Trimethylbenzene	**20**		14	4.4	ppb v/v			12/15/16 01:20	35
1,3-Dichlorobenzene	ND		14	3.9	ppb v/v			12/15/16 01:20	35
1,4-Dichlorobenzene	ND		14	5.2	ppb v/v			12/15/16 01:20	35
2-Hexanone	ND		14	3.0	ppb v/v			12/15/16 01:20	35
1,3-Butadiene	ND		28	5.3	ppb v/v			12/15/16 01:20	35
4-Ethyltoluene	**7.5**	**J**	14	6.5	ppb v/v			12/15/16 01:20	35
Benzene	**48**		14	2.8	ppb v/v			12/15/16 01:20	35
Bromodichloromethane	ND		11	2.3	ppb v/v			12/15/16 01:20	35
Bromoform	ND		14	2.5	ppb v/v			12/15/16 01:20	35
Bromomethane	ND		28	12	ppb v/v			12/15/16 01:20	35
Carbon disulfide	**1200**		28	2.7	ppb v/v			12/15/16 01:20	35
Carbon tetrachloride	ND		28	2.2	ppb v/v			12/15/16 01:20	35
Chlorobenzene	**39**		11	2.2	ppb v/v			12/15/16 01:20	35
Chloroethane	**12**	**J**	28	11	ppb v/v			12/15/16 01:20	35
Chloroform	ND		11	3.3	ppb v/v			12/15/16 01:20	35
Chloromethane	**90**		28	6.9	ppb v/v			12/15/16 01:20	35
cis-1,2-Dichloroethene	**12**	**J**	14	3.1	ppb v/v			12/15/16 01:20	35
cis-1,3-Dichloropropene	ND		14	3.6	ppb v/v			12/15/16 01:20	35
Dibromochloromethane	ND		14	2.8	ppb v/v			12/15/16 01:20	35
Dichlorodifluoromethane	**28**		14	5.1	ppb v/v			12/15/16 01:20	35
Ethylbenzene	**84**		14	2.2	ppb v/v			12/15/16 01:20	35
Gasoline Range Organics (C6-C12)	**39000**		3500	1400	ppb v/v			12/15/16 01:20	35
m,p-Xylene	**54**		28	3.5	ppb v/v			12/15/16 01:20	35
Methylene Chloride	ND		14	2.5	ppb v/v			12/15/16 01:20	35
o-Xylene	**34**		14	1.9	ppb v/v			12/15/16 01:20	35
Styrene	ND		14	2.1	ppb v/v			12/15/16 01:20	35
Tetrachloroethene	ND		14	1.8	ppb v/v			12/15/16 01:20	35
Toluene	**27**		14	1.8	ppb v/v			12/15/16 01:20	35
2-Chlorotoluene	**22**		14	2.8	ppb v/v			12/15/16 01:20	35
trans-1,2-Dichloroethene	ND		14	3.5	ppb v/v			12/15/16 01:20	35
trans-1,3-Dichloropropene	ND		14	3.1	ppb v/v			12/15/16 01:20	35
Cyclohexane	**9.1**	**J**	14	2.9	ppb v/v			12/15/16 01:20	35
Trichloroethene	ND		14	3.7	ppb v/v			12/15/16 01:20	35
Trichlorofluoromethane	ND		14	6.9	ppb v/v			12/15/16 01:20	35
Vinyl chloride	**380**		14	4.2	ppb v/v			12/15/16 01:20	35
n-Heptane	**58**		28	2.2	ppb v/v			12/15/16 01:20	35
Hexane	**93**		28	2.6	ppb v/v			12/15/16 01:20	35
Isopropylbenzene	**40**		28	3.5	ppb v/v			12/15/16 01:20	35
Methyl-t-Butyl Ether (MTBE)	ND		28	4.2	ppb v/v			12/15/16 01:20	35
Propylene	**680**		14	3.5	ppb v/v			12/15/16 01:20	35
Tetrahydrofuran	**51**		28	7.4	ppb v/v			12/15/16 01:20	35
2,2,4-Trimethylpentane	**11**	**J**	14	2.5	ppb v/v			12/15/16 01:20	35
Vinyl bromide	ND		28	8.9	ppb v/v			12/15/16 01:20	35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.057	0.012	mg/m3			12/15/16 01:20	35
1,1,2,2-Tetrachloroethane	ND		0.096	0.017	mg/m3			12/15/16 01:20	35

Client Sample ID: LFB-3:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.11	0.044	mg/m3			12/15/16 01:20	35
1,1,2-Trichloroethane	ND		0.076	0.013	mg/m3			12/15/16 01:20	35
1,1-Dichloroethane	ND		0.042	0.010	mg/m3			12/15/16 01:20	35
1,1-Dichloroethene	ND		0.11	0.018	mg/m3			12/15/16 01:20	35
1,2-Dibromoethane (EDB)	ND		0.22	0.020	mg/m3			12/15/16 01:20	35
Allyl chloride	ND		0.088	0.012	mg/m3			12/15/16 01:20	35
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.20**		0.098	0.038	mg/m3			12/15/16 01:20	35
1,2-Dichlorobenzene	ND		0.084	0.027	mg/m3			12/15/16 01:20	35
1,2-Dichloroethane	ND		0.11	0.012	mg/m3			12/15/16 01:20	35
1,2-Dichloropropane	ND		0.065	0.039	mg/m3			12/15/16 01:20	35
1,3,5-Trimethylbenzene	**0.096**		0.069	0.022	mg/m3			12/15/16 01:20	35
1,3-Dichlorobenzene	ND		0.084	0.023	mg/m3			12/15/16 01:20	35
1,4-Dichlorobenzene	ND		0.084	0.031	mg/m3			12/15/16 01:20	35
2-Hexanone	ND		0.057	0.012	mg/m3			12/15/16 01:20	35
1,3-Butadiene	ND		0.062	0.012	mg/m3			12/15/16 01:20	35
4-Ethyltoluene	**0.037**	**J**	0.069	0.032	mg/m3			12/15/16 01:20	35
Benzene	**0.15**		0.045	0.0088	mg/m3			12/15/16 01:20	35
Bromodichloromethane	ND		0.070	0.015	mg/m3			12/15/16 01:20	35
Bromoform	ND		0.14	0.025	mg/m3			12/15/16 01:20	35
Bromomethane	ND		0.11	0.046	mg/m3			12/15/16 01:20	35
Carbon disulfide	**3.8**		0.087	0.0085	mg/m3			12/15/16 01:20	35
Carbon tetrachloride	ND		0.18	0.014	mg/m3			12/15/16 01:20	35
Chlorobenzene	**0.18**		0.048	0.010	mg/m3			12/15/16 01:20	35
Chloroethane	**0.033**	**J**	0.074	0.028	mg/m3			12/15/16 01:20	35
Chloroform	ND		0.051	0.016	mg/m3			12/15/16 01:20	35
Chloromethane	**0.19**		0.058	0.014	mg/m3			12/15/16 01:20	35
cis-1,2-Dichloroethene	**0.046**	**J**	0.056	0.012	mg/m3			12/15/16 01:20	35
cis-1,3-Dichloropropene	ND		0.064	0.017	mg/m3			12/15/16 01:20	35
Dibromochloromethane	ND		0.12	0.024	mg/m3			12/15/16 01:20	35
Dichlorodifluoromethane	**0.14**		0.069	0.025	mg/m3			12/15/16 01:20	35
Ethylbenzene	**0.37**		0.061	0.0096	mg/m3			12/15/16 01:20	35
Gasoline Range Organics (C6-C12)	**160**		14	5.7	mg/m3			12/15/16 01:20	35
m,p-Xylene	**0.23**		0.12	0.015	mg/m3			12/15/16 01:20	35
Methylene Chloride	ND		0.049	0.0088	mg/m3			12/15/16 01:20	35
o-Xylene	**0.15**		0.061	0.0082	mg/m3			12/15/16 01:20	35
Styrene	ND		0.060	0.0088	mg/m3			12/15/16 01:20	35
Tetrachloroethene	ND		0.095	0.012	mg/m3			12/15/16 01:20	35
Toluene	**0.10**		0.053	0.0067	mg/m3			12/15/16 01:20	35
2-Chlorotoluene	**0.11**		0.072	0.014	mg/m3			12/15/16 01:20	35
trans-1,2-Dichloroethene	ND		0.056	0.014	mg/m3			12/15/16 01:20	35
trans-1,3-Dichloropropene	ND		0.064	0.014	mg/m3			12/15/16 01:20	35
Cyclohexane	**0.031**	**J**	0.048	0.010	mg/m3			12/15/16 01:20	35
Trichloroethene	ND		0.075	0.020	mg/m3			12/15/16 01:20	35
Trichlorofluoromethane	ND		0.079	0.039	mg/m3			12/15/16 01:20	35
Vinyl chloride	**0.97**		0.036	0.011	mg/m3			12/15/16 01:20	35
n-Heptane	**0.24**		0.11	0.0090	mg/m3			12/15/16 01:20	35
Hexane	**0.33**		0.099	0.0093	mg/m3			12/15/16 01:20	35
Isopropylbenzene	**0.20**		0.14	0.017	mg/m3			12/15/16 01:20	35

Client Sample ID: LFB-3:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.10	0.015	mg/m3			12/15/16 01:20	35
Propylene	**1.2**		0.024	0.0060	mg/m3			12/15/16 01:20	35
Tetrahydrofuran	**0.15**		0.083	0.022	mg/m3			12/15/16 01:20	35
2,2,4-Trimethylpentane	**0.053**	**J**	0.065	0.012	mg/m3			12/15/16 01:20	35
Vinyl bromide	ND		0.12	0.039	mg/m3			12/15/16 01:20	35

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*12/15/16 01:20*	*35*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*12/15/16 01:20*	*35*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/15/16 01:20*	*35*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		70	15	ppb v/v			12/24/16 22:12	35
1,2,4-Trimethylbenzene	**36**		28	5.7	ppb v/v			12/24/16 22:12	35
2-Butanone (MEK)	ND		28	7.0	ppb v/v			12/24/16 22:12	35
4-Methyl-2-pentanone (MIBK)	ND		14	4.7	ppb v/v			12/24/16 22:12	35
Acetone	**28**	**J**	180	6.2	ppb v/v			12/24/16 22:12	35
Benzyl chloride	ND		28	5.7	ppb v/v			12/24/16 22:12	35
Hexachlorobutadiene	ND		70	15	ppb v/v			12/24/16 22:12	35
Vinyl acetate	ND		28	5.1	ppb v/v			12/24/16 22:12	35
1,4-Dioxane	ND		28	3.5	ppb v/v			12/24/16 22:12	35
Methyl methacrylate	ND		28	5.5	ppb v/v			12/24/16 22:12	35
Naphthalene	ND		28	20	ppb v/v			12/24/16 22:12	35
Ethanol	ND		35	6.3	ppb v/v			12/24/16 22:12	35
2-Propanol	**9.4**	**J**	70	8.2	ppb v/v			12/24/16 22:12	35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.52	0.11	mg/m3			12/24/16 22:12	35
1,2,4-Trimethylbenzene	**0.18**		0.14	0.028	mg/m3			12/24/16 22:12	35
2-Butanone (MEK)	ND		0.083	0.021	mg/m3			12/24/16 22:12	35
4-Methyl-2-pentanone (MIBK)	ND		0.057	0.019	mg/m3			12/24/16 22:12	35
Acetone	**0.066**	**J**	0.42	0.015	mg/m3			12/24/16 22:12	35
Benzyl chloride	ND		0.14	0.030	mg/m3			12/24/16 22:12	35
Hexachlorobutadiene	ND		0.75	0.16	mg/m3			12/24/16 22:12	35
Vinyl acetate	ND		0.099	0.018	mg/m3			12/24/16 22:12	35
1,4-Dioxane	ND		0.10	0.013	mg/m3			12/24/16 22:12	35
Methyl methacrylate	ND		0.11	0.023	mg/m3			12/24/16 22:12	35
Naphthalene	ND		0.15	0.10	mg/m3			12/24/16 22:12	35
Ethanol	ND		0.066	0.012	mg/m3			12/24/16 22:12	35
2-Propanol	**0.023**	**J**	0.17	0.020	mg/m3			12/24/16 22:12	35

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*12/24/16 22:12*	*35*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*12/24/16 22:12*	*35*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/24/16 22:12*	*35*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-10:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.90**		0.30	0.065	ppb v/v			12/15/16 02:15	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/15/16 02:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.58**		0.40	0.16	ppb v/v			12/15/16 02:15	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/15/16 02:15	1
1,1-Dichloroethane	**0.22**	**J**	0.30	0.072	ppb v/v			12/15/16 02:15	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/15/16 02:15	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/15/16 02:15	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/15/16 02:15	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.67**		0.40	0.16	ppb v/v			12/15/16 02:15	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/15/16 02:15	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			12/15/16 02:15	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/15/16 02:15	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/15/16 02:15	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/15/16 02:15	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/15/16 02:15	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/15/16 02:15	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/15/16 02:15	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/15/16 02:15	1
Benzene	**0.088**	**J**	0.40	0.079	ppb v/v			12/15/16 02:15	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/15/16 02:15	1
Bromoform	ND		0.40	0.070	ppb v/v			12/15/16 02:15	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/15/16 02:15	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			12/15/16 02:15	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/15/16 02:15	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/15/16 02:15	1
Chloroethane	ND		0.80	0.31	ppb v/v			12/15/16 02:15	1
Chloroform	**0.19**	**J**	0.30	0.095	ppb v/v			12/15/16 02:15	1
Chloromethane	ND		0.80	0.20	ppb v/v			12/15/16 02:15	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/15/16 02:15	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/15/16 02:15	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/15/16 02:15	1
Dichlorodifluoromethane	**12**		0.40	0.15	ppb v/v			12/15/16 02:15	1
Ethylbenzene	**0.073**	**J**	0.40	0.063	ppb v/v			12/15/16 02:15	1
Gasoline Range Organics (C6-C12)	**77**	**J**	100	40	ppb v/v			12/15/16 02:15	1
m,p-Xylene	**0.16**	**J**	0.80	0.10	ppb v/v			12/15/16 02:15	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			12/15/16 02:15	1
o-Xylene	**0.057**	**J**	0.40	0.054	ppb v/v			12/15/16 02:15	1
Styrene	ND		0.40	0.059	ppb v/v			12/15/16 02:15	1
Tetrachloroethene	**18**		0.40	0.051	ppb v/v			12/15/16 02:15	1
Toluene	**0.10**	**J**	0.40	0.051	ppb v/v			12/15/16 02:15	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/15/16 02:15	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/15/16 02:15	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/15/16 02:15	1
Cyclohexane	ND		0.40	0.084	ppb v/v			12/15/16 02:15	1
Trichloroethene	**0.93**		0.40	0.11	ppb v/v			12/15/16 02:15	1
Trichlorofluoromethane	**13**		0.40	0.20	ppb v/v			12/15/16 02:15	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			12/15/16 02:15	1

Client Sample ID: LFB-10:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Heptane	ND		0.80	0.063	ppb v/v			12/15/16 02:15	1
Hexane	ND		0.80	0.075	ppb v/v			12/15/16 02:15	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			12/15/16 02:15	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/15/16 02:15	1
Propylene	**0.41**		0.40	0.099	ppb v/v			12/15/16 02:15	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/15/16 02:15	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/15/16 02:15	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/15/16 02:15	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0049**		0.0016	0.00035	mg/m3			12/15/16 02:15	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/15/16 02:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0044**		0.0031	0.0012	mg/m3			12/15/16 02:15	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/15/16 02:15	1
1,1-Dichloroethane	**0.00090**	**J**	0.0012	0.00029	mg/m3			12/15/16 02:15	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/15/16 02:15	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/15/16 02:15	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/15/16 02:15	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.0047**		0.0028	0.0011	mg/m3			12/15/16 02:15	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/15/16 02:15	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			12/15/16 02:15	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/15/16 02:15	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/15/16 02:15	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/15/16 02:15	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/15/16 02:15	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/15/16 02:15	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/15/16 02:15	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/15/16 02:15	1
Benzene	**0.00028**	**J**	0.0013	0.00025	mg/m3			12/15/16 02:15	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/15/16 02:15	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/15/16 02:15	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/15/16 02:15	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			12/15/16 02:15	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/15/16 02:15	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/15/16 02:15	1
Chloroethane	ND		0.0021	0.00081	mg/m3			12/15/16 02:15	1
Chloroform	**0.00091**	**J**	0.0015	0.00046	mg/m3			12/15/16 02:15	1
Chloromethane	ND		0.0017	0.00041	mg/m3			12/15/16 02:15	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/15/16 02:15	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/15/16 02:15	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/15/16 02:15	1
Dichlorodifluoromethane	**0.057**		0.0020	0.00072	mg/m3			12/15/16 02:15	1
Ethylbenzene	**0.00032**	**J**	0.0017	0.00027	mg/m3			12/15/16 02:15	1
Gasoline Range Organics (C6-C12)	**0.32**	**J**	0.41	0.16	mg/m3			12/15/16 02:15	1
m,p-Xylene	**0.00070**	**J**	0.0035	0.00043	mg/m3			12/15/16 02:15	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			12/15/16 02:15	1
o-Xylene	**0.00025**	**J**	0.0017	0.00023	mg/m3			12/15/16 02:15	1
Styrene	ND		0.0017	0.00025	mg/m3			12/15/16 02:15	1

Client Sample ID: LFB-10:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**0.12**		0.0027	0.00035	mg/m3			12/15/16 02:15	1
Toluene	**0.00039**	**J**	0.0015	0.00019	mg/m3			12/15/16 02:15	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/15/16 02:15	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/15/16 02:15	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/15/16 02:15	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/15/16 02:15	1
Trichloroethene	**0.0050**		0.0021	0.00056	mg/m3			12/15/16 02:15	1
Trichlorofluoromethane	**0.072**		0.0022	0.0011	mg/m3			12/15/16 02:15	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			12/15/16 02:15	1
n-Heptane	ND		0.0033	0.00026	mg/m3			12/15/16 02:15	1
Hexane	ND		0.0028	0.00026	mg/m3			12/15/16 02:15	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			12/15/16 02:15	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/15/16 02:15	1
Propylene	**0.00071**		0.00069	0.00017	mg/m3			12/15/16 02:15	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/15/16 02:15	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/15/16 02:15	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/15/16 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*12/15/16 02:15*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*12/15/16 02:15*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*12/15/16 02:15*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			12/24/16 23:12	1
1,2,4-Trimethylbenzene	**0.17**	**J**	0.80	0.16	ppb v/v			12/24/16 23:12	1
2-Butanone (MEK)	ND		0.80	0.20	ppb v/v			12/24/16 23:12	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			12/24/16 23:12	1
Acetone	**1.6**	**J**	5.0	0.18	ppb v/v			12/24/16 23:12	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			12/24/16 23:12	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			12/24/16 23:12	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			12/24/16 23:12	1
1,4-Dioxane	**0.26**	**J**	0.80	0.10	ppb v/v			12/24/16 23:12	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			12/24/16 23:12	1
Naphthalene	ND		0.80	0.56	ppb v/v			12/24/16 23:12	1
Ethanol	**0.46**	**J**	1.0	0.18	ppb v/v			12/24/16 23:12	1
2-Propanol	**0.52**	**J**	2.0	0.23	ppb v/v			12/24/16 23:12	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			12/24/16 23:12	1
1,2,4-Trimethylbenzene	**0.00082**	**J**	0.0039	0.00080	mg/m3			12/24/16 23:12	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			12/24/16 23:12	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			12/24/16 23:12	1
Acetone	**0.0038**	**J**	0.012	0.00042	mg/m3			12/24/16 23:12	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			12/24/16 23:12	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			12/24/16 23:12	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			12/24/16 23:12	1
1,4-Dioxane	**0.00094**	**J**	0.0029	0.00036	mg/m3			12/24/16 23:12	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			12/24/16 23:12	1
Naphthalene	ND		0.0042	0.0029	mg/m3			12/24/16 23:12	1

Client Sample ID: LFB-10:120216

Lab Sample ID: 590-5134-6

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.00086**	**J**	0.0019	0.00034	mg/m3			12/24/16 23:12	1
2-Propanol	**0.0013**	**J**	0.0049	0.00058	mg/m3			12/24/16 23:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*12/24/16 23:12*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*12/24/16 23:12*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*12/24/16 23:12*	*1*

Client Sample ID: LFB-11:120216

Lab Sample ID: 590-5134-7

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		16	3.5	ppb v/v			12/15/16 02:59	53.9
1,1,2,2-Tetrachloroethane	ND		22	3.7	ppb v/v			12/15/16 02:59	53.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		22	8.8	ppb v/v			12/15/16 02:59	53.9
1,1,2-Trichloroethane	ND		22	3.6	ppb v/v			12/15/16 02:59	53.9
1,1-Dichloroethane	**9.9**	**J**	16	3.9	ppb v/v			12/15/16 02:59	53.9
1,1-Dichloroethene	**7.7**	**J**	43	7.0	ppb v/v			12/15/16 02:59	53.9
1,2-Dibromoethane (EDB)	ND		43	4.0	ppb v/v			12/15/16 02:59	53.9
Allyl chloride	ND		43	6.0	ppb v/v			12/15/16 02:59	53.9
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**21**	**J**	22	8.4	ppb v/v			12/15/16 02:59	53.9
1,2-Dichlorobenzene	ND		22	7.0	ppb v/v			12/15/16 02:59	53.9
1,2-Dichloroethane	ND		43	4.7	ppb v/v			12/15/16 02:59	53.9
1,2-Dichloropropane	ND		22	13	ppb v/v			12/15/16 02:59	53.9
1,3,5-Trimethylbenzene	**9.6**	**J**	22	6.7	ppb v/v			12/15/16 02:59	53.9
1,3-Dichlorobenzene	ND		22	5.9	ppb v/v			12/15/16 02:59	53.9
1,4-Dichlorobenzene	**24**		22	8.0	ppb v/v			12/15/16 02:59	53.9
2-Hexanone	ND		22	4.7	ppb v/v			12/15/16 02:59	53.9
1,3-Butadiene	ND		43	8.2	ppb v/v			12/15/16 02:59	53.9
4-Ethyltoluene	**16**	**J**	22	10	ppb v/v			12/15/16 02:59	53.9
Benzene	**110**		22	4.3	ppb v/v			12/15/16 02:59	53.9
Bromodichloromethane	ND		16	3.6	ppb v/v			12/15/16 02:59	53.9
Bromoform	ND		22	3.8	ppb v/v			12/15/16 02:59	53.9
Bromomethane	ND		43	18	ppb v/v			12/15/16 02:59	53.9
Carbon disulfide	ND		43	4.2	ppb v/v			12/15/16 02:59	53.9
Carbon tetrachloride	ND		43	3.4	ppb v/v			12/15/16 02:59	53.9
Chlorobenzene	**17**		16	3.4	ppb v/v			12/15/16 02:59	53.9
Chloroethane	**1800**		43	17	ppb v/v			12/15/16 02:59	53.9
Chloroform	ND		16	5.1	ppb v/v			12/15/16 02:59	53.9
Chloromethane	**13**	**J**	43	11	ppb v/v			12/15/16 02:59	53.9
cis-1,2-Dichloroethene	**69**		22	4.8	ppb v/v			12/15/16 02:59	53.9
cis-1,3-Dichloropropene	ND		22	5.6	ppb v/v			12/15/16 02:59	53.9
Dibromochloromethane	ND		22	4.3	ppb v/v			12/15/16 02:59	53.9
Dichlorodifluoromethane	**48**		22	7.8	ppb v/v			12/15/16 02:59	53.9
Ethylbenzene	**620**		22	3.4	ppb v/v			12/15/16 02:59	53.9
Gasoline Range Organics (C6-C12)	**72000**		5400	2200	ppb v/v			12/15/16 02:59	53.9

Client Sample ID: LFB-11:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	**160**		43	5.4	ppb v/v			12/15/16 02:59	53.9
Methylene Chloride	ND		22	3.9	ppb v/v			12/15/16 02:59	53.9
o-Xylene	**110**		22	2.9	ppb v/v			12/15/16 02:59	53.9
Styrene	ND		22	3.2	ppb v/v			12/15/16 02:59	53.9
Tetrachloroethene	**5.2**	**J**	22	2.7	ppb v/v			12/15/16 02:59	53.9
Toluene	**60**		22	2.7	ppb v/v			12/15/16 02:59	53.9
2-Chlorotoluene	ND		22	4.3	ppb v/v			12/15/16 02:59	53.9
trans-1,2-Dichloroethene	ND		22	5.4	ppb v/v			12/15/16 02:59	53.9
trans-1,3-Dichloropropene	ND		22	4.7	ppb v/v			12/15/16 02:59	53.9
Cyclohexane	**46**		22	4.5	ppb v/v			12/15/16 02:59	53.9
Trichloroethene	**5.9**	**J**	22	5.7	ppb v/v			12/15/16 02:59	53.9
Trichlorofluoromethane	**98**		22	11	ppb v/v			12/15/16 02:59	53.9
Vinyl chloride	**27**		22	6.5	ppb v/v			12/15/16 02:59	53.9
n-Heptane	**220**		43	3.4	ppb v/v			12/15/16 02:59	53.9
Hexane	**390**		43	4.0	ppb v/v			12/15/16 02:59	53.9
Isopropylbenzene	**53**		43	5.4	ppb v/v			12/15/16 02:59	53.9
Methyl-t-Butyl Ether (MTBE)	ND		43	6.5	ppb v/v			12/15/16 02:59	53.9
Propylene	**1600**		22	5.3	ppb v/v			12/15/16 02:59	53.9
Tetrahydrofuran	**84**		43	11	ppb v/v			12/15/16 02:59	53.9
2,2,4-Trimethylpentane	**30**		22	3.8	ppb v/v			12/15/16 02:59	53.9
Vinyl bromide	ND		43	14	ppb v/v			12/15/16 02:59	53.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.088	0.019	mg/m3			12/15/16 02:59	53.9
1,1,2,2-Tetrachloroethane	ND		0.15	0.026	mg/m3			12/15/16 02:59	53.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.17	0.067	mg/m3			12/15/16 02:59	53.9
1,1,2-Trichloroethane	ND		0.12	0.020	mg/m3			12/15/16 02:59	53.9
1,1-Dichloroethane	**0.040**	**J**	0.065	0.016	mg/m3			12/15/16 02:59	53.9
1,1-Dichloroethene	**0.030**	**J**	0.17	0.028	mg/m3			12/15/16 02:59	53.9
1,2-Dibromoethane (EDB)	ND		0.33	0.031	mg/m3			12/15/16 02:59	53.9
Allyl chloride	ND		0.13	0.019	mg/m3			12/15/16 02:59	53.9
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.15**	**J**	0.15	0.058	mg/m3			12/15/16 02:59	53.9
1,2-Dichlorobenzene	ND		0.13	0.042	mg/m3			12/15/16 02:59	53.9
1,2-Dichloroethane	ND		0.17	0.019	mg/m3			12/15/16 02:59	53.9
1,2-Dichloropropane	ND		0.10	0.060	mg/m3			12/15/16 02:59	53.9
1,3,5-Trimethylbenzene	**0.047**	**J**	0.11	0.033	mg/m3			12/15/16 02:59	53.9
1,3-Dichlorobenzene	ND		0.13	0.036	mg/m3			12/15/16 02:59	53.9
1,4-Dichlorobenzene	**0.14**		0.13	0.048	mg/m3			12/15/16 02:59	53.9
2-Hexanone	ND		0.088	0.019	mg/m3			12/15/16 02:59	53.9
1,3-Butadiene	ND		0.095	0.018	mg/m3			12/15/16 02:59	53.9
4-Ethyltoluene	**0.080**	**J**	0.11	0.050	mg/m3			12/15/16 02:59	53.9
Benzene	**0.35**		0.069	0.014	mg/m3			12/15/16 02:59	53.9
Bromodichloromethane	ND		0.11	0.024	mg/m3			12/15/16 02:59	53.9
Bromoform	ND		0.22	0.039	mg/m3			12/15/16 02:59	53.9
Bromomethane	ND		0.17	0.070	mg/m3			12/15/16 02:59	53.9
Carbon disulfide	ND		0.13	0.013	mg/m3			12/15/16 02:59	53.9
Carbon tetrachloride	ND		0.27	0.022	mg/m3			12/15/16 02:59	53.9
Chlorobenzene	**0.080**		0.074	0.016	mg/m3			12/15/16 02:59	53.9
Chloroethane	**4.6**		0.11	0.044	mg/m3			12/15/16 02:59	53.9

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-11:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.079	0.025	mg/m3			12/15/16 02:59	53.9
Chloromethane	**0.027**	**J**	0.089	0.022	mg/m3			12/15/16 02:59	53.9
cis-1,2-Dichloroethene	**0.27**		0.085	0.019	mg/m3			12/15/16 02:59	53.9
cis-1,3-Dichloropropene	ND		0.098	0.025	mg/m3			12/15/16 02:59	53.9
Dibromochloromethane	ND		0.18	0.036	mg/m3			12/15/16 02:59	53.9
Dichlorodifluoromethane	**0.24**		0.11	0.039	mg/m3			12/15/16 02:59	53.9
Ethylbenzene	**2.7**		0.094	0.015	mg/m3			12/15/16 02:59	53.9
Gasoline Range Organics (C6-C12)	**290**		22	8.8	mg/m3			12/15/16 02:59	53.9
m,p-Xylene	**0.70**		0.19	0.023	mg/m3			12/15/16 02:59	53.9
Methylene Chloride	ND		0.075	0.013	mg/m3			12/15/16 02:59	53.9
o-Xylene	**0.48**		0.094	0.013	mg/m3			12/15/16 02:59	53.9
Styrene	ND		0.092	0.014	mg/m3			12/15/16 02:59	53.9
Tetrachloroethene	**0.036**	**J**	0.15	0.019	mg/m3			12/15/16 02:59	53.9
Toluene	**0.23**		0.081	0.010	mg/m3			12/15/16 02:59	53.9
2-Chlorotoluene	ND		0.11	0.022	mg/m3			12/15/16 02:59	53.9
trans-1,2-Dichloroethene	ND		0.085	0.021	mg/m3			12/15/16 02:59	53.9
trans-1,3-Dichloropropene	ND		0.098	0.022	mg/m3			12/15/16 02:59	53.9
Cyclohexane	**0.16**		0.074	0.016	mg/m3			12/15/16 02:59	53.9
Trichloroethene	**0.032**	**J**	0.12	0.030	mg/m3			12/15/16 02:59	53.9
Trichlorofluoromethane	**0.55**		0.12	0.059	mg/m3			12/15/16 02:59	53.9
Vinyl chloride	**0.069**		0.055	0.017	mg/m3			12/15/16 02:59	53.9
n-Heptane	**0.92**		0.18	0.014	mg/m3			12/15/16 02:59	53.9
Hexane	**1.4**		0.15	0.014	mg/m3			12/15/16 02:59	53.9
Isopropylbenzene	**0.26**		0.21	0.026	mg/m3			12/15/16 02:59	53.9
Methyl-t-Butyl Ether (MTBE)	ND		0.16	0.023	mg/m3			12/15/16 02:59	53.9
Propylene	**2.7**		0.037	0.0092	mg/m3			12/15/16 02:59	53.9
Tetrahydrofuran	**0.25**		0.13	0.033	mg/m3			12/15/16 02:59	53.9
2,2,4-Trimethylpentane	**0.14**		0.10	0.018	mg/m3			12/15/16 02:59	53.9
Vinyl bromide	ND		0.19	0.060	mg/m3			12/15/16 02:59	53.9

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*12/15/16 02:59*	*53.9*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*12/15/16 02:59*	*53.9*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/15/16 02:59*	*53.9*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		110	23	ppb v/v			12/25/16 00:04	53.9
1,2,4-Trimethylbenzene	**31**	**J**	43	8.7	ppb v/v			12/25/16 00:04	53.9
2-Butanone (MEK)	ND		43	11	ppb v/v			12/25/16 00:04	53.9
4-Methyl-2-pentanone (MIBK)	ND		22	7.3	ppb v/v			12/25/16 00:04	53.9
Acetone	**15**	**J**	270	9.6	ppb v/v			12/25/16 00:04	53.9
Benzyl chloride	ND		43	8.8	ppb v/v			12/25/16 00:04	53.9
Hexachlorobutadiene	ND		110	23	ppb v/v			12/25/16 00:04	53.9
Vinyl acetate	ND		43	7.8	ppb v/v			12/25/16 00:04	53.9
1,4-Dioxane	ND		43	5.4	ppb v/v			12/25/16 00:04	53.9
Methyl methacrylate	ND		43	8.5	ppb v/v			12/25/16 00:04	53.9
Naphthalene	ND		43	30	ppb v/v			12/25/16 00:04	53.9
Ethanol	ND		54	9.7	ppb v/v			12/25/16 00:04	53.9

Client Sample ID: LFB-11:120216

Lab Sample ID: 590-5134-7

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Propanol	**21**	**J**	110	13	ppb v/v			12/25/16 00:04	53.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.80	0.17	mg/m3			12/25/16 00:04	53.9
1,2,4-Trimethylbenzene	**0.15**	**J**	0.21	0.043	mg/m3			12/25/16 00:04	53.9
2-Butanone (MEK)	ND		0.13	0.032	mg/m3			12/25/16 00:04	53.9
4-Methyl-2-pentanone (MIBK)	ND		0.088	0.030	mg/m3			12/25/16 00:04	53.9
Acetone	**0.036**	**J**	0.64	0.023	mg/m3			12/25/16 00:04	53.9
Benzyl chloride	ND		0.22	0.045	mg/m3			12/25/16 00:04	53.9
Hexachlorobutadiene	ND		1.1	0.25	mg/m3			12/25/16 00:04	53.9
Vinyl acetate	ND		0.15	0.028	mg/m3			12/25/16 00:04	53.9
1,4-Dioxane	ND		0.16	0.020	mg/m3			12/25/16 00:04	53.9
Methyl methacrylate	ND		0.18	0.035	mg/m3			12/25/16 00:04	53.9
Naphthalene	ND		0.23	0.16	mg/m3			12/25/16 00:04	53.9
Ethanol	ND		0.10	0.018	mg/m3			12/25/16 00:04	53.9
2-Propanol	**0.052**	**J**	0.26	0.031	mg/m3			12/25/16 00:04	53.9

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*12/25/16 00:04*	*53.9*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*12/25/16 00:04*	*53.9*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/25/16 00:04*	*53.9*

Client Sample ID: LFB-8:120216

Lab Sample ID: 590-5134-8

Date Collected: 12/02/16 00:00

Matrix: Air

Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1.5**		0.53	0.11	ppb v/v			12/15/16 03:44	1.75
1,1,2,2-Tetrachloroethane	ND		0.70	0.12	ppb v/v			12/15/16 03:44	1.75
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.45**	**J**	0.70	0.29	ppb v/v			12/15/16 03:44	1.75
1,1,2-Trichloroethane	ND		0.70	0.12	ppb v/v			12/15/16 03:44	1.75
1,1-Dichloroethane	**0.60**		0.53	0.13	ppb v/v			12/15/16 03:44	1.75
1,1-Dichloroethene	ND		1.4	0.23	ppb v/v			12/15/16 03:44	1.75
1,2-Dibromoethane (EDB)	ND		1.4	0.13	ppb v/v			12/15/16 03:44	1.75
Allyl chloride	ND		1.4	0.19	ppb v/v			12/15/16 03:44	1.75
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**1.5**		0.70	0.27	ppb v/v			12/15/16 03:44	1.75
1,2-Dichlorobenzene	ND		0.70	0.23	ppb v/v			12/15/16 03:44	1.75
1,2-Dichloroethane	ND		1.4	0.15	ppb v/v			12/15/16 03:44	1.75
1,2-Dichloropropane	ND		0.70	0.42	ppb v/v			12/15/16 03:44	1.75
1,3,5-Trimethylbenzene	ND		0.70	0.22	ppb v/v			12/15/16 03:44	1.75
1,3-Dichlorobenzene	ND		0.70	0.19	ppb v/v			12/15/16 03:44	1.75
1,4-Dichlorobenzene	ND		0.70	0.26	ppb v/v			12/15/16 03:44	1.75
2-Hexanone	ND		0.70	0.15	ppb v/v			12/15/16 03:44	1.75
1,3-Butadiene	ND		1.4	0.27	ppb v/v			12/15/16 03:44	1.75
4-Ethyltoluene	ND		0.70	0.33	ppb v/v			12/15/16 03:44	1.75
Benzene	ND		0.70	0.14	ppb v/v			12/15/16 03:44	1.75
Bromodichloromethane	ND		0.53	0.12	ppb v/v			12/15/16 03:44	1.75
Bromoform	ND		0.70	0.12	ppb v/v			12/15/16 03:44	1.75

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-8:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		1.4	0.59	ppb v/v			12/15/16 03:44	1.75
Carbon disulfide	ND		1.4	0.14	ppb v/v			12/15/16 03:44	1.75
Carbon tetrachloride	ND		1.4	0.11	ppb v/v			12/15/16 03:44	1.75
Chlorobenzene	ND		0.53	0.11	ppb v/v			12/15/16 03:44	1.75
Chloroethane	**0.60**	**J**	1.4	0.54	ppb v/v			12/15/16 03:44	1.75
Chloroform	**0.18**	**J**	0.53	0.17	ppb v/v			12/15/16 03:44	1.75
Chloromethane	ND		1.4	0.34	ppb v/v			12/15/16 03:44	1.75
cis-1,2-Dichloroethene	ND		0.70	0.16	ppb v/v			12/15/16 03:44	1.75
cis-1,3-Dichloropropene	ND		0.70	0.18	ppb v/v			12/15/16 03:44	1.75
Dibromochloromethane	ND		0.70	0.14	ppb v/v			12/15/16 03:44	1.75
Dichlorodifluoromethane	**22**		0.70	0.25	ppb v/v			12/15/16 03:44	1.75
Ethylbenzene	**0.31**	**J**	0.70	0.11	ppb v/v			12/15/16 03:44	1.75
Gasoline Range Organics (C6-C12)	**81**	**J**	180	70	ppb v/v			12/15/16 03:44	1.75
m,p-Xylene	ND		1.4	0.18	ppb v/v			12/15/16 03:44	1.75
Methylene Chloride	ND		0.70	0.13	ppb v/v			12/15/16 03:44	1.75
o-Xylene	ND		0.70	0.095	ppb v/v			12/15/16 03:44	1.75
Styrene	**1.0**		0.70	0.10	ppb v/v			12/15/16 03:44	1.75
Tetrachloroethene	**7.6**		0.70	0.089	ppb v/v			12/15/16 03:44	1.75
Toluene	**0.13**	**J**	0.70	0.089	ppb v/v			12/15/16 03:44	1.75
2-Chlorotoluene	ND		0.70	0.14	ppb v/v			12/15/16 03:44	1.75
trans-1,2-Dichloroethene	ND		0.70	0.18	ppb v/v			12/15/16 03:44	1.75
trans-1,3-Dichloropropene	ND		0.70	0.15	ppb v/v			12/15/16 03:44	1.75
Cyclohexane	**0.17**	**J**	0.70	0.15	ppb v/v			12/15/16 03:44	1.75
Trichloroethene	ND		0.70	0.18	ppb v/v			12/15/16 03:44	1.75
Trichlorofluoromethane	**78**		0.70	0.34	ppb v/v			12/15/16 03:44	1.75
Vinyl chloride	ND		0.70	0.21	ppb v/v			12/15/16 03:44	1.75
n-Heptane	**0.39**	**J**	1.4	0.11	ppb v/v			12/15/16 03:44	1.75
Hexane	**0.84**	**J**	1.4	0.13	ppb v/v			12/15/16 03:44	1.75
Isopropylbenzene	ND		1.4	0.18	ppb v/v			12/15/16 03:44	1.75
Methyl-t-Butyl Ether (MTBE)	ND		1.4	0.21	ppb v/v			12/15/16 03:44	1.75
Propylene	**51**		0.70	0.17	ppb v/v			12/15/16 03:44	1.75
Tetrahydrofuran	ND		1.4	0.37	ppb v/v			12/15/16 03:44	1.75
2,2,4-Trimethylpentane	ND		0.70	0.12	ppb v/v			12/15/16 03:44	1.75
Vinyl bromide	ND		1.4	0.45	ppb v/v			12/15/16 03:44	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0083**		0.0029	0.00062	mg/m3			12/15/16 03:44	1.75
1,1,2,2-Tetrachloroethane	ND		0.0048	0.00083	mg/m3			12/15/16 03:44	1.75
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0035**	**J**	0.0054	0.0022	mg/m3			12/15/16 03:44	1.75
1,1,2-Trichloroethane	ND		0.0038	0.00064	mg/m3			12/15/16 03:44	1.75
1,1-Dichloroethane	**0.0024**		0.0021	0.00051	mg/m3			12/15/16 03:44	1.75
1,1-Dichloroethene	ND		0.0056	0.00090	mg/m3			12/15/16 03:44	1.75
1,2-Dibromoethane (EDB)	ND		0.011	0.0010	mg/m3			12/15/16 03:44	1.75
Allyl chloride	ND		0.0044	0.00061	mg/m3			12/15/16 03:44	1.75
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.010**		0.0049	0.0019	mg/m3			12/15/16 03:44	1.75
1,2-Dichlorobenzene	ND		0.0042	0.0014	mg/m3			12/15/16 03:44	1.75
1,2-Dichloroethane	ND		0.0057	0.00062	mg/m3			12/15/16 03:44	1.75
1,2-Dichloropropane	ND		0.0032	0.0019	mg/m3			12/15/16 03:44	1.75

Client Sample ID: LFB-8:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.0034	0.0011	mg/m3			12/15/16 03:44	1.75
1,3-Dichlorobenzene	ND		0.0042	0.0012	mg/m3			12/15/16 03:44	1.75
1,4-Dichlorobenzene	ND		0.0042	0.0016	mg/m3			12/15/16 03:44	1.75
2-Hexanone	ND		0.0029	0.00062	mg/m3			12/15/16 03:44	1.75
1,3-Butadiene	ND		0.0031	0.00059	mg/m3			12/15/16 03:44	1.75
4-Ethyltoluene	ND		0.0034	0.0016	mg/m3			12/15/16 03:44	1.75
Benzene	ND		0.0022	0.00044	mg/m3			12/15/16 03:44	1.75
Bromodichloromethane	ND		0.0035	0.00077	mg/m3			12/15/16 03:44	1.75
Bromoform	ND		0.0072	0.0013	mg/m3			12/15/16 03:44	1.75
Bromomethane	ND		0.0054	0.0023	mg/m3			12/15/16 03:44	1.75
Carbon disulfide	ND		0.0044	0.00043	mg/m3			12/15/16 03:44	1.75
Carbon tetrachloride	ND		0.0088	0.00070	mg/m3			12/15/16 03:44	1.75
Chlorobenzene	ND		0.0024	0.00052	mg/m3			12/15/16 03:44	1.75
Chloroethane	**0.0016**	**J**	0.0037	0.0014	mg/m3			12/15/16 03:44	1.75
Chloroform	**0.00089**	**J**	0.0026	0.00081	mg/m3			12/15/16 03:44	1.75
Chloromethane	ND		0.0029	0.00071	mg/m3			12/15/16 03:44	1.75
cis-1,2-Dichloroethene	ND		0.0028	0.00062	mg/m3			12/15/16 03:44	1.75
cis-1,3-Dichloropropene	ND		0.0032	0.00083	mg/m3			12/15/16 03:44	1.75
Dibromochloromethane	ND		0.0060	0.0012	mg/m3			12/15/16 03:44	1.75
Dichlorodifluoromethane	**0.11**		0.0035	0.0013	mg/m3			12/15/16 03:44	1.75
Ethylbenzene	**0.0013**	**J**	0.0030	0.00048	mg/m3			12/15/16 03:44	1.75
Gasoline Range Organics (C6-C12)	**0.33**	**J**	0.72	0.29	mg/m3			12/15/16 03:44	1.75
m,p-Xylene	ND		0.0061	0.00076	mg/m3			12/15/16 03:44	1.75
Methylene Chloride	ND		0.0024	0.00044	mg/m3			12/15/16 03:44	1.75
o-Xylene	ND		0.0030	0.00041	mg/m3			12/15/16 03:44	1.75
Styrene	**0.0043**		0.0030	0.00044	mg/m3			12/15/16 03:44	1.75
Tetrachloroethene	**0.051**		0.0047	0.00061	mg/m3			12/15/16 03:44	1.75
Toluene	**0.00049**	**J**	0.0026	0.00034	mg/m3			12/15/16 03:44	1.75
2-Chlorotoluene	ND		0.0036	0.00072	mg/m3			12/15/16 03:44	1.75
trans-1,2-Dichloroethene	ND		0.0028	0.00069	mg/m3			12/15/16 03:44	1.75
trans-1,3-Dichloropropene	ND		0.0032	0.00070	mg/m3			12/15/16 03:44	1.75
Cyclohexane	**0.00058**	**J**	0.0024	0.00051	mg/m3			12/15/16 03:44	1.75
Trichloroethene	ND		0.0038	0.00099	mg/m3			12/15/16 03:44	1.75
Trichlorofluoromethane	**0.44**		0.0039	0.0019	mg/m3			12/15/16 03:44	1.75
Vinyl chloride	ND		0.0018	0.00054	mg/m3			12/15/16 03:44	1.75
n-Heptane	**0.0016**	**J**	0.0057	0.00045	mg/m3			12/15/16 03:44	1.75
Hexane	**0.0029**	**J**	0.0049	0.00046	mg/m3			12/15/16 03:44	1.75
Isopropylbenzene	ND		0.0069	0.00086	mg/m3			12/15/16 03:44	1.75
Methyl-t-Butyl Ether (MTBE)	ND		0.0050	0.00076	mg/m3			12/15/16 03:44	1.75
Propylene	**0.087**		0.0012	0.00030	mg/m3			12/15/16 03:44	1.75
Tetrahydrofuran	ND		0.0041	0.0011	mg/m3			12/15/16 03:44	1.75
2,2,4-Trimethylpentane	ND		0.0033	0.00058	mg/m3			12/15/16 03:44	1.75
Vinyl bromide	ND		0.0061	0.0020	mg/m3			12/15/16 03:44	1.75

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*12/15/16 03:44*	*1.75*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*12/15/16 03:44*	*1.75*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/15/16 03:44*	*1.75*

Client Sample ID: LFB-8:120216

Lab Sample ID: 590-5134-8
Matrix: Air
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		3.5	0.76	ppb v/v			12/25/16 00:58	1.75
1,2,4-Trimethylbenzene	**0.50**	**J**	1.4	0.28	ppb v/v			12/25/16 00:58	1.75
2-Butanone (MEK)	**0.55**	**J**	1.4	0.35	ppb v/v			12/25/16 00:58	1.75
4-Methyl-2-pentanone (MIBK)	ND		0.70	0.24	ppb v/v			12/25/16 00:58	1.75
Acetone	**2.3**	**J**	8.8	0.31	ppb v/v			12/25/16 00:58	1.75
Benzyl chloride	ND		1.4	0.29	ppb v/v			12/25/16 00:58	1.75
Hexachlorobutadiene	ND		3.5	0.76	ppb v/v			12/25/16 00:58	1.75
Vinyl acetate	**0.56**	**J**	1.4	0.25	ppb v/v			12/25/16 00:58	1.75
1,4-Dioxane	**0.21**	**J**	1.4	0.18	ppb v/v			12/25/16 00:58	1.75
Methyl methacrylate	**0.32**	**J**	1.4	0.27	ppb v/v			12/25/16 00:58	1.75
Naphthalene	ND		1.4	0.98	ppb v/v			12/25/16 00:58	1.75
Ethanol	**2.3**		1.8	0.32	ppb v/v			12/25/16 00:58	1.75
2-Propanol	**1.2**	**J**	3.5	0.41	ppb v/v			12/25/16 00:58	1.75

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.026	0.0056	mg/m3			12/25/16 00:58	1.75
1,2,4-Trimethylbenzene	**0.0025**	**J**	0.0069	0.0014	mg/m3			12/25/16 00:58	1.75
2-Butanone (MEK)	**0.0016**	**J**	0.0041	0.0010	mg/m3			12/25/16 00:58	1.75
4-Methyl-2-pentanone (MIBK)	ND		0.0029	0.00097	mg/m3			12/25/16 00:58	1.75
Acetone	**0.0055**	**J**	0.021	0.00074	mg/m3			12/25/16 00:58	1.75
Benzyl chloride	ND		0.0072	0.0015	mg/m3			12/25/16 00:58	1.75
Hexachlorobutadiene	ND		0.037	0.0081	mg/m3			12/25/16 00:58	1.75
Vinyl acetate	**0.0020**	**J**	0.0049	0.00089	mg/m3			12/25/16 00:58	1.75
1,4-Dioxane	**0.00076**	**J**	0.0050	0.00064	mg/m3			12/25/16 00:58	1.75
Methyl methacrylate	**0.0013**	**J**	0.0057	0.0011	mg/m3			12/25/16 00:58	1.75
Naphthalene	ND		0.0073	0.0052	mg/m3			12/25/16 00:58	1.75
Ethanol	**0.0043**		0.0033	0.00059	mg/m3			12/25/16 00:58	1.75
2-Propanol	**0.0029**	**J**	0.0086	0.0010	mg/m3			12/25/16 00:58	1.75

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*12/25/16 00:58*	*1.75*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*12/25/16 00:58*	*1.75*
Toluene-d8 (Surr)	*95*		*70 - 130*		*12/25/16 00:58*	*1.75*

Client Sample ID: LFB-9:120216

Lab Sample ID: 590-5134-9
Matrix: Air
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.12**	**J**	0.30	0.065	ppb v/v			12/15/16 04:32	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/15/16 04:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.54**		0.40	0.16	ppb v/v			12/15/16 04:32	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/15/16 04:32	1
1,1-Dichloroethane	**0.47**		0.30	0.072	ppb v/v			12/15/16 04:32	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/15/16 04:32	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/15/16 04:32	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/15/16 04:32	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**1.5**		0.40	0.16	ppb v/v			12/15/16 04:32	1

Client Sample ID: LFB-9:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/15/16 04:32	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			12/15/16 04:32	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/15/16 04:32	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/15/16 04:32	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/15/16 04:32	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/15/16 04:32	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/15/16 04:32	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/15/16 04:32	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/15/16 04:32	1
Benzene	**0.13**	**J**	0.40	0.079	ppb v/v			12/15/16 04:32	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/15/16 04:32	1
Bromoform	ND		0.40	0.070	ppb v/v			12/15/16 04:32	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/15/16 04:32	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			12/15/16 04:32	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/15/16 04:32	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/15/16 04:32	1
Chloroethane	ND		0.80	0.31	ppb v/v			12/15/16 04:32	1
Chloroform	**0.15**	**J**	0.30	0.095	ppb v/v			12/15/16 04:32	1
Chloromethane	ND		0.80	0.20	ppb v/v			12/15/16 04:32	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/15/16 04:32	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/15/16 04:32	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/15/16 04:32	1
Dichlorodifluoromethane	**16**		0.40	0.15	ppb v/v			12/15/16 04:32	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			12/15/16 04:32	1
Gasoline Range Organics (C6-C12)	**44**	**J**	100	40	ppb v/v			12/15/16 04:32	1
m,p-Xylene	**0.10**	**J**	0.80	0.10	ppb v/v			12/15/16 04:32	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			12/15/16 04:32	1
o-Xylene	ND		0.40	0.054	ppb v/v			12/15/16 04:32	1
Styrene	ND		0.40	0.059	ppb v/v			12/15/16 04:32	1
Tetrachloroethene	**16**		0.40	0.051	ppb v/v			12/15/16 04:32	1
Toluene	**0.086**	**J**	0.40	0.051	ppb v/v			12/15/16 04:32	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/15/16 04:32	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/15/16 04:32	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/15/16 04:32	1
Cyclohexane	ND		0.40	0.084	ppb v/v			12/15/16 04:32	1
Trichloroethene	**1.2**		0.40	0.11	ppb v/v			12/15/16 04:32	1
Trichlorofluoromethane	**17**		0.40	0.20	ppb v/v			12/15/16 04:32	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			12/15/16 04:32	1
n-Heptane	ND		0.80	0.063	ppb v/v			12/15/16 04:32	1
Hexane	ND		0.80	0.075	ppb v/v			12/15/16 04:32	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			12/15/16 04:32	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/15/16 04:32	1
Propylene	**0.46**		0.40	0.099	ppb v/v			12/15/16 04:32	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/15/16 04:32	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/15/16 04:32	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/15/16 04:32	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.00064**	**J**	0.0016	0.00035	mg/m3			12/15/16 04:32	1

Client Sample ID: LFB-9:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/15/16 04:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0041**		0.0031	0.0012	mg/m3			12/15/16 04:32	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/15/16 04:32	1
1,1-Dichloroethane	**0.0019**		0.0012	0.00029	mg/m3			12/15/16 04:32	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/15/16 04:32	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/15/16 04:32	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/15/16 04:32	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.010**		0.0028	0.0011	mg/m3			12/15/16 04:32	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/15/16 04:32	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			12/15/16 04:32	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/15/16 04:32	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/15/16 04:32	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/15/16 04:32	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/15/16 04:32	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/15/16 04:32	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/15/16 04:32	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/15/16 04:32	1
Benzene	**0.00042**	**J**	0.0013	0.00025	mg/m3			12/15/16 04:32	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/15/16 04:32	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/15/16 04:32	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/15/16 04:32	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			12/15/16 04:32	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/15/16 04:32	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/15/16 04:32	1
Chloroethane	ND		0.0021	0.00081	mg/m3			12/15/16 04:32	1
Chloroform	**0.00074**	**J**	0.0015	0.00046	mg/m3			12/15/16 04:32	1
Chloromethane	ND		0.0017	0.00041	mg/m3			12/15/16 04:32	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/15/16 04:32	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/15/16 04:32	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/15/16 04:32	1
Dichlorodifluoromethane	**0.078**		0.0020	0.00072	mg/m3			12/15/16 04:32	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			12/15/16 04:32	1
Gasoline Range Organics (C6-C12)	**0.18**	**J**	0.41	0.16	mg/m3			12/15/16 04:32	1
m,p-Xylene	**0.00045**	**J**	0.0035	0.00043	mg/m3			12/15/16 04:32	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			12/15/16 04:32	1
o-Xylene	ND		0.0017	0.00023	mg/m3			12/15/16 04:32	1
Styrene	ND		0.0017	0.00025	mg/m3			12/15/16 04:32	1
Tetrachloroethene	**0.11**		0.0027	0.00035	mg/m3			12/15/16 04:32	1
Toluene	**0.00032**	**J**	0.0015	0.00019	mg/m3			12/15/16 04:32	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/15/16 04:32	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/15/16 04:32	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/15/16 04:32	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/15/16 04:32	1
Trichloroethene	**0.0065**		0.0021	0.00056	mg/m3			12/15/16 04:32	1
Trichlorofluoromethane	**0.097**		0.0022	0.0011	mg/m3			12/15/16 04:32	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			12/15/16 04:32	1
n-Heptane	ND		0.0033	0.00026	mg/m3			12/15/16 04:32	1

Client Sample ID: LFB-9:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		0.0028	0.00026	mg/m3			12/15/16 04:32	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			12/15/16 04:32	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/15/16 04:32	1
Propylene	**0.00078**		0.00069	0.00017	mg/m3			12/15/16 04:32	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/15/16 04:32	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/15/16 04:32	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/15/16 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*12/15/16 04:32*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*12/15/16 04:32*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*12/15/16 04:32*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		3.7	0.80	ppb v/v			12/25/16 02:25	1.84
1,2,4-Trimethylbenzene	ND		1.5	0.30	ppb v/v			12/25/16 02:25	1.84
2-Butanone (MEK)	ND		1.5	0.37	ppb v/v			12/25/16 02:25	1.84
4-Methyl-2-pentanone (MIBK)	ND		0.74	0.25	ppb v/v			12/25/16 02:25	1.84
Acetone	**1.7**	**J**	9.2	0.33	ppb v/v			12/25/16 02:25	1.84
Benzyl chloride	ND		1.5	0.30	ppb v/v			12/25/16 02:25	1.84
Hexachlorobutadiene	ND		3.7	0.79	ppb v/v			12/25/16 02:25	1.84
Vinyl acetate	ND		1.5	0.27	ppb v/v			12/25/16 02:25	1.84
1,4-Dioxane	ND		1.5	0.19	ppb v/v			12/25/16 02:25	1.84
Methyl methacrylate	ND		1.5	0.29	ppb v/v			12/25/16 02:25	1.84
Naphthalene	ND		1.5	1.0	ppb v/v			12/25/16 02:25	1.84
Ethanol	**0.64**	**J**	1.8	0.33	ppb v/v			12/25/16 02:25	1.84
2-Propanol	ND		3.7	0.43	ppb v/v			12/25/16 02:25	1.84

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.027	0.0059	mg/m3			12/25/16 02:25	1.84
1,2,4-Trimethylbenzene	ND		0.0072	0.0015	mg/m3			12/25/16 02:25	1.84
2-Butanone (MEK)	ND		0.0043	0.0011	mg/m3			12/25/16 02:25	1.84
4-Methyl-2-pentanone (MIBK)	ND		0.0030	0.0010	mg/m3			12/25/16 02:25	1.84
Acetone	**0.0040**	**J**	0.022	0.00078	mg/m3			12/25/16 02:25	1.84
Benzyl chloride	ND		0.0076	0.0016	mg/m3			12/25/16 02:25	1.84
Hexachlorobutadiene	ND		0.039	0.0085	mg/m3			12/25/16 02:25	1.84
Vinyl acetate	ND		0.0052	0.00094	mg/m3			12/25/16 02:25	1.84
1,4-Dioxane	ND		0.0053	0.00067	mg/m3			12/25/16 02:25	1.84
Methyl methacrylate	ND		0.0060	0.0012	mg/m3			12/25/16 02:25	1.84
Naphthalene	ND		0.0077	0.0054	mg/m3			12/25/16 02:25	1.84
Ethanol	**0.0012**	**J**	0.0035	0.00062	mg/m3			12/25/16 02:25	1.84
2-Propanol	ND		0.0090	0.0011	mg/m3			12/25/16 02:25	1.84

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*12/25/16 02:25*	*1.84*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*12/25/16 02:25*	*1.84*
Toluene-d8 (Surr)	*97*		*70 - 130*		*12/25/16 02:25*	*1.84*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-5:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.6	1.2	ppb v/v			12/15/16 05:15	18.5
1,1,2,2-Tetrachloroethane	ND		7.4	1.3	ppb v/v			12/15/16 05:15	18.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.4	3.0	ppb v/v			12/15/16 05:15	18.5
1,1,2-Trichloroethane	ND		7.4	1.2	ppb v/v			12/15/16 05:15	18.5
1,1-Dichloroethane	ND		5.6	1.3	ppb v/v			12/15/16 05:15	18.5
1,1-Dichloroethene	ND		15	2.4	ppb v/v			12/15/16 05:15	18.5
1,2-Dibromoethane (EDB)	ND		15	1.4	ppb v/v			12/15/16 05:15	18.5
Allyl chloride	ND		15	2.1	ppb v/v			12/15/16 05:15	18.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**13**		7.4	2.9	ppb v/v			12/15/16 05:15	18.5
1,2-Dichlorobenzene	ND		7.4	2.4	ppb v/v			12/15/16 05:15	18.5
1,2-Dichloroethane	**2.0**	**J**	15	1.6	ppb v/v			12/15/16 05:15	18.5
1,2-Dichloropropane	ND		7.4	4.4	ppb v/v			12/15/16 05:15	18.5
1,3,5-Trimethylbenzene	ND		7.4	2.3	ppb v/v			12/15/16 05:15	18.5
1,3-Dichlorobenzene	ND		7.4	2.0	ppb v/v			12/15/16 05:15	18.5
1,4-Dichlorobenzene	**7.8**		7.4	2.8	ppb v/v			12/15/16 05:15	18.5
2-Hexanone	ND		7.4	1.6	ppb v/v			12/15/16 05:15	18.5
1,3-Butadiene	ND		15	2.8	ppb v/v			12/15/16 05:15	18.5
4-Ethyltoluene	ND		7.4	3.5	ppb v/v			12/15/16 05:15	18.5
Benzene	**7.6**		7.4	1.5	ppb v/v			12/15/16 05:15	18.5
Bromodichloromethane	ND		5.6	1.2	ppb v/v			12/15/16 05:15	18.5
Bromoform	ND		7.4	1.3	ppb v/v			12/15/16 05:15	18.5
Bromomethane	ND		15	6.2	ppb v/v			12/15/16 05:15	18.5
Carbon disulfide	**6.6**	**J**	15	1.4	ppb v/v			12/15/16 05:15	18.5
Carbon tetrachloride	ND		15	1.2	ppb v/v			12/15/16 05:15	18.5
Chlorobenzene	ND		5.6	1.2	ppb v/v			12/15/16 05:15	18.5
Chloroethane	**5.7**	**J**	15	5.7	ppb v/v			12/15/16 05:15	18.5
Chloroform	ND		5.6	1.8	ppb v/v			12/15/16 05:15	18.5
Chloromethane	**31**		15	3.6	ppb v/v			12/15/16 05:15	18.5
cis-1,2-Dichloroethene	**18**		7.4	1.6	ppb v/v			12/15/16 05:15	18.5
cis-1,3-Dichloropropene	ND		7.4	1.9	ppb v/v			12/15/16 05:15	18.5
Dibromochloromethane	ND		7.4	1.5	ppb v/v			12/15/16 05:15	18.5
Dichlorodifluoromethane	**21**		7.4	2.7	ppb v/v			12/15/16 05:15	18.5
Ethylbenzene	**32**		7.4	1.2	ppb v/v			12/15/16 05:15	18.5
Gasoline Range Organics (C6-C12)	**10000**		1900	740	ppb v/v			12/15/16 05:15	18.5
m,p-Xylene	ND		15	1.9	ppb v/v			12/15/16 05:15	18.5
Methylene Chloride	ND		7.4	1.3	ppb v/v			12/15/16 05:15	18.5
o-Xylene	ND		7.4	1.0	ppb v/v			12/15/16 05:15	18.5
Styrene	ND		7.4	1.1	ppb v/v			12/15/16 05:15	18.5
Tetrachloroethene	ND		7.4	0.94	ppb v/v			12/15/16 05:15	18.5
Toluene	**3.2**	**J**	7.4	0.94	ppb v/v			12/15/16 05:15	18.5
2-Chlorotoluene	ND		7.4	1.5	ppb v/v			12/15/16 05:15	18.5
trans-1,2-Dichloroethene	ND		7.4	1.9	ppb v/v			12/15/16 05:15	18.5
trans-1,3-Dichloropropene	ND		7.4	1.6	ppb v/v			12/15/16 05:15	18.5
Cyclohexane	**9.0**		7.4	1.6	ppb v/v			12/15/16 05:15	18.5
Trichloroethene	ND		7.4	1.9	ppb v/v			12/15/16 05:15	18.5
Trichlorofluoromethane	ND		7.4	3.6	ppb v/v			12/15/16 05:15	18.5
Vinyl chloride	**90**		7.4	2.2	ppb v/v			12/15/16 05:15	18.5
n-Heptane	**12**	**J**	15	1.2	ppb v/v			12/15/16 05:15	18.5

Client Sample ID: LFB-5:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	**47**		15	1.4	ppb v/v			12/15/16 05:15	18.5
Isopropylbenzene	**19**		15	1.9	ppb v/v			12/15/16 05:15	18.5
Methyl-t-Butyl Ether (MTBE)	ND		15	2.2	ppb v/v			12/15/16 05:15	18.5
Propylene	**620**		7.4	1.8	ppb v/v			12/15/16 05:15	18.5
Tetrahydrofuran	**11**	**J**	15	3.9	ppb v/v			12/15/16 05:15	18.5
2,2,4-Trimethylpentane	**4.3**	**J**	7.4	1.3	ppb v/v			12/15/16 05:15	18.5
Vinyl bromide	ND		15	4.7	ppb v/v			12/15/16 05:15	18.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.030	0.0066	mg/m3			12/15/16 05:15	18.5
1,1,2,2-Tetrachloroethane	ND		0.051	0.0088	mg/m3			12/15/16 05:15	18.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.057	0.023	mg/m3			12/15/16 05:15	18.5
1,1,2-Trichloroethane	ND		0.040	0.0068	mg/m3			12/15/16 05:15	18.5
1,1-Dichloroethane	ND		0.022	0.0054	mg/m3			12/15/16 05:15	18.5
1,1-Dichloroethene	ND		0.059	0.0095	mg/m3			12/15/16 05:15	18.5
1,2-Dibromoethane (EDB)	ND		0.11	0.011	mg/m3			12/15/16 05:15	18.5
Allyl chloride	ND		0.046	0.0064	mg/m3			12/15/16 05:15	18.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.094**		0.052	0.020	mg/m3			12/15/16 05:15	18.5
1,2-Dichlorobenzene	ND		0.044	0.014	mg/m3			12/15/16 05:15	18.5
1,2-Dichloroethane	**0.0079**	**J**	0.060	0.0066	mg/m3			12/15/16 05:15	18.5
1,2-Dichloropropane	ND		0.034	0.021	mg/m3			12/15/16 05:15	18.5
1,3,5-Trimethylbenzene	ND		0.036	0.011	mg/m3			12/15/16 05:15	18.5
1,3-Dichlorobenzene	ND		0.044	0.012	mg/m3			12/15/16 05:15	18.5
1,4-Dichlorobenzene	**0.047**		0.044	0.017	mg/m3			12/15/16 05:15	18.5
2-Hexanone	ND		0.030	0.0066	mg/m3			12/15/16 05:15	18.5
1,3-Butadiene	ND		0.033	0.0062	mg/m3			12/15/16 05:15	18.5
4-Ethyltoluene	ND		0.036	0.017	mg/m3			12/15/16 05:15	18.5
Benzene	**0.024**		0.024	0.0047	mg/m3			12/15/16 05:15	18.5
Bromodichloromethane	ND		0.037	0.0082	mg/m3			12/15/16 05:15	18.5
Bromoform	ND		0.076	0.013	mg/m3			12/15/16 05:15	18.5
Bromomethane	ND		0.057	0.024	mg/m3			12/15/16 05:15	18.5
Carbon disulfide	**0.021**	**J**	0.046	0.0045	mg/m3			12/15/16 05:15	18.5
Carbon tetrachloride	ND		0.093	0.0074	mg/m3			12/15/16 05:15	18.5
Chlorobenzene	ND		0.026	0.0055	mg/m3			12/15/16 05:15	18.5
Chloroethane	**0.015**	**J**	0.039	0.015	mg/m3			12/15/16 05:15	18.5
Chloroform	ND		0.027	0.0086	mg/m3			12/15/16 05:15	18.5
Chloromethane	**0.064**		0.031	0.0075	mg/m3			12/15/16 05:15	18.5
cis-1,2-Dichloroethene	**0.072**		0.029	0.0065	mg/m3			12/15/16 05:15	18.5
cis-1,3-Dichloropropene	ND		0.034	0.0087	mg/m3			12/15/16 05:15	18.5
Dibromochloromethane	ND		0.063	0.012	mg/m3			12/15/16 05:15	18.5
Dichlorodifluoromethane	**0.10**		0.037	0.013	mg/m3			12/15/16 05:15	18.5
Ethylbenzene	**0.14**		0.032	0.0051	mg/m3			12/15/16 05:15	18.5
Gasoline Range Organics (C6-C12)	**43**		7.6	3.0	mg/m3			12/15/16 05:15	18.5
m,p-Xylene	ND		0.064	0.0080	mg/m3			12/15/16 05:15	18.5
Methylene Chloride	ND		0.026	0.0046	mg/m3			12/15/16 05:15	18.5
o-Xylene	ND		0.032	0.0043	mg/m3			12/15/16 05:15	18.5
Styrene	ND		0.032	0.0046	mg/m3			12/15/16 05:15	18.5
Tetrachloroethene	ND		0.050	0.0064	mg/m3			12/15/16 05:15	18.5
Toluene	**0.012**	**J**	0.028	0.0036	mg/m3			12/15/16 05:15	18.5

Client Sample ID: LFB-5:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.038	0.0077	mg/m3			12/15/16 05:15	18.5
trans-1,2-Dichloroethene	ND		0.029	0.0073	mg/m3			12/15/16 05:15	18.5
trans-1,3-Dichloropropene	ND		0.034	0.0074	mg/m3			12/15/16 05:15	18.5
Cyclohexane	**0.031**		0.025	0.0053	mg/m3			12/15/16 05:15	18.5
Trichloroethene	ND		0.040	0.010	mg/m3			12/15/16 05:15	18.5
Trichlorofluoromethane	ND		0.042	0.020	mg/m3			12/15/16 05:15	18.5
Vinyl chloride	**0.23**		0.019	0.0057	mg/m3			12/15/16 05:15	18.5
n-Heptane	**0.048**	**J**	0.061	0.0048	mg/m3			12/15/16 05:15	18.5
Hexane	**0.17**		0.052	0.0049	mg/m3			12/15/16 05:15	18.5
Isopropylbenzene	**0.091**		0.073	0.0091	mg/m3			12/15/16 05:15	18.5
Methyl-t-Butyl Ether (MTBE)	ND		0.053	0.0080	mg/m3			12/15/16 05:15	18.5
Propylene	**1.1**		0.013	0.0032	mg/m3			12/15/16 05:15	18.5
Tetrahydrofuran	**0.032**	**J**	0.044	0.011	mg/m3			12/15/16 05:15	18.5
2,2,4-Trimethylpentane	**0.020**	**J**	0.035	0.0061	mg/m3			12/15/16 05:15	18.5
Vinyl bromide	ND		0.065	0.021	mg/m3			12/15/16 05:15	18.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*12/15/16 05:15*	*18.5*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*12/15/16 05:15*	*18.5*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/15/16 05:15*	*18.5*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		37	8.0	ppb v/v			12/25/16 03:17	18.5
1,2,4-Trimethylbenzene	ND		15	3.0	ppb v/v			12/25/16 03:17	18.5
2-Butanone (MEK)	ND		15	3.7	ppb v/v			12/25/16 03:17	18.5
4-Methyl-2-pentanone (MIBK)	ND		7.4	2.5	ppb v/v			12/25/16 03:17	18.5
Acetone	**12**	**J**	93	3.3	ppb v/v			12/25/16 03:17	18.5
Benzyl chloride	ND		15	3.0	ppb v/v			12/25/16 03:17	18.5
Hexachlorobutadiene	ND		37	8.0	ppb v/v			12/25/16 03:17	18.5
Vinyl acetate	ND		15	2.7	ppb v/v			12/25/16 03:17	18.5
1,4-Dioxane	ND		15	1.9	ppb v/v			12/25/16 03:17	18.5
Methyl methacrylate	ND		15	2.9	ppb v/v			12/25/16 03:17	18.5
Naphthalene	ND		15	10	ppb v/v			12/25/16 03:17	18.5
Ethanol	ND		19	3.3	ppb v/v			12/25/16 03:17	18.5
2-Propanol	**15**	**J**	37	4.3	ppb v/v			12/25/16 03:17	18.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.27	0.059	mg/m3			12/25/16 03:17	18.5
1,2,4-Trimethylbenzene	ND		0.073	0.015	mg/m3			12/25/16 03:17	18.5
2-Butanone (MEK)	ND		0.044	0.011	mg/m3			12/25/16 03:17	18.5
4-Methyl-2-pentanone (MIBK)	ND		0.030	0.010	mg/m3			12/25/16 03:17	18.5
Acetone	**0.028**	**J**	0.22	0.0078	mg/m3			12/25/16 03:17	18.5
Benzyl chloride	ND		0.077	0.016	mg/m3			12/25/16 03:17	18.5
Hexachlorobutadiene	ND		0.39	0.085	mg/m3			12/25/16 03:17	18.5
Vinyl acetate	ND		0.052	0.0094	mg/m3			12/25/16 03:17	18.5
1,4-Dioxane	ND		0.053	0.0067	mg/m3			12/25/16 03:17	18.5
Methyl methacrylate	ND		0.061	0.012	mg/m3			12/25/16 03:17	18.5
Naphthalene	ND		0.078	0.055	mg/m3			12/25/16 03:17	18.5
Ethanol	ND		0.035	0.0063	mg/m3			12/25/16 03:17	18.5
2-Propanol	**0.036**	**J**	0.091	0.011	mg/m3			12/25/16 03:17	18.5

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		12/25/16 03:17	18.5
4-Bromofluorobenzene (Surr)	89		70 - 130		12/25/16 03:17	18.5
Toluene-d8 (Surr)	95		70 - 130		12/25/16 03:17	18.5

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-142132/13
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	0.065	ppb v/v			12/14/16 20:41	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/14/16 20:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			12/14/16 20:41	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/14/16 20:41	1
1,1-Dichloroethane	ND		0.30	0.072	ppb v/v			12/14/16 20:41	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/14/16 20:41	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/14/16 20:41	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/14/16 20:41	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			12/14/16 20:41	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/14/16 20:41	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			12/14/16 20:41	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/14/16 20:41	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/14/16 20:41	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/14/16 20:41	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/14/16 20:41	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/14/16 20:41	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/14/16 20:41	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/14/16 20:41	1
Benzene	ND		0.40	0.079	ppb v/v			12/14/16 20:41	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/14/16 20:41	1
Bromoform	ND		0.40	0.070	ppb v/v			12/14/16 20:41	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/14/16 20:41	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			12/14/16 20:41	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/14/16 20:41	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/14/16 20:41	1
Chloroethane	ND		0.80	0.31	ppb v/v			12/14/16 20:41	1
Chloroform	ND		0.30	0.095	ppb v/v			12/14/16 20:41	1
Chloromethane	ND		0.80	0.20	ppb v/v			12/14/16 20:41	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/14/16 20:41	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/14/16 20:41	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/14/16 20:41	1
Dichlorodifluoromethane	ND		0.40	0.15	ppb v/v			12/14/16 20:41	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			12/14/16 20:41	1
Gasoline Range Organics (C6-C12)	ND		100	40	ppb v/v			12/14/16 20:41	1
m,p-Xylene	ND		0.80	0.10	ppb v/v			12/14/16 20:41	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			12/14/16 20:41	1
o-Xylene	ND		0.40	0.054	ppb v/v			12/14/16 20:41	1
Styrene	ND		0.40	0.059	ppb v/v			12/14/16 20:41	1
Tetrachloroethene	ND		0.40	0.051	ppb v/v			12/14/16 20:41	1
Toluene	ND		0.40	0.051	ppb v/v			12/14/16 20:41	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/14/16 20:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/14/16 20:41	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/14/16 20:41	1
Cyclohexane	ND		0.40	0.084	ppb v/v			12/14/16 20:41	1
Trichloroethene	ND		0.40	0.11	ppb v/v			12/14/16 20:41	1
Trichlorofluoromethane	ND		0.40	0.20	ppb v/v			12/14/16 20:41	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			12/14/16 20:41	1
n-Heptane	ND		0.80	0.063	ppb v/v			12/14/16 20:41	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-142132/13
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		0.80	0.075	ppb v/v			12/14/16 20:41	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			12/14/16 20:41	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/14/16 20:41	1
Propylene	ND		0.40	0.099	ppb v/v			12/14/16 20:41	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/14/16 20:41	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/14/16 20:41	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/14/16 20:41	1
Ethanol	ND		1.0	0.18	ppb v/v			12/14/16 20:41	1
2-Propanol	ND		2.0	0.23	ppb v/v			12/14/16 20:41	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			12/14/16 20:41	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/14/16 20:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			12/14/16 20:41	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/14/16 20:41	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			12/14/16 20:41	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/14/16 20:41	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/14/16 20:41	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/14/16 20:41	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			12/14/16 20:41	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/14/16 20:41	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			12/14/16 20:41	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/14/16 20:41	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/14/16 20:41	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/14/16 20:41	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/14/16 20:41	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/14/16 20:41	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/14/16 20:41	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/14/16 20:41	1
Benzene	ND		0.0013	0.00025	mg/m3			12/14/16 20:41	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/14/16 20:41	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/14/16 20:41	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/14/16 20:41	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			12/14/16 20:41	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/14/16 20:41	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/14/16 20:41	1
Chloroethane	ND		0.0021	0.00081	mg/m3			12/14/16 20:41	1
Chloroform	ND		0.0015	0.00046	mg/m3			12/14/16 20:41	1
Chloromethane	ND		0.0017	0.00041	mg/m3			12/14/16 20:41	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/14/16 20:41	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/14/16 20:41	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/14/16 20:41	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			12/14/16 20:41	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			12/14/16 20:41	1
Gasoline Range Organics (C6-C12)	ND		0.41	0.16	mg/m3			12/14/16 20:41	1
m,p-Xylene	ND		0.0035	0.00043	mg/m3			12/14/16 20:41	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			12/14/16 20:41	1
o-Xylene	ND		0.0017	0.00023	mg/m3			12/14/16 20:41	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-142132/13
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.0017	0.00025	mg/m3			12/14/16 20:41	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			12/14/16 20:41	1
Toluene	ND		0.0015	0.00019	mg/m3			12/14/16 20:41	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/14/16 20:41	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/14/16 20:41	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/14/16 20:41	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/14/16 20:41	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			12/14/16 20:41	1
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			12/14/16 20:41	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			12/14/16 20:41	1
n-Heptane	ND		0.0033	0.00026	mg/m3			12/14/16 20:41	1
Hexane	ND		0.0028	0.00026	mg/m3			12/14/16 20:41	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			12/14/16 20:41	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/14/16 20:41	1
Propylene	ND		0.00069	0.00017	mg/m3			12/14/16 20:41	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/14/16 20:41	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/14/16 20:41	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/14/16 20:41	1
Ethanol	ND		0.0019	0.00034	mg/m3			12/14/16 20:41	1
2-Propanol	ND		0.0049	0.00058	mg/m3			12/14/16 20:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*12/14/16 20:41*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*12/14/16 20:41*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/14/16 20:41*	*1*

Lab Sample ID: LCS 320-142132/4
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	16.7		ppb v/v		83	65 - 124
1,1,2,2-Tetrachloroethane	20.0	19.7		ppb v/v		98	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.4		ppb v/v		82	50 - 132
1,1,2-Trichloroethane	20.0	18.8		ppb v/v		94	71 - 131
1,1-Dichloroethane	20.0	18.1		ppb v/v		91	65 - 125
1,1-Dichloroethene	20.0	17.2		ppb v/v		86	53 - 128
1,2-Dibromoethane (EDB)	20.0	18.4		ppb v/v		92	68 - 131
Allyl chloride	20.0	17.7		ppb v/v		88	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	20.0		ppb v/v		100	64 - 124
1,2-Dichlorobenzene	20.0	20.7		ppb v/v		104	73 - 143
1,2-Dichloroethane	20.0	18.7		ppb v/v		93	71 - 131
1,2-Dichloropropane	20.0	18.1		ppb v/v		90	74 - 128
1,3,5-Trimethylbenzene	20.0	18.2		ppb v/v		91	65 - 136
1,3-Dichlorobenzene	20.0	20.6		ppb v/v		103	77 - 136
1,4-Dichlorobenzene	20.0	21.5		ppb v/v		107	73 - 143

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-142132/4
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	20.0	19.3		ppb v/v		96	70 - 128
1,3-Butadiene	20.0	19.4		ppb v/v		97	58 - 126
4-Ethyltoluene	20.0	17.3		ppb v/v		86	62 - 136
Benzene	20.0	17.4		ppb v/v		87	68 - 128
Bromodichloromethane	20.0	17.4		ppb v/v		87	65 - 130
Bromoform	20.0	18.6		ppb v/v		93	64 - 144
Bromomethane	20.0	19.8		ppb v/v		99	70 - 131
Carbon disulfide	20.0	16.6		ppb v/v		83	63 - 123
Carbon tetrachloride	20.0	17.0		ppb v/v		85	67 - 127
Chlorobenzene	20.0	18.9		ppb v/v		94	70 - 132
Chloroethane	20.0	21.1		ppb v/v		105	70 - 131
Chloroform	20.0	16.9		ppb v/v		84	69 - 129
Chloromethane	20.0	21.4		ppb v/v		107	67 - 127
cis-1,2-Dichloroethene	20.0	17.2		ppb v/v		86	68 - 128
cis-1,3-Dichloropropene	20.0	19.8		ppb v/v		99	78 - 132
Dibromochloromethane	20.0	18.7		ppb v/v		93	68 - 128
Dichlorodifluoromethane	20.0	17.6		ppb v/v		88	69 - 129
Ethylbenzene	20.0	21.8		ppb v/v		109	76 - 136
m,p-Xylene	40.0	42.8		ppb v/v		107	75 - 138
Methylene Chloride	20.0	16.0		ppb v/v		80	65 - 125
o-Xylene	20.0	21.2		ppb v/v		106	77 - 132
Styrene	20.0	22.9		ppb v/v		114	76 - 144
Tetrachloroethene	20.0	18.5		ppb v/v		92	56 - 138
Toluene	20.0	19.5		ppb v/v		97	71 - 132
2-Chlorotoluene	20.0	20.6		ppb v/v		103	73 - 131
trans-1,2-Dichloroethene	20.0	18.8		ppb v/v		94	70 - 130
trans-1,3-Dichloropropene	20.0	16.6		ppb v/v		83	56 - 136
Cyclohexane	20.0	17.1		ppb v/v		86	63 - 128
Trichloroethene	20.0	16.8		ppb v/v		84	64 - 127
Trichlorofluoromethane	20.0	18.4		ppb v/v		92	68 - 128
Vinyl chloride	20.0	22.9		ppb v/v		114	69 - 129
n-Heptane	20.0	17.2		ppb v/v		86	69 - 129
Hexane	20.0	15.5		ppb v/v		77	63 - 123
Isopropylbenzene	20.0	20.5		ppb v/v		103	75 - 135
Methyl-t-Butyl Ether (MTBE)	20.0	18.0		ppb v/v		90	72 - 132
Propylene	20.0	18.6		ppb v/v		93	72 - 132
Tetrahydrofuran	20.0	17.3		ppb v/v		87	69 - 129
2,2,4-Trimethylpentane	20.0	19.3		ppb v/v		97	72 - 132
Vinyl bromide	20.0	18.5		ppb v/v		93	65 - 125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.0910		mg/m3		83	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.135		mg/m3		98	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.125		mg/m3		82	50 - 132
1,1,2-Trichloroethane	0.11	0.103		mg/m3		94	71 - 131
1,1-Dichloroethane	0.081	0.0734		mg/m3		91	65 - 125
1,1-Dichloroethene	0.079	0.0683		mg/m3		86	53 - 128

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-142132/4
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.15	0.141		mg/m3		92	68 - 131
Allyl chloride	0.063	0.0553		mg/m3		88	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.140		mg/m3		100	64 - 124
1,2-Dichlorobenzene	0.12	0.125		mg/m3		104	73 - 143
1,2-Dichloroethane	0.081	0.0755		mg/m3		93	71 - 131
1,2-Dichloropropane	0.092	0.0836		mg/m3		90	74 - 128
1,3,5-Trimethylbenzene	0.098	0.0894		mg/m3		91	65 - 136
1,3-Dichlorobenzene	0.12	0.124		mg/m3		103	77 - 136
1,4-Dichlorobenzene	0.12	0.129		mg/m3		107	73 - 143
2-Hexanone	0.082	0.0790		mg/m3		96	70 - 128
1,3-Butadiene	0.044	0.0428		mg/m3		97	58 - 126
4-Ethyltoluene	0.098	0.0849		mg/m3		86	62 - 136
Benzene	0.064	0.0557		mg/m3		87	68 - 128
Bromodichloromethane	0.13	0.117		mg/m3		87	65 - 130
Bromoform	0.21	0.192		mg/m3		93	64 - 144
Bromomethane	0.078	0.0768		mg/m3		99	70 - 131
Carbon disulfide	0.062	0.0516		mg/m3		83	63 - 123
Carbon tetrachloride	0.13	0.107		mg/m3		85	67 - 127
Chlorobenzene	0.092	0.0869		mg/m3		94	70 - 132
Chloroethane	0.053	0.0556		mg/m3		105	70 - 131
Chloroform	0.098	0.0823		mg/m3		84	69 - 129
Chloromethane	0.041	0.0443		mg/m3		107	67 - 127
cis-1,2-Dichloroethene	0.079	0.0683		mg/m3		86	68 - 128
cis-1,3-Dichloropropene	0.091	0.0898		mg/m3		99	78 - 132
Dibromochloromethane	0.17	0.159		mg/m3		93	68 - 128
Dichlorodifluoromethane	0.099	0.0873		mg/m3		88	69 - 129
Ethylbenzene	0.087	0.0946		mg/m3		109	76 - 136
m,p-Xylene	0.17	0.186		mg/m3		107	75 - 138
Methylene Chloride	0.069	0.0556		mg/m3		80	65 - 125
o-Xylene	0.087	0.0922		mg/m3		106	77 - 132
Styrene	0.085	0.0975		mg/m3		114	76 - 144
Tetrachloroethene	0.14	0.125		mg/m3		92	56 - 138
Toluene	0.075	0.0734		mg/m3		97	71 - 132
2-Chlorotoluene	0.10	0.106		mg/m3		103	73 - 131
trans-1,2-Dichloroethene	0.079	0.0746		mg/m3		94	70 - 130
trans-1,3-Dichloropropene	0.091	0.0754		mg/m3		83	56 - 136
Cyclohexane	0.069	0.0589		mg/m3		86	63 - 128
Trichloroethene	0.11	0.0901		mg/m3		84	64 - 127
Trichlorofluoromethane	0.11	0.103		mg/m3		92	68 - 128
Vinyl chloride	0.051	0.0585		mg/m3		114	69 - 129
n-Heptane	0.082	0.0704		mg/m3		86	69 - 129
Hexane	0.070	0.0546		mg/m3		77	63 - 123
Isopropylbenzene	0.098	0.101		mg/m3		103	75 - 135
Methyl-t-Butyl Ether (MTBE)	0.072	0.0647		mg/m3		90	72 - 132
Propylene	0.034	0.0319		mg/m3		93	72 - 132
Tetrahydrofuran	0.059	0.0511		mg/m3		87	69 - 129
2,2,4-Trimethylpentane	0.093	0.0903		mg/m3		97	72 - 132

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-142132/4
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl bromide			0.087	0.0811		mg/m3		93	65 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCS 320-142132/9
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			5000	3980		ppb v/v		80	70 - 130		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			20	16.3		mg/m3		80	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*128*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 320-142132/10
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)			5000	3990		ppb v/v		80	70 - 130	0	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)			20	16.3		mg/m3		80	70 - 130	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*127*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 320-142132/5
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	16.6		ppb v/v		83	65 - 124	0	25
1,1,2,2-Tetrachloroethane			20.0	20.2		ppb v/v		101	75 - 135	3	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-142132/5
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.0		ppb v/v		80	50 - 132	2	25
1,1,2-Trichloroethane	20.0	19.1		ppb v/v		95	71 - 131	1	25
1,1-Dichloroethane	20.0	18.1		ppb v/v		90	65 - 125	0	25
1,1-Dichloroethene	20.0	16.8		ppb v/v		84	53 - 128	2	25
1,2-Dibromoethane (EDB)	20.0	18.6		ppb v/v		93	68 - 131	1	25
Allyl chloride	20.0	17.5		ppb v/v		88	77 - 137	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	19.6		ppb v/v		98	64 - 124	2	25
1,2-Dichlorobenzene	20.0	21.3		ppb v/v		107	73 - 143	3	25
1,2-Dichloroethane	20.0	18.7		ppb v/v		94	71 - 131	0	25
1,2-Dichloropropane	20.0	18.1		ppb v/v		91	74 - 128	0	25
1,3,5-Trimethylbenzene	20.0	19.0		ppb v/v		95	65 - 136	5	25
1,3-Dichlorobenzene	20.0	20.9		ppb v/v		104	77 - 136	1	25
1,4-Dichlorobenzene	20.0	21.6		ppb v/v		108	73 - 143	1	25
2-Hexanone	20.0	20.3		ppb v/v		102	70 - 128	5	25
1,3-Butadiene	20.0	19.1		ppb v/v		96	58 - 126	1	25
4-Ethyltoluene	20.0	18.1		ppb v/v		90	62 - 136	5	25
Benzene	20.0	17.4		ppb v/v		87	68 - 128	0	25
Bromodichloromethane	20.0	17.4		ppb v/v		87	65 - 130	0	25
Bromoform	20.0	18.7		ppb v/v		94	64 - 144	1	25
Bromomethane	20.0	19.8		ppb v/v		99	70 - 131	0	25
Carbon disulfide	20.0	16.3		ppb v/v		82	63 - 123	1	25
Carbon tetrachloride	20.0	16.9		ppb v/v		84	67 - 127	1	25
Chlorobenzene	20.0	19.0		ppb v/v		95	70 - 132	1	25
Chloroethane	20.0	20.8		ppb v/v		104	70 - 131	1	25
Chloroform	20.0	16.7		ppb v/v		84	69 - 129	1	25
Chloromethane	20.0	21.3		ppb v/v		107	67 - 127	1	25
cis-1,2-Dichloroethene	20.0	17.3		ppb v/v		87	68 - 128	0	25
cis-1,3-Dichloropropene	20.0	19.9		ppb v/v		100	78 - 132	1	25
Dibromochloromethane	20.0	18.9		ppb v/v		94	68 - 128	1	25
Dichlorodifluoromethane	20.0	17.5		ppb v/v		88	69 - 129	1	25
Ethylbenzene	20.0	22.3		ppb v/v		111	76 - 136	2	25
m,p-Xylene	40.0	44.0		ppb v/v		110	75 - 138	3	25
Methylene Chloride	20.0	15.8		ppb v/v		79	65 - 125	2	25
o-Xylene	20.0	21.9		ppb v/v		110	77 - 132	3	25
Styrene	20.0	23.5		ppb v/v		117	76 - 144	3	25
Tetrachloroethene	20.0	18.6		ppb v/v		93	56 - 138	1	25
Toluene	20.0	19.6		ppb v/v		98	71 - 132	1	25
2-Chlorotoluene	20.0	20.8		ppb v/v		104	73 - 131	1	25
trans-1,2-Dichloroethene	20.0	18.5		ppb v/v		93	70 - 130	2	25
trans-1,3-Dichloropropene	20.0	16.8		ppb v/v		84	56 - 136	1	25
Cyclohexane	20.0	16.6		ppb v/v		83	63 - 128	3	25
Trichloroethene	20.0	16.9		ppb v/v		84	64 - 127	1	25
Trichlorofluoromethane	20.0	18.0		ppb v/v		90	68 - 128	2	25
Vinyl chloride	20.0	22.8		ppb v/v		114	69 - 129	0	25
n-Heptane	20.0	17.1		ppb v/v		86	69 - 129	0	25
Hexane	20.0	15.4		ppb v/v		77	63 - 123	1	25
Isopropylbenzene	20.0	21.3		ppb v/v		106	75 - 135	4	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-142132/5
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl-t-Butyl Ether (MTBE)			20.0	18.8		ppb v/v		94	72 - 132	4	25
Propylene			20.0	18.2		ppb v/v		91	72 - 132	2	25
Tetrahydrofuran			20.0	18.1		ppb v/v		90	69 - 129	4	25
2,2,4-Trimethylpentane			20.0	19.2		ppb v/v		96	72 - 132	1	25
Vinyl bromide			20.0	18.3		ppb v/v		91	65 - 125	2	25
Analyte			**Spike Added**	**LCSD Result**	**LCSD Qualifier**	**Unit**	**D**	**%Rec**	**%Rec. Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane			0.11	0.0908		mg/m3		83	65 - 124	0	25
1,1,2,2-Tetrachloroethane			0.14	0.139		mg/m3		101	75 - 135	3	25
1,1,2-Trichloro-1,2,2-trifluoroethane			0.15	0.123		mg/m3		80	50 - 132	2	25
1,1,2-Trichloroethane			0.11	0.104		mg/m3		95	71 - 131	1	25
1,1-Dichloroethane			0.081	0.0732		mg/m3		90	65 - 125	0	25
1,1-Dichloroethene			0.079	0.0667		mg/m3		84	53 - 128	2	25
1,2-Dibromoethane (EDB)			0.15	0.143		mg/m3		93	68 - 131	1	25
Allyl chloride			0.063	0.0548		mg/m3		88	77 - 137	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane			0.14	0.137		mg/m3		98	64 - 124	2	25
1,2-Dichlorobenzene			0.12	0.128		mg/m3		107	73 - 143	3	25
1,2-Dichloroethane			0.081	0.0758		mg/m3		94	71 - 131	0	25
1,2-Dichloropropane			0.092	0.0838		mg/m3		91	74 - 128	0	25
1,3,5-Trimethylbenzene			0.098	0.0936		mg/m3		95	65 - 136	5	25
1,3-Dichlorobenzene			0.12	0.125		mg/m3		104	77 - 136	1	25
1,4-Dichlorobenzene			0.12	0.130		mg/m3		108	73 - 143	1	25
2-Hexanone			0.082	0.0832		mg/m3		102	70 - 128	5	25
1,3-Butadiene			0.044	0.0423		mg/m3		96	58 - 126	1	25
4-Ethyltoluene			0.098	0.0890		mg/m3		90	62 - 136	5	25
Benzene			0.064	0.0556		mg/m3		87	68 - 128	0	25
Bromodichloromethane			0.13	0.117		mg/m3		87	65 - 130	0	25
Bromoform			0.21	0.194		mg/m3		94	64 - 144	1	25
Bromomethane			0.078	0.0767		mg/m3		99	70 - 131	0	25
Carbon disulfide			0.062	0.0509		mg/m3		82	63 - 123	1	25
Carbon tetrachloride			0.13	0.106		mg/m3		84	67 - 127	1	25
Chlorobenzene			0.092	0.0876		mg/m3		95	70 - 132	1	25
Chloroethane			0.053	0.0548		mg/m3		104	70 - 131	1	25
Chloroform			0.098	0.0817		mg/m3		84	69 - 129	1	25
Chloromethane			0.041	0.0441		mg/m3		107	67 - 127	1	25
cis-1,2-Dichloroethene			0.079	0.0686		mg/m3		87	68 - 128	0	25
cis-1,3-Dichloropropene			0.091	0.0904		mg/m3		100	78 - 132	1	25
Dibromochloromethane			0.17	0.161		mg/m3		94	68 - 128	1	25
Dichlorodifluoromethane			0.099	0.0865		mg/m3		88	69 - 129	1	25
Ethylbenzene			0.087	0.0968		mg/m3		111	76 - 136	2	25
m,p-Xylene			0.17	0.191		mg/m3		110	75 - 138	3	25
Methylene Chloride			0.069	0.0548		mg/m3		79	65 - 125	2	25
o-Xylene			0.087	0.0952		mg/m3		110	77 - 132	3	25
Styrene			0.085	0.100		mg/m3		117	76 - 144	3	25
Tetrachloroethene			0.14	0.126		mg/m3		93	56 - 138	1	25
Toluene			0.075	0.0740		mg/m3		98	71 - 132	1	25
2-Chlorotoluene			0.10	0.108		mg/m3		104	73 - 131	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-142132/5
Matrix: Air
Analysis Batch: 142132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene			0.079	0.0734		mg/m3		93	70 - 130	2	25
trans-1,3-Dichloropropene			0.091	0.0764		mg/m3		84	56 - 136	1	25
Cyclohexane			0.069	0.0573		mg/m3		83	63 - 128	3	25
Trichloroethene			0.11	0.0907		mg/m3		84	64 - 127	1	25
Trichlorofluoromethane			0.11	0.101		mg/m3		90	68 - 128	2	25
Vinyl chloride			0.051	0.0584		mg/m3		114	69 - 129	0	25
n-Heptane			0.082	0.0702		mg/m3		86	69 - 129	0	25
Hexane			0.070	0.0541		mg/m3		77	63 - 123	1	25
Isopropylbenzene			0.098	0.105		mg/m3		106	75 - 135	4	25
Methyl-t-Butyl Ether (MTBE)			0.072	0.0677		mg/m3		94	72 - 132	4	25
Propylene			0.034	0.0314		mg/m3		91	72 - 132	2	25
Tetrahydrofuran			0.059	0.0534		mg/m3		90	69 - 129	4	25
2,2,4-Trimethylpentane			0.093	0.0898		mg/m3		96	72 - 132	1	25
Vinyl bromide			0.087	0.0799		mg/m3		91	65 - 125	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 320-143721/9
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	0.065	ppb v/v			12/23/16 18:22	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/23/16 18:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			12/23/16 18:22	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/23/16 18:22	1
1,1-Dichloroethane	ND		0.30	0.072	ppb v/v			12/23/16 18:22	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/23/16 18:22	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			12/23/16 18:22	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			12/23/16 18:22	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/23/16 18:22	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/23/16 18:22	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			12/23/16 18:22	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/23/16 18:22	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			12/23/16 18:22	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/23/16 18:22	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/23/16 18:22	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/23/16 18:22	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/23/16 18:22	1
2-Butanone (MEK)	ND		0.80	0.20	ppb v/v			12/23/16 18:22	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/23/16 18:22	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/23/16 18:22	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/23/16 18:22	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			12/23/16 18:22	1
Acetone	ND		5.0	0.18	ppb v/v			12/23/16 18:22	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-143721/9
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.079	ppb v/v			12/23/16 18:22	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			12/23/16 18:22	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/23/16 18:22	1
Bromoform	ND		0.40	0.070	ppb v/v			12/23/16 18:22	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/23/16 18:22	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			12/23/16 18:22	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/23/16 18:22	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/23/16 18:22	1
Chloroethane	ND		0.80	0.31	ppb v/v			12/23/16 18:22	1
Chloroform	ND		0.30	0.095	ppb v/v			12/23/16 18:22	1
Chloromethane	ND		0.80	0.20	ppb v/v			12/23/16 18:22	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/23/16 18:22	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/23/16 18:22	1
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/23/16 18:22	1
Dichlorodifluoromethane	ND		0.40	0.15	ppb v/v			12/23/16 18:22	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			12/23/16 18:22	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			12/23/16 18:22	1
m,p-Xylene	ND		0.80	0.10	ppb v/v			12/23/16 18:22	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			12/23/16 18:22	1
o-Xylene	ND		0.40	0.054	ppb v/v			12/23/16 18:22	1
Styrene	ND		0.40	0.059	ppb v/v			12/23/16 18:22	1
Tetrachloroethene	ND		0.40	0.051	ppb v/v			12/23/16 18:22	1
Toluene	ND		0.40	0.051	ppb v/v			12/23/16 18:22	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/23/16 18:22	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/23/16 18:22	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/23/16 18:22	1
Cyclohexane	ND		0.40	0.084	ppb v/v			12/23/16 18:22	1
Trichloroethene	ND		0.40	0.11	ppb v/v			12/23/16 18:22	1
Trichlorofluoromethane	ND		0.40	0.20	ppb v/v			12/23/16 18:22	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			12/23/16 18:22	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			12/23/16 18:22	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			12/23/16 18:22	1
n-Heptane	ND		0.80	0.063	ppb v/v			12/23/16 18:22	1
Hexane	ND		0.80	0.075	ppb v/v			12/23/16 18:22	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			12/23/16 18:22	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/23/16 18:22	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			12/23/16 18:22	1
Naphthalene	ND		0.80	0.56	ppb v/v			12/23/16 18:22	1
Propylene	ND		0.40	0.099	ppb v/v			12/23/16 18:22	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/23/16 18:22	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/23/16 18:22	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/23/16 18:22	1
Ethanol	ND		1.0	0.18	ppb v/v			12/23/16 18:22	1
2-Propanol	ND		2.0	0.23	ppb v/v			12/23/16 18:22	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			12/23/16 18:22	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/23/16 18:22	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-143721/9
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			12/23/16 18:22	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/23/16 18:22	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			12/23/16 18:22	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/23/16 18:22	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			12/23/16 18:22	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			12/23/16 18:22	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/23/16 18:22	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/23/16 18:22	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			12/23/16 18:22	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/23/16 18:22	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			12/23/16 18:22	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/23/16 18:22	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/23/16 18:22	1
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/23/16 18:22	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/23/16 18:22	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			12/23/16 18:22	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/23/16 18:22	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/23/16 18:22	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/23/16 18:22	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			12/23/16 18:22	1
Acetone	ND		0.012	0.00042	mg/m3			12/23/16 18:22	1
Benzene	ND		0.0013	0.00025	mg/m3			12/23/16 18:22	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			12/23/16 18:22	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/23/16 18:22	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/23/16 18:22	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/23/16 18:22	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			12/23/16 18:22	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/23/16 18:22	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/23/16 18:22	1
Chloroethane	ND		0.0021	0.00081	mg/m3			12/23/16 18:22	1
Chloroform	ND		0.0015	0.00046	mg/m3			12/23/16 18:22	1
Chloromethane	ND		0.0017	0.00041	mg/m3			12/23/16 18:22	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/23/16 18:22	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/23/16 18:22	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/23/16 18:22	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			12/23/16 18:22	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			12/23/16 18:22	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			12/23/16 18:22	1
m,p-Xylene	ND		0.0035	0.00043	mg/m3			12/23/16 18:22	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			12/23/16 18:22	1
o-Xylene	ND		0.0017	0.00023	mg/m3			12/23/16 18:22	1
Styrene	ND		0.0017	0.00025	mg/m3			12/23/16 18:22	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			12/23/16 18:22	1
Toluene	ND		0.0015	0.00019	mg/m3			12/23/16 18:22	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/23/16 18:22	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/23/16 18:22	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/23/16 18:22	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/23/16 18:22	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-143721/9
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		0.0021	0.00056	mg/m3			12/23/16 18:22	1
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			12/23/16 18:22	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			12/23/16 18:22	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			12/23/16 18:22	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			12/23/16 18:22	1
n-Heptane	ND		0.0033	0.00026	mg/m3			12/23/16 18:22	1
Hexane	ND		0.0028	0.00026	mg/m3			12/23/16 18:22	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			12/23/16 18:22	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/23/16 18:22	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			12/23/16 18:22	1
Naphthalene	ND		0.0042	0.0029	mg/m3			12/23/16 18:22	1
Propylene	ND		0.00069	0.00017	mg/m3			12/23/16 18:22	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/23/16 18:22	1
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/23/16 18:22	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/23/16 18:22	1
Ethanol	ND		0.0019	0.00034	mg/m3			12/23/16 18:22	1
2-Propanol	ND		0.0049	0.00058	mg/m3			12/23/16 18:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*12/23/16 18:22*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*12/23/16 18:22*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*12/23/16 18:22*	*1*

Lab Sample ID: LCS 320-143721/4
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	22.0		ppb v/v		110	65 - 124
1,1,2,2-Tetrachloroethane	20.0	21.4		ppb v/v		107	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.5		ppb v/v		97	50 - 132
1,1,2-Trichloroethane	20.0	22.6		ppb v/v		113	71 - 131
1,1-Dichloroethane	20.0	20.0		ppb v/v		100	65 - 125
1,1-Dichloroethene	20.0	18.2		ppb v/v		91	53 - 128
1,2,4-Trichlorobenzene	20.0	19.9		ppb v/v		100	59 - 150
1,2,4-Trimethylbenzene	20.0	21.5		ppb v/v		107	61 - 145
1,2-Dibromoethane (EDB)	20.0	22.0		ppb v/v		110	68 - 131
Allyl chloride	20.0	19.8		ppb v/v		99	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.6		ppb v/v		108	64 - 124
1,2-Dichlorobenzene	20.0	22.1		ppb v/v		111	73 - 143
1,2-Dichloroethane	20.0	21.5		ppb v/v		107	71 - 131
1,2-Dichloropropane	20.0	22.5		ppb v/v		113	74 - 128
1,3,5-Trimethylbenzene	20.0	20.7		ppb v/v		103	65 - 136
1,3-Dichlorobenzene	20.0	21.9		ppb v/v		110	77 - 136
1,4-Dichlorobenzene	20.0	22.0		ppb v/v		110	73 - 143
2-Butanone (MEK)	20.0	22.9		ppb v/v		115	71 - 131

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-143721/4
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	20.0	22.1		ppb v/v		111	70 - 128
1,3-Butadiene	20.0	19.7		ppb v/v		98	58 - 126
4-Ethyltoluene	20.0	20.1		ppb v/v		101	62 - 136
4-Methyl-2-pentanone (MIBK)	20.0	21.3		ppb v/v		107	73 - 133
Acetone	20.0	19.0		ppb v/v		95	71 - 131
Benzene	20.0	21.3		ppb v/v		106	68 - 128
Benzyl chloride	20.0	16.1		ppb v/v		80	58 - 120
Bromodichloromethane	20.0	22.4		ppb v/v		112	65 - 130
Bromoform	20.0	22.1		ppb v/v		111	64 - 144
Bromomethane	20.0	21.0		ppb v/v		105	70 - 131
Carbon disulfide	20.0	19.5		ppb v/v		97	63 - 123
Carbon tetrachloride	20.0	23.3		ppb v/v		116	67 - 127
Chlorobenzene	20.0	21.7		ppb v/v		109	70 - 132
Chloroethane	20.0	21.5		ppb v/v		107	70 - 131
Chloroform	20.0	21.8		ppb v/v		109	69 - 129
Chloromethane	20.0	20.4		ppb v/v		102	67 - 127
cis-1,2-Dichloroethene	20.0	21.2		ppb v/v		106	68 - 128
cis-1,3-Dichloropropene	20.0	23.1		ppb v/v		115	78 - 132
Dibromochloromethane	20.0	22.5		ppb v/v		113	68 - 128
Dichlorodifluoromethane	20.0	22.3		ppb v/v		111	69 - 129
Ethylbenzene	20.0	21.3		ppb v/v		107	76 - 136
Hexachlorobutadiene	20.0	17.0		ppb v/v		85	42 - 150
m,p-Xylene	40.0	43.0		ppb v/v		108	75 - 138
Methylene Chloride	20.0	17.4		ppb v/v		87	65 - 125
o-Xylene	20.0	21.4		ppb v/v		107	77 - 132
Styrene	20.0	22.0		ppb v/v		110	76 - 144
Tetrachloroethene	20.0	21.2		ppb v/v		106	56 - 138
Toluene	20.0	22.1		ppb v/v		111	71 - 132
2-Chlorotoluene	20.0	20.5		ppb v/v		103	73 - 131
trans-1,2-Dichloroethene	20.0	20.2		ppb v/v		101	70 - 130
trans-1,3-Dichloropropene	20.0	19.4		ppb v/v		97	56 - 136
Cyclohexane	20.0	20.8		ppb v/v		104	63 - 128
Trichloroethene	20.0	22.4		ppb v/v		112	64 - 127
Trichlorofluoromethane	20.0	21.1		ppb v/v		106	68 - 128
Vinyl acetate	20.0	22.3		ppb v/v		112	77 - 134
Vinyl chloride	20.0	20.1		ppb v/v		101	69 - 129
1,4-Dioxane	20.0	23.2		ppb v/v		116	55 - 141
n-Heptane	20.0	19.7		ppb v/v		99	69 - 129
Hexane	20.0	18.7		ppb v/v		94	63 - 123
Isopropylbenzene	20.0	21.2		ppb v/v		106	75 - 135
Methyl-t-Butyl Ether (MTBE)	20.0	19.9		ppb v/v		100	72 - 132
Methyl methacrylate	20.0	21.4		ppb v/v		107	71 - 130
Naphthalene	20.0	18.3		ppb v/v		91	58 - 150
Propylene	20.0	18.8		ppb v/v		94	72 - 132
Tetrahydrofuran	20.0	18.8		ppb v/v		94	69 - 129
2,2,4-Trimethylpentane	20.0	20.9		ppb v/v		105	72 - 132
Vinyl bromide	20.0	20.4		ppb v/v		102	65 - 125

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.120		mg/m3		110	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.147		mg/m3		107	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.149		mg/m3		97	50 - 132
1,1,2-Trichloroethane	0.11	0.123		mg/m3		113	71 - 131
1,1-Dichloroethane	0.081	0.0811		mg/m3		100	65 - 125
1,1-Dichloroethene	0.079	0.0723		mg/m3		91	53 - 128
1,2,4-Trichlorobenzene	0.15	0.148		mg/m3		100	59 - 150
1,2,4-Trimethylbenzene	0.098	0.105		mg/m3		107	61 - 145
1,2-Dibromoethane (EDB)	0.15	0.169		mg/m3		110	68 - 131
Allyl chloride	0.063	0.0620		mg/m3		99	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.151		mg/m3		108	64 - 124
1,2-Dichlorobenzene	0.12	0.133		mg/m3		111	73 - 143
1,2-Dichloroethane	0.081	0.0868		mg/m3		107	71 - 131
1,2-Dichloropropane	0.092	0.104		mg/m3		113	74 - 128
1,3,5-Trimethylbenzene	0.098	0.102		mg/m3		103	65 - 136
1,3-Dichlorobenzene	0.12	0.132		mg/m3		110	77 - 136
1,4-Dichlorobenzene	0.12	0.132		mg/m3		110	73 - 143
2-Butanone (MEK)	0.059	0.0676		mg/m3		115	71 - 131
2-Hexanone	0.082	0.0906		mg/m3		111	70 - 128
1,3-Butadiene	0.044	0.0436		mg/m3		98	58 - 126
4-Ethyltoluene	0.098	0.0989		mg/m3		101	62 - 136
4-Methyl-2-pentanone (MIBK)	0.082	0.0874		mg/m3		107	73 - 133
Acetone	0.048	0.0451		mg/m3		95	71 - 131
Benzene	0.064	0.0680		mg/m3		106	68 - 128
Benzyl chloride	0.10	0.0833		mg/m3		80	58 - 120
Bromodichloromethane	0.13	0.150		mg/m3		112	65 - 130
Bromoform	0.21	0.228		mg/m3		111	64 - 144
Bromomethane	0.078	0.0817		mg/m3		105	70 - 131
Carbon disulfide	0.062	0.0606		mg/m3		97	63 - 123
Carbon tetrachloride	0.13	0.147		mg/m3		116	67 - 127
Chlorobenzene	0.092	0.100		mg/m3		109	70 - 132
Chloroethane	0.053	0.0567		mg/m3		107	70 - 131
Chloroform	0.098	0.107		mg/m3		109	69 - 129
Chloromethane	0.041	0.0422		mg/m3		102	67 - 127
cis-1,2-Dichloroethene	0.079	0.0842		mg/m3		106	68 - 128
cis-1,3-Dichloropropene	0.091	0.105		mg/m3		115	78 - 132
Dibromochloromethane	0.17	0.192		mg/m3		113	68 - 128
Dichlorodifluoromethane	0.099	0.110		mg/m3		111	69 - 129
Ethylbenzene	0.087	0.0925		mg/m3		107	76 - 136
Hexachlorobutadiene	0.21	0.182		mg/m3		85	42 - 150
m,p-Xylene	0.17	0.187		mg/m3		108	75 - 138
Methylene Chloride	0.069	0.0605		mg/m3		87	65 - 125
o-Xylene	0.087	0.0930		mg/m3		107	77 - 132
Styrene	0.085	0.0938		mg/m3		110	76 - 144
Tetrachloroethene	0.14	0.144		mg/m3		106	56 - 138
Toluene	0.075	0.0834		mg/m3		111	71 - 132
2-Chlorotoluene	0.10	0.106		mg/m3		103	73 - 131
trans-1,2-Dichloroethene	0.079	0.0800		mg/m3		101	70 - 130
trans-1,3-Dichloropropene	0.091	0.0882		mg/m3		97	56 - 136
Cyclohexane	0.069	0.0716		mg/m3		104	63 - 128
Trichloroethene	0.11	0.121		mg/m3		112	64 - 127
Trichlorofluoromethane	0.11	0.119		mg/m3		106	68 - 128

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-143721/4
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	0.070	0.0786		mg/m3		112	77 - 134
Vinyl chloride	0.051	0.0514		mg/m3		101	69 - 129
1,4-Dioxane	0.072	0.0835		mg/m3		116	55 - 141
n-Heptane	0.082	0.0809		mg/m3		99	69 - 129
Hexane	0.070	0.0659		mg/m3		94	63 - 123
Isopropylbenzene	0.098	0.104		mg/m3		106	75 - 135
Methyl-t-Butyl Ether (MTBE)	0.072	0.0718		mg/m3		100	72 - 132
Methyl methacrylate	0.082	0.0875		mg/m3		107	71 - 130
Naphthalene	0.10	0.0958		mg/m3		91	58 - 150
Propylene	0.034	0.0323		mg/m3		94	72 - 132
Tetrahydrofuran	0.059	0.0553		mg/m3		94	69 - 129
2,2,4-Trimethylpentane	0.093	0.0978		mg/m3		105	72 - 132
Vinyl bromide	0.087	0.0894		mg/m3		102	65 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCS 320-143721/6
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	100	104		ppb v/v		104	62 - 131
2-Propanol	20.0	21.4		ppb v/v		107	55 - 139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	0.19	0.197		mg/m3		104	62 - 131
2-Propanol	0.049	0.0525		mg/m3		107	55 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 320-143721/5
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	20.9		ppb v/v		105	65 - 124	5	25
1,1,2,2-Tetrachloroethane	20.0	21.2		ppb v/v		106	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	18.9		ppb v/v		94	50 - 132	3	25
1,1,2-Trichloroethane	20.0	22.2		ppb v/v		111	71 - 131	2	25
1,1-Dichloroethane	20.0	19.5		ppb v/v		98	65 - 125	3	25
1,1-Dichloroethene	20.0	17.7		ppb v/v		89	53 - 128	3	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143721/5
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			20.0	20.0		ppb v/v		100	59 - 150	0	25
1,2,4-Trimethylbenzene			20.0	22.1		ppb v/v		110	61 - 145	3	25
1,2-Dibromoethane (EDB)			20.0	21.4		ppb v/v		107	68 - 131	3	25
Allyl chloride			20.0	19.1		ppb v/v		96	77 - 137	4	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane			20.0	21.4		ppb v/v		107	64 - 124	1	25
1,2-Dichlorobenzene			20.0	22.2		ppb v/v		111	73 - 143	0	25
1,2-Dichloroethane			20.0	21.0		ppb v/v		105	71 - 131	2	25
1,2-Dichloropropane			20.0	22.1		ppb v/v		111	74 - 128	2	25
1,3,5-Trimethylbenzene			20.0	21.1		ppb v/v		105	65 - 136	2	25
1,3-Dichlorobenzene			20.0	22.4		ppb v/v		112	77 - 136	2	25
1,4-Dichlorobenzene			20.0	22.3		ppb v/v		111	73 - 143	1	25
2-Butanone (MEK)			20.0	21.1		ppb v/v		106	71 - 131	8	25
2-Hexanone			20.0	22.0		ppb v/v		110	70 - 128	0	25
1,3-Butadiene			20.0	18.9		ppb v/v		94	58 - 126	4	25
4-Ethyltoluene			20.0	20.6		ppb v/v		103	62 - 136	3	25
4-Methyl-2-pentanone (MIBK)			20.0	21.1		ppb v/v		105	73 - 133	1	25
Acetone			20.0	18.5		ppb v/v		93	71 - 131	2	25
Benzene			20.0	20.8		ppb v/v		104	68 - 128	2	25
Benzyl chloride			20.0	16.2		ppb v/v		81	58 - 120	1	25
Bromodichloromethane			20.0	21.7		ppb v/v		108	65 - 130	4	25
Bromoform			20.0	21.7		ppb v/v		109	64 - 144	2	25
Bromomethane			20.0	20.4		ppb v/v		102	70 - 131	3	25
Carbon disulfide			20.0	19.0		ppb v/v		95	63 - 123	3	25
Carbon tetrachloride			20.0	22.6		ppb v/v		113	67 - 127	3	25
Chlorobenzene			20.0	21.2		ppb v/v		106	70 - 132	2	25
Chloroethane			20.0	20.4		ppb v/v		102	70 - 131	5	25
Chloroform			20.0	20.9		ppb v/v		105	69 - 129	4	25
Chloromethane			20.0	19.4		ppb v/v		97	67 - 127	5	25
cis-1,2-Dichloroethene			20.0	20.5		ppb v/v		102	68 - 128	4	25
cis-1,3-Dichloropropene			20.0	22.5		ppb v/v		113	78 - 132	3	25
Dibromochloromethane			20.0	22.2		ppb v/v		111	68 - 128	2	25
Dichlorodifluoromethane			20.0	21.4		ppb v/v		107	69 - 129	4	25
Ethylbenzene			20.0	20.9		ppb v/v		104	76 - 136	2	25
Hexachlorobutadiene			20.0	16.9		ppb v/v		84	42 - 150	1	25
m,p-Xylene			40.0	42.5		ppb v/v		106	75 - 138	1	25
Methylene Chloride			20.0	16.9		ppb v/v		85	65 - 125	3	25
o-Xylene			20.0	21.1		ppb v/v		106	77 - 132	1	25
Styrene			20.0	21.9		ppb v/v		110	76 - 144	1	25
Tetrachloroethene			20.0	20.8		ppb v/v		104	56 - 138	2	25
Toluene			20.0	21.4		ppb v/v		107	71 - 132	3	25
2-Chlorotoluene			20.0	20.5		ppb v/v		103	73 - 131	0	25
trans-1,2-Dichloroethene			20.0	19.7		ppb v/v		98	70 - 130	3	25
trans-1,3-Dichloropropene			20.0	19.1		ppb v/v		95	56 - 136	2	25
Cyclohexane			20.0	20.4		ppb v/v		102	63 - 128	2	25
Trichloroethene			20.0	21.7		ppb v/v		109	64 - 127	3	25
Trichlorofluoromethane			20.0	20.5		ppb v/v		103	68 - 128	3	25
Vinyl acetate			20.0	21.1		ppb v/v		106	77 - 134	5	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143721/5
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	20.0	20.0		ppb v/v		100	69 - 129	0	25
1,4-Dioxane	20.0	22.7		ppb v/v		114	55 - 141	2	25
n-Heptane	20.0	19.3		ppb v/v		96	69 - 129	2	25
Hexane	20.0	18.0		ppb v/v		90	63 - 123	4	25
Isopropylbenzene	20.0	20.9		ppb v/v		104	75 - 135	1	25
Methyl-t-Butyl Ether (MTBE)	20.0	19.5		ppb v/v		97	72 - 132	2	25
Methyl methacrylate	20.0	20.9		ppb v/v		105	71 - 130	2	25
Naphthalene	20.0	18.4		ppb v/v		92	58 - 150	1	25
Propylene	20.0	18.8		ppb v/v		94	72 - 132	0	25
Tetrahydrofuran	20.0	18.1		ppb v/v		90	69 - 129	4	25
2,2,4-Trimethylpentane	20.0	20.3		ppb v/v		102	72 - 132	3	25
Vinyl bromide	20.0	19.7		ppb v/v		99	65 - 125	4	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.11	0.114		mg/m3		105	65 - 124	5	25
1,1,2,2-Tetrachloroethane	0.14	0.145		mg/m3		106	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.145		mg/m3		94	50 - 132	3	25
1,1,2-Trichloroethane	0.11	0.121		mg/m3		111	71 - 131	2	25
1,1-Dichloroethane	0.081	0.0791		mg/m3		98	65 - 125	3	25
1,1-Dichloroethene	0.079	0.0704		mg/m3		89	53 - 128	3	25
1,2,4-Trichlorobenzene	0.15	0.148		mg/m3		100	59 - 150	0	25
1,2,4-Trimethylbenzene	0.098	0.109		mg/m3		110	61 - 145	3	25
1,2-Dibromoethane (EDB)	0.15	0.165		mg/m3		107	68 - 131	3	25
Allyl chloride	0.063	0.0598		mg/m3		96	77 - 137	4	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.149		mg/m3		107	64 - 124	1	25
1,2-Dichlorobenzene	0.12	0.133		mg/m3		111	73 - 143	0	25
1,2-Dichloroethane	0.081	0.0850		mg/m3		105	71 - 131	2	25
1,2-Dichloropropane	0.092	0.102		mg/m3		111	74 - 128	2	25
1,3,5-Trimethylbenzene	0.098	0.104		mg/m3		105	65 - 136	2	25
1,3-Dichlorobenzene	0.12	0.135		mg/m3		112	77 - 136	2	25
1,4-Dichlorobenzene	0.12	0.134		mg/m3		111	73 - 143	1	25
2-Butanone (MEK)	0.059	0.0623		mg/m3		106	71 - 131	8	25
2-Hexanone	0.082	0.0902		mg/m3		110	70 - 128	0	25
1,3-Butadiene	0.044	0.0417		mg/m3		94	58 - 126	4	25
4-Ethyltoluene	0.098	0.102		mg/m3		103	62 - 136	3	25
4-Methyl-2-pentanone (MIBK)	0.082	0.0864		mg/m3		105	73 - 133	1	25
Acetone	0.048	0.0440		mg/m3		93	71 - 131	2	25
Benzene	0.064	0.0663		mg/m3		104	68 - 128	2	25
Benzyl chloride	0.10	0.0841		mg/m3		81	58 - 120	1	25
Bromodichloromethane	0.13	0.145		mg/m3		108	65 - 130	4	25
Bromoform	0.21	0.225		mg/m3		109	64 - 144	2	25
Bromomethane	0.078	0.0792		mg/m3		102	70 - 131	3	25
Carbon disulfide	0.062	0.0590		mg/m3		95	63 - 123	3	25
Carbon tetrachloride	0.13	0.142		mg/m3		113	67 - 127	3	25
Chlorobenzene	0.092	0.0977		mg/m3		106	70 - 132	2	25
Chloroethane	0.053	0.0538		mg/m3		102	70 - 131	5	25
Chloroform	0.098	0.102		mg/m3		105	69 - 129	4	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143721/5
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane			0.041	0.0400		mg/m3		97	67 - 127	5	25
cis-1,2-Dichloroethene			0.079	0.0813		mg/m3		102	68 - 128	4	25
cis-1,3-Dichloropropene			0.091	0.102		mg/m3		113	78 - 132	3	25
Dibromochloromethane			0.17	0.189		mg/m3		111	68 - 128	2	25
Dichlorodifluoromethane			0.099	0.106		mg/m3		107	69 - 129	4	25
Ethylbenzene			0.087	0.0907		mg/m3		104	76 - 136	2	25
Hexachlorobutadiene			0.21	0.180		mg/m3		84	42 - 150	1	25
m,p-Xylene			0.17	0.184		mg/m3		106	75 - 138	1	25
Methylene Chloride			0.069	0.0587		mg/m3		85	65 - 125	3	25
o-Xylene			0.087	0.0918		mg/m3		106	77 - 132	1	25
Styrene			0.085	0.0933		mg/m3		110	76 - 144	1	25
Tetrachloroethene			0.14	0.141		mg/m3		104	56 - 138	2	25
Toluene			0.075	0.0808		mg/m3		107	71 - 132	3	25
2-Chlorotoluene			0.10	0.106		mg/m3		103	73 - 131	0	25
trans-1,2-Dichloroethene			0.079	0.0780		mg/m3		98	70 - 130	3	25
trans-1,3-Dichloropropene			0.091	0.0866		mg/m3		95	56 - 136	2	25
Cyclohexane			0.069	0.0701		mg/m3		102	63 - 128	2	25
Trichloroethene			0.11	0.117		mg/m3		109	64 - 127	3	25
Trichlorofluoromethane			0.11	0.115		mg/m3		103	68 - 128	3	25
Vinyl acetate			0.070	0.0745		mg/m3		106	77 - 134	5	25
Vinyl chloride			0.051	0.0512		mg/m3		100	69 - 129	0	25
1,4-Dioxane			0.072	0.0820		mg/m3		114	55 - 141	2	25
n-Heptane			0.082	0.0790		mg/m3		96	69 - 129	2	25
Hexane			0.070	0.0636		mg/m3		90	63 - 123	4	25
Isopropylbenzene			0.098	0.103		mg/m3		104	75 - 135	1	25
Methyl-t-Butyl Ether (MTBE)			0.072	0.0702		mg/m3		97	72 - 132	2	25
Methyl methacrylate			0.082	0.0857		mg/m3		105	71 - 130	2	25
Naphthalene			0.10	0.0964		mg/m3		92	58 - 150	1	25
Propylene			0.034	0.0323		mg/m3		94	72 - 132	0	25
Tetrahydrofuran			0.059	0.0533		mg/m3		90	69 - 129	4	25
2,2,4-Trimethylpentane			0.093	0.0950		mg/m3		102	72 - 132	3	25
Vinyl bromide			0.087	0.0864		mg/m3		99	65 - 125	4	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 320-143721/7
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			100	103		ppb v/v		103	62 - 131	1	25
2-Propanol			20.0	21.6		ppb v/v		108	55 - 139	1	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			0.19	0.195		mg/m3		103	62 - 131	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143721/7
Matrix: Air
Analysis Batch: 143721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Propanol			0.049	0.0531		mg/m3		108	55 - 139	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 320-143841/9
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	0.065	ppb v/v			12/24/16 18:38	1
1,1,2,2-Tetrachloroethane	ND		0.40	0.069	ppb v/v			12/24/16 18:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16	ppb v/v			12/24/16 18:38	1
1,1,2-Trichloroethane	ND		0.40	0.067	ppb v/v			12/24/16 18:38	1
1,1-Dichloroethane	ND		0.30	0.072	ppb v/v			12/24/16 18:38	1
1,1-Dichloroethene	ND		0.80	0.13	ppb v/v			12/24/16 18:38	1
1,2,4-Trichlorobenzene	ND		2.0	0.43	ppb v/v			12/24/16 18:38	1
1,2,4-Trimethylbenzene	ND		0.80	0.16	ppb v/v			12/24/16 18:38	1
1,2-Dibromoethane (EDB)	ND		0.80	0.075	ppb v/v			12/24/16 18:38	1
Allyl chloride	ND		0.80	0.11	ppb v/v			12/24/16 18:38	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16	ppb v/v			12/24/16 18:38	1
1,2-Dichlorobenzene	ND		0.40	0.13	ppb v/v			12/24/16 18:38	1
1,2-Dichloroethane	ND		0.80	0.088	ppb v/v			12/24/16 18:38	1
1,2-Dichloropropane	ND		0.40	0.24	ppb v/v			12/24/16 18:38	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/24/16 18:38	1
1,3-Dichlorobenzene	ND		0.40	0.11	ppb v/v			12/24/16 18:38	1
1,4-Dichlorobenzene	ND		0.40	0.15	ppb v/v			12/24/16 18:38	1
2-Butanone (MEK)	ND		0.80	0.20	ppb v/v			12/24/16 18:38	1
2-Hexanone	ND		0.40	0.087	ppb v/v			12/24/16 18:38	1
1,3-Butadiene	ND		0.80	0.15	ppb v/v			12/24/16 18:38	1
4-Ethyltoluene	ND		0.40	0.19	ppb v/v			12/24/16 18:38	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14	ppb v/v			12/24/16 18:38	1
Acetone	ND		5.0	0.18	ppb v/v			12/24/16 18:38	1
Benzene	ND		0.40	0.079	ppb v/v			12/24/16 18:38	1
Benzyl chloride	ND		0.80	0.16	ppb v/v			12/24/16 18:38	1
Bromodichloromethane	ND		0.30	0.066	ppb v/v			12/24/16 18:38	1
Bromoform	ND		0.40	0.070	ppb v/v			12/24/16 18:38	1
Bromomethane	ND		0.80	0.34	ppb v/v			12/24/16 18:38	1
Carbon disulfide	ND		0.80	0.078	ppb v/v			12/24/16 18:38	1
Carbon tetrachloride	ND		0.80	0.064	ppb v/v			12/24/16 18:38	1
Chlorobenzene	ND		0.30	0.064	ppb v/v			12/24/16 18:38	1
Chloroethane	ND		0.80	0.31	ppb v/v			12/24/16 18:38	1
Chloroform	ND		0.30	0.095	ppb v/v			12/24/16 18:38	1
Chloromethane	ND		0.80	0.20	ppb v/v			12/24/16 18:38	1
cis-1,2-Dichloroethene	ND		0.40	0.089	ppb v/v			12/24/16 18:38	1
cis-1,3-Dichloropropene	ND		0.40	0.10	ppb v/v			12/24/16 18:38	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-143841/9
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.40	0.079	ppb v/v			12/24/16 18:38	1
Dichlorodifluoromethane	ND		0.40	0.15	ppb v/v			12/24/16 18:38	1
Ethylbenzene	ND		0.40	0.063	ppb v/v			12/24/16 18:38	1
Hexachlorobutadiene	ND		2.0	0.43	ppb v/v			12/24/16 18:38	1
m,p-Xylene	ND		0.80	0.10	ppb v/v			12/24/16 18:38	1
Methylene Chloride	ND		0.40	0.072	ppb v/v			12/24/16 18:38	1
o-Xylene	ND		0.40	0.054	ppb v/v			12/24/16 18:38	1
Styrene	ND		0.40	0.059	ppb v/v			12/24/16 18:38	1
Tetrachloroethene	ND		0.40	0.051	ppb v/v			12/24/16 18:38	1
Toluene	ND		0.40	0.051	ppb v/v			12/24/16 18:38	1
2-Chlorotoluene	ND		0.40	0.080	ppb v/v			12/24/16 18:38	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			12/24/16 18:38	1
trans-1,3-Dichloropropene	ND		0.40	0.088	ppb v/v			12/24/16 18:38	1
Cyclohexane	ND		0.40	0.084	ppb v/v			12/24/16 18:38	1
Trichloroethene	ND		0.40	0.11	ppb v/v			12/24/16 18:38	1
Trichlorofluoromethane	ND		0.40	0.20	ppb v/v			12/24/16 18:38	1
Vinyl acetate	ND		0.80	0.15	ppb v/v			12/24/16 18:38	1
Vinyl chloride	ND		0.40	0.12	ppb v/v			12/24/16 18:38	1
1,4-Dioxane	ND		0.80	0.10	ppb v/v			12/24/16 18:38	1
n-Heptane	ND		0.80	0.063	ppb v/v			12/24/16 18:38	1
Hexane	ND		0.80	0.075	ppb v/v			12/24/16 18:38	1
Isopropylbenzene	ND		0.80	0.10	ppb v/v			12/24/16 18:38	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12	ppb v/v			12/24/16 18:38	1
Methyl methacrylate	ND		0.80	0.16	ppb v/v			12/24/16 18:38	1
Naphthalene	ND		0.80	0.56	ppb v/v			12/24/16 18:38	1
Propylene	ND		0.40	0.099	ppb v/v			12/24/16 18:38	1
Tetrahydrofuran	ND		0.80	0.21	ppb v/v			12/24/16 18:38	1
2,2,4-Trimethylpentane	ND		0.40	0.071	ppb v/v			12/24/16 18:38	1
Vinyl bromide	ND		0.80	0.26	ppb v/v			12/24/16 18:38	1
Ethanol	ND		1.0	0.18	ppb v/v			12/24/16 18:38	1
2-Propanol	ND		2.0	0.23	ppb v/v			12/24/16 18:38	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016	0.00035	mg/m3			12/24/16 18:38	1
1,1,2,2-Tetrachloroethane	ND		0.0027	0.00047	mg/m3			12/24/16 18:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031	0.0012	mg/m3			12/24/16 18:38	1
1,1,2-Trichloroethane	ND		0.0022	0.00037	mg/m3			12/24/16 18:38	1
1,1-Dichloroethane	ND		0.0012	0.00029	mg/m3			12/24/16 18:38	1
1,1-Dichloroethene	ND		0.0032	0.00051	mg/m3			12/24/16 18:38	1
1,2,4-Trichlorobenzene	ND		0.015	0.0032	mg/m3			12/24/16 18:38	1
1,2,4-Trimethylbenzene	ND		0.0039	0.00080	mg/m3			12/24/16 18:38	1
1,2-Dibromoethane (EDB)	ND		0.0061	0.00058	mg/m3			12/24/16 18:38	1
Allyl chloride	ND		0.0025	0.00035	mg/m3			12/24/16 18:38	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028	0.0011	mg/m3			12/24/16 18:38	1
1,2-Dichlorobenzene	ND		0.0024	0.00078	mg/m3			12/24/16 18:38	1
1,2-Dichloroethane	ND		0.0032	0.00036	mg/m3			12/24/16 18:38	1
1,2-Dichloropropane	ND		0.0018	0.0011	mg/m3			12/24/16 18:38	1
1,3,5-Trimethylbenzene	ND		0.0020	0.00061	mg/m3			12/24/16 18:38	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-143841/9
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.0024	0.00066	mg/m3			12/24/16 18:38	1
1,4-Dichlorobenzene	ND		0.0024	0.00090	mg/m3			12/24/16 18:38	1
2-Butanone (MEK)	ND		0.0024	0.00059	mg/m3			12/24/16 18:38	1
2-Hexanone	ND		0.0016	0.00036	mg/m3			12/24/16 18:38	1
1,3-Butadiene	ND		0.0018	0.00034	mg/m3			12/24/16 18:38	1
4-Ethyltoluene	ND		0.0020	0.00092	mg/m3			12/24/16 18:38	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016	0.00055	mg/m3			12/24/16 18:38	1
Acetone	ND		0.012	0.00042	mg/m3			12/24/16 18:38	1
Benzene	ND		0.0013	0.00025	mg/m3			12/24/16 18:38	1
Benzyl chloride	ND		0.0041	0.00084	mg/m3			12/24/16 18:38	1
Bromodichloromethane	ND		0.0020	0.00044	mg/m3			12/24/16 18:38	1
Bromoform	ND		0.0041	0.00072	mg/m3			12/24/16 18:38	1
Bromomethane	ND		0.0031	0.0013	mg/m3			12/24/16 18:38	1
Carbon disulfide	ND		0.0025	0.00024	mg/m3			12/24/16 18:38	1
Carbon tetrachloride	ND		0.0050	0.00040	mg/m3			12/24/16 18:38	1
Chlorobenzene	ND		0.0014	0.00029	mg/m3			12/24/16 18:38	1
Chloroethane	ND		0.0021	0.00081	mg/m3			12/24/16 18:38	1
Chloroform	ND		0.0015	0.00046	mg/m3			12/24/16 18:38	1
Chloromethane	ND		0.0017	0.00041	mg/m3			12/24/16 18:38	1
cis-1,2-Dichloroethene	ND		0.0016	0.00035	mg/m3			12/24/16 18:38	1
cis-1,3-Dichloropropene	ND		0.0018	0.00047	mg/m3			12/24/16 18:38	1
Dibromochloromethane	ND		0.0034	0.00067	mg/m3			12/24/16 18:38	1
Dichlorodifluoromethane	ND		0.0020	0.00072	mg/m3			12/24/16 18:38	1
Ethylbenzene	ND		0.0017	0.00027	mg/m3			12/24/16 18:38	1
Hexachlorobutadiene	ND		0.021	0.0046	mg/m3			12/24/16 18:38	1
m,p-Xylene	ND		0.0035	0.00043	mg/m3			12/24/16 18:38	1
Methylene Chloride	ND		0.0014	0.00025	mg/m3			12/24/16 18:38	1
o-Xylene	ND		0.0017	0.00023	mg/m3			12/24/16 18:38	1
Styrene	ND		0.0017	0.00025	mg/m3			12/24/16 18:38	1
Tetrachloroethene	ND		0.0027	0.00035	mg/m3			12/24/16 18:38	1
Toluene	ND		0.0015	0.00019	mg/m3			12/24/16 18:38	1
2-Chlorotoluene	ND		0.0021	0.00041	mg/m3			12/24/16 18:38	1
trans-1,2-Dichloroethene	ND		0.0016	0.00040	mg/m3			12/24/16 18:38	1
trans-1,3-Dichloropropene	ND		0.0018	0.00040	mg/m3			12/24/16 18:38	1
Cyclohexane	ND		0.0014	0.00029	mg/m3			12/24/16 18:38	1
Trichloroethene	ND		0.0021	0.00056	mg/m3			12/24/16 18:38	1
Trichlorofluoromethane	ND		0.0022	0.0011	mg/m3			12/24/16 18:38	1
Vinyl acetate	ND		0.0028	0.00051	mg/m3			12/24/16 18:38	1
Vinyl chloride	ND		0.0010	0.00031	mg/m3			12/24/16 18:38	1
1,4-Dioxane	ND		0.0029	0.00036	mg/m3			12/24/16 18:38	1
n-Heptane	ND		0.0033	0.00026	mg/m3			12/24/16 18:38	1
Hexane	ND		0.0028	0.00026	mg/m3			12/24/16 18:38	1
Isopropylbenzene	ND		0.0039	0.00049	mg/m3			12/24/16 18:38	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029	0.00043	mg/m3			12/24/16 18:38	1
Methyl methacrylate	ND		0.0033	0.00064	mg/m3			12/24/16 18:38	1
Naphthalene	ND		0.0042	0.0029	mg/m3			12/24/16 18:38	1
Propylene	ND		0.00069	0.00017	mg/m3			12/24/16 18:38	1
Tetrahydrofuran	ND		0.0024	0.00062	mg/m3			12/24/16 18:38	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-143841/9
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2,4-Trimethylpentane	ND		0.0019	0.00033	mg/m3			12/24/16 18:38	1
Vinyl bromide	ND		0.0035	0.0011	mg/m3			12/24/16 18:38	1
Ethanol	ND		0.0019	0.00034	mg/m3			12/24/16 18:38	1
2-Propanol	ND		0.0049	0.00058	mg/m3			12/24/16 18:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*12/24/16 18:38*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*12/24/16 18:38*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*12/24/16 18:38*	*1*

Lab Sample ID: LCS 320-143841/4
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	23.1		ppb v/v		115	65 - 124
1,1,2,2-Tetrachloroethane	20.0	21.7		ppb v/v		109	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.3		ppb v/v		102	50 - 132
1,1,2-Trichloroethane	20.0	22.6		ppb v/v		113	71 - 131
1,1-Dichloroethane	20.0	20.5		ppb v/v		103	65 - 125
1,1-Dichloroethene	20.0	19.4		ppb v/v		97	53 - 128
1,2,4-Trichlorobenzene	20.0	21.5		ppb v/v		107	59 - 150
1,2,4-Trimethylbenzene	20.0	23.3		ppb v/v		116	61 - 145
1,2-Dibromoethane (EDB)	20.0	22.2		ppb v/v		111	68 - 131
Allyl chloride	20.0	20.1		ppb v/v		101	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	23.9		ppb v/v		119	64 - 124
1,2-Dichlorobenzene	20.0	23.7		ppb v/v		118	73 - 143
1,2-Dichloroethane	20.0	24.2		ppb v/v		121	71 - 131
1,2-Dichloropropane	20.0	25.7	*	ppb v/v		129	74 - 128
1,3,5-Trimethylbenzene	20.0	21.7		ppb v/v		109	65 - 136
1,3-Dichlorobenzene	20.0	23.6		ppb v/v		118	77 - 136
1,4-Dichlorobenzene	20.0	23.6		ppb v/v		118	73 - 143
2-Butanone (MEK)	20.0	22.0		ppb v/v		110	71 - 131
2-Hexanone	20.0	21.8		ppb v/v		109	70 - 128
1,3-Butadiene	20.0	20.7		ppb v/v		103	58 - 126
4-Ethyltoluene	20.0	21.4		ppb v/v		107	62 - 136
4-Methyl-2-pentanone (MIBK)	20.0	22.9		ppb v/v		115	73 - 133
Acetone	20.0	19.8		ppb v/v		99	71 - 131
Benzene	20.0	21.5		ppb v/v		107	68 - 128
Benzyl chloride	20.0	16.9		ppb v/v		85	58 - 120
Bromodichloromethane	20.0	25.1		ppb v/v		125	65 - 130
Bromoform	20.0	23.5		ppb v/v		117	64 - 144
Bromomethane	20.0	18.9		ppb v/v		94	70 - 131
Carbon disulfide	20.0	19.9		ppb v/v		99	63 - 123
Carbon tetrachloride	20.0	26.4	*	ppb v/v		132	67 - 127
Chlorobenzene	20.0	21.9		ppb v/v		110	70 - 132

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-143841/4
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	20.0	21.4		ppb v/v		107	70 - 131
Chloroform	20.0	22.7		ppb v/v		114	69 - 129
Chloromethane	20.0	20.4		ppb v/v		102	67 - 127
cis-1,2-Dichloroethene	20.0	21.4		ppb v/v		107	68 - 128
cis-1,3-Dichloropropene	20.0	24.9		ppb v/v		124	78 - 132
Dibromochloromethane	20.0	23.3		ppb v/v		117	68 - 128
Dichlorodifluoromethane	20.0	25.7		ppb v/v		129	69 - 129
Ethylbenzene	20.0	21.6		ppb v/v		108	76 - 136
Hexachlorobutadiene	20.0	18.6		ppb v/v		93	42 - 150
m,p-Xylene	40.0	44.4		ppb v/v		111	75 - 138
Methylene Chloride	20.0	18.2		ppb v/v		91	65 - 125
o-Xylene	20.0	21.9		ppb v/v		110	77 - 132
Styrene	20.0	22.6		ppb v/v		113	76 - 144
Tetrachloroethene	20.0	21.8		ppb v/v		109	56 - 138
Toluene	20.0	23.8		ppb v/v		119	71 - 132
2-Chlorotoluene	20.0	21.7		ppb v/v		108	73 - 131
trans-1,2-Dichloroethene	20.0	20.9		ppb v/v		104	70 - 130
trans-1,3-Dichloropropene	20.0	19.9		ppb v/v		100	56 - 136
Cyclohexane	20.0	21.6		ppb v/v		108	63 - 128
Trichloroethene	20.0	24.5		ppb v/v		123	64 - 127
Trichlorofluoromethane	20.0	23.5		ppb v/v		117	68 - 128
Vinyl acetate	20.0	22.0		ppb v/v		110	77 - 134
Vinyl chloride	20.0	21.2		ppb v/v		106	69 - 129
1,4-Dioxane	20.0	25.0		ppb v/v		125	55 - 141
n-Heptane	20.0	19.8		ppb v/v		99	69 - 129
Hexane	20.0	19.4		ppb v/v		97	63 - 123
Isopropylbenzene	20.0	22.2		ppb v/v		111	75 - 135
Methyl-t-Butyl Ether (MTBE)	20.0	20.7		ppb v/v		104	72 - 132
Methyl methacrylate	20.0	22.7		ppb v/v		114	71 - 130
Naphthalene	20.0	19.3		ppb v/v		97	58 - 150
Propylene	20.0	20.6		ppb v/v		103	72 - 132
Tetrahydrofuran	20.0	18.5		ppb v/v		92	69 - 129
2,2,4-Trimethylpentane	20.0	20.8		ppb v/v		104	72 - 132
Vinyl bromide	20.0	20.9		ppb v/v		105	65 - 125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.126		mg/m3		115	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.149		mg/m3		109	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.156		mg/m3		102	50 - 132
1,1,2-Trichloroethane	0.11	0.123		mg/m3		113	71 - 131
1,1-Dichloroethane	0.081	0.0830		mg/m3		103	65 - 125
1,1-Dichloroethene	0.079	0.0769		mg/m3		97	53 - 128
1,2,4-Trichlorobenzene	0.15	0.159		mg/m3		107	59 - 150
1,2,4-Trimethylbenzene	0.098	0.114		mg/m3		116	61 - 145
1,2-Dibromoethane (EDB)	0.15	0.171		mg/m3		111	68 - 131
Allyl chloride	0.063	0.0631		mg/m3		101	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.167		mg/m3		119	64 - 124

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-143841/4
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	0.12	0.142		mg/m3		118	73 - 143
1,2-Dichloroethane	0.081	0.0979		mg/m3		121	71 - 131
1,2-Dichloropropane	0.092	0.119	*	mg/m3		129	74 - 128
1,3,5-Trimethylbenzene	0.098	0.107		mg/m3		109	65 - 136
1,3-Dichlorobenzene	0.12	0.142		mg/m3		118	77 - 136
1,4-Dichlorobenzene	0.12	0.142		mg/m3		118	73 - 143
2-Butanone (MEK)	0.059	0.0650		mg/m3		110	71 - 131
2-Hexanone	0.082	0.0892		mg/m3		109	70 - 128
1,3-Butadiene	0.044	0.0457		mg/m3		103	58 - 126
4-Ethyltoluene	0.098	0.105		mg/m3		107	62 - 136
4-Methyl-2-pentanone (MIBK)	0.082	0.0939		mg/m3		115	73 - 133
Acetone	0.048	0.0471		mg/m3		99	71 - 131
Benzene	0.064	0.0687		mg/m3		107	68 - 128
Benzyl chloride	0.10	0.0877		mg/m3		85	58 - 120
Bromodichloromethane	0.13	0.168		mg/m3		125	65 - 130
Bromoform	0.21	0.243		mg/m3		117	64 - 144
Bromomethane	0.078	0.0732		mg/m3		94	70 - 131
Carbon disulfide	0.062	0.0618		mg/m3		99	63 - 123
Carbon tetrachloride	0.13	0.166	*	mg/m3		132	67 - 127
Chlorobenzene	0.092	0.101		mg/m3		110	70 - 132
Chloroethane	0.053	0.0564		mg/m3		107	70 - 131
Chloroform	0.098	0.111		mg/m3		114	69 - 129
Chloromethane	0.041	0.0422		mg/m3		102	67 - 127
cis-1,2-Dichloroethene	0.079	0.0849		mg/m3		107	68 - 128
cis-1,3-Dichloropropene	0.091	0.113		mg/m3		124	78 - 132
Dibromochloromethane	0.17	0.199		mg/m3		117	68 - 128
Dichlorodifluoromethane	0.099	0.127		mg/m3		129	69 - 129
Ethylbenzene	0.087	0.0940		mg/m3		108	76 - 136
Hexachlorobutadiene	0.21	0.198		mg/m3		93	42 - 150
m,p-Xylene	0.17	0.193		mg/m3		111	75 - 138
Methylene Chloride	0.069	0.0633		mg/m3		91	65 - 125
o-Xylene	0.087	0.0952		mg/m3		110	77 - 132
Styrene	0.085	0.0962		mg/m3		113	76 - 144
Tetrachloroethene	0.14	0.148		mg/m3		109	56 - 138
Toluene	0.075	0.0898		mg/m3		119	71 - 132
2-Chlorotoluene	0.10	0.112		mg/m3		108	73 - 131
trans-1,2-Dichloroethene	0.079	0.0828		mg/m3		104	70 - 130
trans-1,3-Dichloropropene	0.091	0.0905		mg/m3		100	56 - 136
Cyclohexane	0.069	0.0744		mg/m3		108	63 - 128
Trichloroethene	0.11	0.132		mg/m3		123	64 - 127
Trichlorofluoromethane	0.11	0.132		mg/m3		117	68 - 128
Vinyl acetate	0.070	0.0773		mg/m3		110	77 - 134
Vinyl chloride	0.051	0.0542		mg/m3		106	69 - 129
1,4-Dioxane	0.072	0.0899		mg/m3		125	55 - 141
n-Heptane	0.082	0.0813		mg/m3		99	69 - 129
Hexane	0.070	0.0684		mg/m3		97	63 - 123
Isopropylbenzene	0.098	0.109		mg/m3		111	75 - 135
Methyl-t-Butyl Ether (MTBE)	0.072	0.0747		mg/m3		104	72 - 132

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-143841/4
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl methacrylate	0.082	0.0930		mg/m3		114	71 - 130
Naphthalene	0.10	0.101		mg/m3		97	58 - 150
Propylene	0.034	0.0354		mg/m3		103	72 - 132
Tetrahydrofuran	0.059	0.0544		mg/m3		92	69 - 129
2,2,4-Trimethylpentane	0.093	0.0970		mg/m3		104	72 - 132
Vinyl bromide	0.087	0.0916		mg/m3		105	65 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCS 320-143841/6
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	100	97.7		ppb v/v		98	62 - 131
2-Propanol	20.0	21.0		ppb v/v		105	55 - 139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	0.19	0.184		mg/m3		98	62 - 131
2-Propanol	0.049	0.0515		mg/m3		105	55 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 320-143841/5
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	22.9		ppb v/v		114	65 - 124	1	25
1,1,2,2-Tetrachloroethane	20.0	21.9		ppb v/v		110	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.4		ppb v/v		102	50 - 132	1	25
1,1,2-Trichloroethane	20.0	22.3		ppb v/v		111	71 - 131	2	25
1,1-Dichloroethane	20.0	20.8		ppb v/v		104	65 - 125	1	25
1,1-Dichloroethene	20.0	19.6		ppb v/v		98	53 - 128	1	25
1,2,4-Trichlorobenzene	20.0	21.8		ppb v/v		109	59 - 150	2	25
1,2,4-Trimethylbenzene	20.0	23.4		ppb v/v		117	61 - 145	1	25
1,2-Dibromoethane (EDB)	20.0	22.1		ppb v/v		111	68 - 131	0	25
Allyl chloride	20.0	20.1		ppb v/v		101	77 - 137	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	24.1		ppb v/v		120	64 - 124	1	25
1,2-Dichlorobenzene	20.0	23.8		ppb v/v		119	73 - 143	0	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143841/5
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloroethane	20.0	23.4		ppb v/v		117	71 - 131	4	25
1,2-Dichloropropane	20.0	25.1		ppb v/v		126	74 - 128	2	25
1,3,5-Trimethylbenzene	20.0	21.9		ppb v/v		110	65 - 136	1	25
1,3-Dichlorobenzene	20.0	23.8		ppb v/v		119	77 - 136	1	25
1,4-Dichlorobenzene	20.0	23.8		ppb v/v		119	73 - 143	1	25
2-Butanone (MEK)	20.0	22.2		ppb v/v		111	71 - 131	1	25
2-Hexanone	20.0	22.0		ppb v/v		110	70 - 128	1	25
1,3-Butadiene	20.0	21.4		ppb v/v		107	58 - 126	3	25
4-Ethyltoluene	20.0	21.4		ppb v/v		107	62 - 136	0	25
4-Methyl-2-pentanone (MIBK)	20.0	22.7		ppb v/v		113	73 - 133	1	25
Acetone	20.0	19.9		ppb v/v		100	71 - 131	1	25
Benzene	20.0	21.5		ppb v/v		107	68 - 128	0	25
Benzyl chloride	20.0	17.2		ppb v/v		86	58 - 120	2	25
Bromodichloromethane	20.0	24.5		ppb v/v		122	65 - 130	2	25
Bromoform	20.0	23.4		ppb v/v		117	64 - 144	0	25
Bromomethane	20.0	21.6		ppb v/v		108	70 - 131	13	25
Carbon disulfide	20.0	20.1		ppb v/v		101	63 - 123	1	25
Carbon tetrachloride	20.0	25.7	*	ppb v/v		128	67 - 127	3	25
Chlorobenzene	20.0	22.1		ppb v/v		110	70 - 132	1	25
Chloroethane	20.0	22.0		ppb v/v		110	70 - 131	3	25
Chloroform	20.0	22.6		ppb v/v		113	69 - 129	1	25
Chloromethane	20.0	21.0		ppb v/v		105	67 - 127	3	25
cis-1,2-Dichloroethene	20.0	21.6		ppb v/v		108	68 - 128	1	25
cis-1,3-Dichloropropene	20.0	24.5		ppb v/v		123	78 - 132	1	25
Dibromochloromethane	20.0	22.8		ppb v/v		114	68 - 128	2	25
Dichlorodifluoromethane	20.0	25.3		ppb v/v		127	69 - 129	2	25
Ethylbenzene	20.0	21.8		ppb v/v		109	76 - 136	1	25
Hexachlorobutadiene	20.0	18.7		ppb v/v		93	42 - 150	1	25
m,p-Xylene	40.0	44.8		ppb v/v		112	75 - 138	1	25
Methylene Chloride	20.0	18.3		ppb v/v		92	65 - 125	1	25
o-Xylene	20.0	22.2		ppb v/v		111	77 - 132	1	25
Styrene	20.0	22.9		ppb v/v		114	76 - 144	1	25
Tetrachloroethene	20.0	21.5		ppb v/v		108	56 - 138	1	25
Toluene	20.0	23.2		ppb v/v		116	71 - 132	3	25
2-Chlorotoluene	20.0	21.6		ppb v/v		108	73 - 131	0	25
trans-1,2-Dichloroethene	20.0	20.9		ppb v/v		105	70 - 130	0	25
trans-1,3-Dichloropropene	20.0	19.8		ppb v/v		99	56 - 136	0	25
Cyclohexane	20.0	21.1		ppb v/v		106	63 - 128	2	25
Trichloroethene	20.0	24.3		ppb v/v		121	64 - 127	1	25
Trichlorofluoromethane	20.0	23.5		ppb v/v		118	68 - 128	0	25
Vinyl acetate	20.0	22.3		ppb v/v		112	77 - 134	2	25
Vinyl chloride	20.0	22.0		ppb v/v		110	69 - 129	4	25
1,4-Dioxane	20.0	24.6		ppb v/v		123	55 - 141	2	25
n-Heptane	20.0	19.6		ppb v/v		98	69 - 129	1	25
Hexane	20.0	19.5		ppb v/v		97	63 - 123	0	25
Isopropylbenzene	20.0	22.2		ppb v/v		111	75 - 135	0	25
Methyl-t-Butyl Ether (MTBE)	20.0	21.0		ppb v/v		105	72 - 132	1	25
Methyl methacrylate	20.0	22.4		ppb v/v		112	71 - 130	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143841/5
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			20.0	19.9		ppb v/v		99	58 - 150	3	25
Propylene			20.0	20.9		ppb v/v		105	72 - 132	2	25
Tetrahydrofuran			20.0	18.6		ppb v/v		93	69 - 129	1	25
2,2,4-Trimethylpentane			20.0	20.7		ppb v/v		104	72 - 132	0	25
Vinyl bromide			20.0	21.4		ppb v/v		107	65 - 125	2	25
Analyte			**Spike Added**	**LCSD Result**	**LCSD Qualifier**	**Unit**	**D**	**%Rec**	**%Rec. Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane			0.11	0.125		mg/m3		114	65 - 124	1	25
1,1,2,2-Tetrachloroethane			0.14	0.150		mg/m3		110	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane			0.15	0.156		mg/m3		102	50 - 132	1	25
1,1,2-Trichloroethane			0.11	0.121		mg/m3		111	71 - 131	2	25
1,1-Dichloroethane			0.081	0.0840		mg/m3		104	65 - 125	1	25
1,1-Dichloroethene			0.079	0.0777		mg/m3		98	53 - 128	1	25
1,2,4-Trichlorobenzene			0.15	0.162		mg/m3		109	59 - 150	2	25
1,2,4-Trimethylbenzene			0.098	0.115		mg/m3		117	61 - 145	1	25
1,2-Dibromoethane (EDB)			0.15	0.170		mg/m3		111	68 - 131	0	25
Allyl chloride			0.063	0.0630		mg/m3		101	77 - 137	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane			0.14	0.168		mg/m3		120	64 - 124	1	25
1,2-Dichlorobenzene			0.12	0.143		mg/m3		119	73 - 143	0	25
1,2-Dichloroethane			0.081	0.0945		mg/m3		117	71 - 131	4	25
1,2-Dichloropropane			0.092	0.116		mg/m3		126	74 - 128	2	25
1,3,5-Trimethylbenzene			0.098	0.108		mg/m3		110	65 - 136	1	25
1,3-Dichlorobenzene			0.12	0.143		mg/m3		119	77 - 136	1	25
1,4-Dichlorobenzene			0.12	0.143		mg/m3		119	73 - 143	1	25
2-Butanone (MEK)			0.059	0.0655		mg/m3		111	71 - 131	1	25
2-Hexanone			0.082	0.0902		mg/m3		110	70 - 128	1	25
1,3-Butadiene			0.044	0.0473		mg/m3		107	58 - 126	3	25
4-Ethyltoluene			0.098	0.105		mg/m3		107	62 - 136	0	25
4-Methyl-2-pentanone (MIBK)			0.082	0.0930		mg/m3		113	73 - 133	1	25
Acetone			0.048	0.0473		mg/m3		100	71 - 131	1	25
Benzene			0.064	0.0687		mg/m3		107	68 - 128	0	25
Benzyl chloride			0.10	0.0891		mg/m3		86	58 - 120	2	25
Bromodichloromethane			0.13	0.164		mg/m3		122	65 - 130	2	25
Bromoform			0.21	0.242		mg/m3		117	64 - 144	0	25
Bromomethane			0.078	0.0838		mg/m3		108	70 - 131	13	25
Carbon disulfide			0.062	0.0627		mg/m3		101	63 - 123	1	25
Carbon tetrachloride			0.13	0.161	*	mg/m3		128	67 - 127	3	25
Chlorobenzene			0.092	0.102		mg/m3		110	70 - 132	1	25
Chloroethane			0.053	0.0581		mg/m3		110	70 - 131	3	25
Chloroform			0.098	0.110		mg/m3		113	69 - 129	1	25
Chloromethane			0.041	0.0434		mg/m3		105	67 - 127	3	25
cis-1,2-Dichloroethene			0.079	0.0858		mg/m3		108	68 - 128	1	25
cis-1,3-Dichloropropene			0.091	0.111		mg/m3		123	78 - 132	1	25
Dibromochloromethane			0.17	0.195		mg/m3		114	68 - 128	2	25
Dichlorodifluoromethane			0.099	0.125		mg/m3		127	69 - 129	2	25
Ethylbenzene			0.087	0.0948		mg/m3		109	76 - 136	1	25
Hexachlorobutadiene			0.21	0.199		mg/m3		93	42 - 150	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-143841/5
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m,p-Xylene			0.17	0.194		mg/m3		112	75 - 138	1	25
Methylene Chloride			0.069	0.0636		mg/m3		92	65 - 125	1	25
o-Xylene			0.087	0.0966		mg/m3		111	77 - 132	1	25
Styrene			0.085	0.0975		mg/m3		114	76 - 144	1	25
Tetrachloroethene			0.14	0.146		mg/m3		108	56 - 138	1	25
Toluene			0.075	0.0876		mg/m3		116	71 - 132	3	25
2-Chlorotoluene			0.10	0.112		mg/m3		108	73 - 131	0	25
trans-1,2-Dichloroethene			0.079	0.0830		mg/m3		105	70 - 130	0	25
trans-1,3-Dichloropropene			0.091	0.0901		mg/m3		99	56 - 136	0	25
Cyclohexane			0.069	0.0728		mg/m3		106	63 - 128	2	25
Trichloroethene			0.11	0.131		mg/m3		121	64 - 127	1	25
Trichlorofluoromethane			0.11	0.132		mg/m3		118	68 - 128	0	25
Vinyl acetate			0.070	0.0787		mg/m3		112	77 - 134	2	25
Vinyl chloride			0.051	0.0562		mg/m3		110	69 - 129	4	25
1,4-Dioxane			0.072	0.0885		mg/m3		123	55 - 141	2	25
n-Heptane			0.082	0.0803		mg/m3		98	69 - 129	1	25
Hexane			0.070	0.0686		mg/m3		97	63 - 123	0	25
Isopropylbenzene			0.098	0.109		mg/m3		111	75 - 135	0	25
Methyl-t-Butyl Ether (MTBE)			0.072	0.0756		mg/m3		105	72 - 132	1	25
Methyl methacrylate			0.082	0.0919		mg/m3		112	71 - 130	1	25
Naphthalene			0.10	0.104		mg/m3		99	58 - 150	3	25
Propylene			0.034	0.0360		mg/m3		105	72 - 132	2	25
Tetrahydrofuran			0.059	0.0549		mg/m3		93	69 - 129	1	25
2,2,4-Trimethylpentane			0.093	0.0967		mg/m3		104	72 - 132	0	25
Vinyl bromide			0.087	0.0937		mg/m3		107	65 - 125	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 320-143841/7
Matrix: Air
Analysis Batch: 143841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			100	107		ppb v/v		107	62 - 131	9	25
2-Propanol			20.0	22.7		ppb v/v		114	55 - 139	8	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			0.19	0.201		mg/m3		107	62 - 131	9	25
2-Propanol			0.049	0.0558		mg/m3		114	55 - 139	8	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Client Sample ID: LFB-17:120216
Lab Sample ID: 590-5134-1
Date Collected: 12/02/16 00:00
Matrix: Air
Date Received: 12/05/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.75	250 mL	250 mL	142132	12/14/16 22:10	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	1.75	250 mL	250 mL	143721	12/24/16 02:35	AP1	TAL SAC

Client Sample ID: LFB-16:120216
Lab Sample ID: 590-5134-2
Date Collected: 12/02/16 00:00
Matrix: Air
Date Received: 12/05/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	471 mL	250 mL	142132	12/14/16 23:06	AP1	TAL SAC
Total/NA	Analysis	TO-15	DL	1.12	750 mL	250 mL	143721	12/24/16 03:35	AP1	TAL SAC

Client Sample ID: LFB-15:120216
Lab Sample ID: 590-5134-3
Date Collected: 12/02/16 00:00
Matrix: Air
Date Received: 12/05/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	455 mL	250 mL	142132	12/14/16 23:53	AP1	TAL SAC
Total/NA	Analysis	TO-15	DL	1.28	750 mL	250 mL	143721	12/24/16 04:35	AP1	TAL SAC

Client Sample ID: LFB-4:120216
Lab Sample ID: 590-5134-4
Date Collected: 12/02/16 00:00
Matrix: Air
Date Received: 12/05/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		18.4	25 mL	250 mL	142132	12/15/16 00:36	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	18.4	25 mL	250 mL	143841	12/24/16 21:20	AP1	TAL SAC

Client Sample ID: LFB-3:120216
Lab Sample ID: 590-5134-5
Date Collected: 12/02/16 00:00
Matrix: Air
Date Received: 12/05/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		35	12.5 mL	250 mL	142132	12/15/16 01:20	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	35	25 mL	250 mL	143841	12/24/16 22:12	AP1	TAL SAC

Client Sample ID: LFB-10:120216
Lab Sample ID: 590-5134-6
Date Collected: 12/02/16 00:00
Matrix: Air
Date Received: 12/05/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	482 mL	250 mL	142132	12/15/16 02:15	AP1	TAL SAC

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Client Sample ID: LFB-10:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-6
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	1	757 mL	250 mL	143841	12/24/16 23:12	AP1	TAL SAC

Client Sample ID: LFB-11:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-7
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		53.9	8.33 mL	250 mL	142132	12/15/16 02:59	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	53.9	8.33 mL	250 mL	143841	12/25/16 00:04	AP1	TAL SAC

Client Sample ID: LFB-8:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-8
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.75	250 mL	250 mL	142132	12/15/16 03:44	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	1.75	250 mL	250 mL	143841	12/25/16 00:58	AP1	TAL SAC

Client Sample ID: LFB-9:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-9
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	455 mL	250 mL	142132	12/15/16 04:32	AP1	TAL SAC
Total/NA	Analysis	TO-15	DL	1.84	750 mL	250 mL	143841	12/25/16 02:25	AP1	TAL SAC

Client Sample ID: LFB-5:120216
Date Collected: 12/02/16 00:00
Date Received: 12/05/16 12:45

Lab Sample ID: 590-5134-10
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		18.5	25 mL	250 mL	142132	12/15/16 05:15	AP1	TAL SAC
Total/NA	Analysis	TO-15	RA	18.5	25 mL	250 mL	143841	12/25/16 03:17	AP1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5134-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.374.4378 fax 916.372.1059

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Jon Rudeloff	**Samples Collected By:** JML
Company Name: GeoEngineers	Phone: 509-363-3125	
Address: 523 E. Second Ave	Email: jrudeloff@geoengineers.com	
City/State/Zip Spokane, WA 99202		
Phone: 509-363-3125	**Site Contact:**	
FAX: 509-363-3126	**TA Contact:**	
Project Name: Marshall Landfill	**Anaylsis Turnaround Time**	
Site/Location: Marshall, WA	Standard (Specific):	
P O # 0504-104-00	Rush (Specifiy):	

COC No: 1 of 1 COCs

For Lab Use Only:
Walk-in Client:
Lab Sampling:

Job / SDG No.:
(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
LFB-17:120216	12/2/16	1341	1350	-30	-2	7311	A7128D	X												X		
LFB-16:120216	12/2/16	1358	1405	-29	-0.5	7470	8521	X												X		
LFB-15:120216	12/2/16	1411	1419	-29	-0.2	7132	A6991D	X												X		
LFB-4:120216	12/2/16	1428	1436	-27	-1.0	7447	A7164D	X												X		
LFB-3:120216	12/2/16	1442	1450	-28	-1.6	7484	5203D	X												X		
LFB-10:120216	12/2/16	1510	1516	-29	-2.0	8493	8290	X												X		
LFB-11:120216	12/2/16	1522	1528	-29	-1.5	7595	A7146D	X												X		
LFB-8:120216	12/2/16	1535	1543	-28	-2.0	7455	50220	X												X		
LFB-9:120216	12/2/16	1710	1548	-29	-2.0	7442	A8861D	X												X		
LFB-5:120216	12/2/16	1554	1606	-27	-2.0	7483	A7091D	X												X		

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

590-5134 Chain of Custody

Special Instructions/QC Requirements & Comments:

Samples Shipped by:	**Date / Time:**	**Samples Received by:** Sheila Kraly TA Spok 12/5/16 1245
Samples Relinquished by: Josh Lee	**Date / Time:** 12/5/2016 1245	**Received by:**
Relinquished by:	**Date / Time:**	**Received by:**
Lab Use Only: **Shipper Name:**	**Opened by:**	**Condition:**

Form No. CA-C-WI-003, Rev. 1, dated 05/10/2013

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2343.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5134-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/15/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15/Air_Pass_Can (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-17:120216 (590-5134-1)	12/2/16	Pacific		Air			X	1	
LFB-16:120216 (590-5134-2)	12/2/16	Pacific		Air			X	1	
LFB-15:120216 (590-5134-3)	12/2/16	Pacific		Air			X	1	
LFB-4:120216 (590-5134-4)	12/2/16	Pacific		Air			X	1	
LFB-3:120216 (590-5134-5)	12/2/16	Pacific		Air			X	1	
LFB-10:120216 (590-5134-6)	12/2/16	Pacific		Air			X	1	
LFB-11:120216 (590-5134-7)	12/2/16	Pacific		Air			X	1	
LFB-8:120216 (590-5134-8)	12/2/16	Pacific		Air			X	1	
LFB-9:120216 (590-5134-9)	12/2/16	Pacific		Air			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Kraly	12/5/16 1430	TA Spok	Troy A. Turpen	12/6/16 10:30	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

12/28/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2343.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5134-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/15/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15/Air_Pass_Can (MOD) Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-5:120216 (590-5134-10)	12/2/16	Pacific		Air			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Kratz	12/5/16 1430	TA SPOK	Ivy G. Turpin	12/6/16 1030	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

12/28/2016

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5134-1

Login Number: 5134
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5134-1

Login Number: 5134
List Number: 2
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 12/07/16 11:05 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5101-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/21/2016 9:36:38 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5101-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 11/30/2016 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 4.6º C, 4.7º C and 5.1º C.

Receipt Exceptions
Method 8290A: Sample containers for method 8290A were delayed by federal express and were to arrive on Friday the 2nd, 2016 but did not arrive till Monday the 5th, 2016. The sample was received out of temperature at 7.4 degrees Celsius. Due to this the containers were removed from circulation and additional volume was shipped and received within temperature specifications on 12/09/2016.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-9939 recovered above the upper control limit for 1,1,1-Trichloroethane and Carbon tetrachloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SW-1:113016 (590-5101-1).

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-9939 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane and Naphthalene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-234074 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The method blank for preparation batch 580-233897 and analytical batch 580-234074 contained Anthracene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The continuing calibration verification (CCV) associated with batch 280-354926 recovered above the upper control limit for 2,4-D, 2,4-Dichlorophenylacetic acid, Dalapon, Dicamba, Dichlorprop, MCPA, and MCPP. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The surrogate is in control on both columns for the associated samples. The following samples are impacted: SW-1:113016 (590-5101-1), (CCV 280-354926/24), (CCV 280-354926/35), (CCV 280-354926/45), (CCVRT 280-354926/8), (LCS 280-354292/2-A), (LCSD 280-354292/3-A) and (MB 280-354292/1-A).

Method 8141B: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-354183 and analytical batch 280-355174 recovered outside control limits for the following analytes: Chlormefos, Coumaphos, Dichlorvos, and Azinphos-methyl. Azinphos-methyl was biased high in the LCSD and was not detected in the associated samples. Coumaphos was biased high in the LCS and LCSD and was not detected in the associated samples. Dichlorvos was biased high in the LCS and biased low in the LCSD. The surrogate, chlormefos, was low in the LCSD.

Method 8141B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 280-354183 recovered outside control limits for the following analytes: Mevinphos.

Method 8141B: The continuing calibration verification (CCV) associated with batch 280-355174 recovered outside acceptance criteria, low biased, for Atrazine, Simazine and Propazine. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8081B: The method blank for preparation batch 580-233792 and analytical batch 580-234067 contained gamma-Chlordane and alpha-Chlordane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Job ID: 590-5101-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 8081B: The closing continuing calibration verification (CCV) associated with batch 580-234067 recovered above the upper control limit for Methoxychlor on the confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 335.4: The matrix spike (MS) recovery for preparation batch 490-392115 and analytical batch 490-392251 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8141B_3510C: The following sample formed emulsions during the extraction procedure: SW-1:113016 (590-5101-1). The emulsions were broken up using a centrifuge on all three extractions.

Method 8141B_3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-354183.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-354292.

Method 8151A: The following sample formed emulsions during the extraction procedure: SW-1:113016 (590-5101-1). The emulsions were broken up using a pour back for the second MeCl2 clean up step only

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5101-1	SW-1:113016	Water	11/30/16 15:30	11/30/16 16:50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/08/16 09:29	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/08/16 09:29	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/16 09:29	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/08/16 09:29	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/08/16 09:29	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/08/16 09:29	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/08/16 09:29	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/16 09:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/16 09:29	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/08/16 09:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/16 09:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/16 09:29	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/08/16 09:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/08/16 09:29	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/08/16 09:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/08/16 09:29	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/08/16 09:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/16 09:29	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/16 09:29	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/08/16 09:29	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/16 09:29	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/16 09:29	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/16 09:29	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/16 09:29	1
2-Hexanone	ND		10	0.75	ug/L			12/08/16 09:29	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/16 09:29	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/16 09:29	1
Acetone	ND		25	4.1	ug/L			12/08/16 09:29	1
Benzene	ND		0.20	0.093	ug/L			12/08/16 09:29	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/16 09:29	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/08/16 09:29	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/08/16 09:29	1
Bromoform	ND		2.0	0.80	ug/L			12/08/16 09:29	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/16 09:29	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/08/16 09:29	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/16 09:29	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/16 09:29	1
Chloroethane	ND		2.0	1.1	ug/L			12/08/16 09:29	1
Chloroform	ND		1.0	0.41	ug/L			12/08/16 09:29	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/16 09:29	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/08/16 09:29	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/16 09:29	1
Dibromochloromethane	ND		1.0	0.35	ug/L			12/08/16 09:29	1
Dibromomethane	ND		1.0	0.50	ug/L			12/08/16 09:29	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/08/16 09:29	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/16 09:29	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/16 09:29	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/08/16 09:29	1
Hexane	ND		1.0	0.084	ug/L			12/08/16 09:29	1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.063	ug/L			12/08/16 09:29	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/16 09:29	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/08/16 09:29	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/08/16 09:29	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/16 09:29	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/16 09:29	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/16 09:29	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/16 09:29	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/08/16 09:29	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/16 09:29	1
Styrene	ND		1.0	0.10	ug/L			12/08/16 09:29	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/16 09:29	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/08/16 09:29	1
Toluene	ND		1.0	0.31	ug/L			12/08/16 09:29	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/08/16 09:29	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/16 09:29	1
Trichloroethene	ND		1.0	0.44	ug/L			12/08/16 09:29	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/16 09:29	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/08/16 09:29	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/16 09:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 125*		*12/08/16 09:29*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/08/16 09:29*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/08/16 09:29*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/08/16 09:29*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			12/01/16 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*12/01/16 15:51*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
1-Methylnaphthalene	ND		0.057	0.029	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
2-Chlorophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
2-Methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2-Nitroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
2-Nitrophenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
3-Nitroaniline	ND		0.38	0.11	ug/L		12/05/16 16:00	12/08/16 01:02	1
4,6-Dinitro-2-methylphenol	ND		3.8	0.95	ug/L		12/05/16 16:00	12/08/16 01:02	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
4-Chloroaniline	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
4-Nitroaniline	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
4-Nitrophenol	ND		2.9	0.95	ug/L		12/05/16 16:00	12/08/16 01:02	1
Acenaphthene	ND		0.095	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Acenaphthylene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Anthracene	ND		0.038	0.0095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzoic acid	**0.81**	**J**	2.9	0.57	ug/L		12/05/16 16:00	12/08/16 01:02	1
Benzyl alcohol	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Bis(2-ethylhexyl) phthalate	**26**	**J**	29	11	ug/L		12/05/16 16:00	12/08/16 14:17	10
Butyl benzyl phthalate	**0.27**	**J**	0.57	0.19	ug/L		12/05/16 16:00	12/08/16 01:02	1
Carbazole	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Chrysene	ND		0.038	0.012	ug/L		12/05/16 16:00	12/08/16 01:02	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Dibenzofuran	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Diethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Di-n-butyl phthalate	**0.16**	**J**	0.38	0.12	ug/L		12/05/16 16:00	12/08/16 01:02	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		12/05/16 16:00	12/08/16 01:02	1
Fluoranthene	ND		0.048	0.012	ug/L		12/05/16 16:00	12/08/16 01:02	1
Fluorene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Hexachloroethane	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Isophorone	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Naphthalene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Nitrobenzene	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Phenanthrene	ND		0.076	0.019	ug/L		12/05/16 16:00	12/08/16 01:02	1
Phenol	ND		0.57	0.095	ug/L		12/05/16 16:00	12/08/16 01:02	1
Pyrene	ND		0.057	0.012	ug/L		12/05/16 16:00	12/08/16 01:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*94*		*57 - 132*	*12/05/16 16:00*	*12/08/16 01:02*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/05/16 16:00*	*12/08/16 01:02*	*1*
2-Fluorophenol	*78*		*50 - 113*	*12/05/16 16:00*	*12/08/16 01:02*	*1*
Nitrobenzene-d5	*82*		*59 - 120*	*12/05/16 16:00*	*12/08/16 01:02*	*1*
Phenol-d5	*81*		*52 - 120*	*12/05/16 16:00*	*12/08/16 01:02*	*1*
Terphenyl-d14	*82*		*72 - 140*	*12/05/16 16:00*	*12/08/16 01:02*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 17:50	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		12/03/16 15:20	12/07/16 03:57	1
4,4'-DDE	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:57	1
4,4'-DDT	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 03:57	1
Aldrin	ND		0.029	0.0068	ug/L		12/03/16 15:20	12/07/16 03:57	1
alpha-BHC	ND		0.029	0.0068	ug/L		12/03/16 15:20	12/07/16 03:57	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:57	1
beta-BHC	ND		0.048	0.012	ug/L		12/03/16 15:20	12/07/16 03:57	1
delta-BHC	ND		0.048	0.0097	ug/L		12/03/16 15:20	12/07/16 03:57	1
Dieldrin	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 03:57	1
Endosulfan I	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:57	1
Endosulfan II	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:57	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:57	1
Endrin	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:57	1
Endrin aldehyde	ND		0.19	0.033	ug/L		12/03/16 15:20	12/07/16 03:57	1
Endrin ketone	ND		0.019	0.0019	ug/L		12/03/16 15:20	12/07/16 03:57	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		12/03/16 15:20	12/07/16 03:57	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:57	1
Heptachlor	ND		0.019	0.0039	ug/L		12/03/16 15:20	12/07/16 03:57	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		12/03/16 15:20	12/07/16 03:57	1
Methoxychlor	ND		0.097	0.0019	ug/L		12/03/16 15:20	12/07/16 03:57	1
Toxaphene	ND		0.97	0.21	ug/L		12/03/16 15:20	12/07/16 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*22 - 150*	*12/03/16 15:20*	*12/07/16 03:57*	*1*
Tetrachloro-m-xylene	*73*		*40 - 113*	*12/03/16 15:20*	*12/07/16 03:57*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.099	0.061	ug/L		12/08/16 10:51	12/08/16 16:35	1
PCB-1221	ND		0.099	0.061	ug/L		12/08/16 10:51	12/08/16 16:35	1
PCB-1232	ND		0.099	0.061	ug/L		12/08/16 10:51	12/08/16 16:35	1
PCB-1242	ND		0.099	0.061	ug/L		12/08/16 10:51	12/08/16 16:35	1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.099	0.061	ug/L		12/08/16 10:51	12/08/16 16:35	1
PCB-1254	ND		0.099	0.061	ug/L		12/08/16 10:51	12/08/16 16:35	1
PCB-1260	ND		0.099	0.043	ug/L		12/08/16 10:51	12/08/16 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*20 - 120*	*12/08/16 10:51*	*12/08/16 16:35*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*36 - 138*	*12/08/16 10:51*	*12/08/16 16:35*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 06:20	1
Azinphos-methyl	ND	*	2.4	0.16	ug/L		12/05/16 09:51	12/13/16 06:20	1
Bolstar	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 06:20	1
Chlorpyrifos	ND		1.4	0.35	ug/L		12/05/16 09:51	12/13/16 06:20	1
Coumaphos	ND	*	0.97	0.13	ug/L		12/05/16 09:51	12/13/16 06:20	1
Demeton, Total	ND		2.9	0.20	ug/L		12/05/16 09:51	12/13/16 06:20	1
Diazinon	ND		0.48	0.14	ug/L		12/05/16 09:51	12/13/16 06:20	1
Dichlorvos	ND	*	0.48	0.16	ug/L		12/05/16 09:51	12/13/16 06:20	1
Dimethoate	ND		1.4	0.43	ug/L		12/05/16 09:51	12/13/16 06:20	1
Disulfoton	ND		0.97	0.31	ug/L		12/05/16 09:51	12/13/16 06:20	1
EPN	ND		1.2	0.14	ug/L		12/05/16 09:51	12/13/16 06:20	1
Famphur	ND		0.97	0.17	ug/L		12/05/16 09:51	12/13/16 06:20	1
Fensulfothion	ND		2.4	0.53	ug/L		12/05/16 09:51	12/13/16 06:20	1
Fenthion	ND		2.4	0.15	ug/L		12/05/16 09:51	12/13/16 06:20	1
Malathion	ND		1.9	0.13	ug/L		12/05/16 09:51	12/13/16 06:20	1
Merphos	ND		4.8	0.17	ug/L		12/05/16 09:51	12/13/16 06:20	1
Methyl parathion	ND		3.9	0.14	ug/L		12/05/16 09:51	12/13/16 06:20	1
Mevinphos	ND	*	6.0	0.44	ug/L		12/05/16 09:51	12/13/16 06:20	1
Ethyl Parathion	ND		0.97	0.14	ug/L		12/05/16 09:51	12/13/16 06:20	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/13/16 06:20	1
Ronnel	ND		9.7	0.11	ug/L		12/05/16 09:51	12/13/16 06:20	1
Simazine	ND		9.7	0.22	ug/L		12/05/16 09:51	12/13/16 06:20	1
Sulfotepp	ND		1.4	0.16	ug/L		12/05/16 09:51	12/13/16 06:20	1
Thionazin	ND		0.97	0.30	ug/L		12/05/16 09:51	12/13/16 06:20	1
Tokuthion	ND		1.5	0.12	ug/L		12/05/16 09:51	12/13/16 06:20	1
Trichloronate	ND		1.4	0.23	ug/L		12/05/16 09:51	12/13/16 06:20	1
Ethoprop	ND		1.4	0.17	ug/L		12/05/16 09:51	12/13/16 06:20	1
Propazine	ND		9.7	0.28	ug/L		12/05/16 09:51	12/13/16 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*86*		*49 - 171*	*12/05/16 09:51*	*12/13/16 06:20*	*1*
Triphenylphosphate	*85*		*60 - 154*	*12/05/16 09:51*	*12/13/16 06:20*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		12/05/16 15:38	12/09/16 09:36	1
2,4-D	ND		3.8	0.20	ug/L		12/05/16 15:38	12/09/16 09:36	1
2,4-DB	ND		3.8	0.34	ug/L		12/05/16 15:38	12/09/16 09:36	1
Dalapon	ND		1.9	0.87	ug/L		12/05/16 15:38	12/09/16 09:36	1
Dicamba	ND		1.9	0.14	ug/L		12/05/16 15:38	12/09/16 09:36	1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		12/05/16 15:38	12/09/16 09:36	1
MCPA	ND		380	16	ug/L		12/05/16 15:38	12/09/16 09:36	1
MCPP	ND		380	31	ug/L		12/05/16 15:38	12/09/16 09:36	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		12/05/16 15:38	12/09/16 09:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*92*		*39 - 135*	*12/05/16 15:38*	*12/09/16 09:36*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		12/05/16 14:09	12/05/16 20:09	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		12/05/16 14:09	12/05/16 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*12/05/16 14:09*	*12/05/16 20:09*	*1*
n-Triacontane-d62	*95*		*50 - 150*	*12/05/16 14:09*	*12/05/16 20:09*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13**		0.80	0.42	mg/L			12/01/16 12:53	1
Nitrate as N	**1.5**		0.20	0.039	mg/L			12/01/16 12:53	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 12:53	1
Sulfate	**11**		0.50	0.13	mg/L			12/01/16 12:53	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.13	pg/L		12/12/16 14:18	12/14/16 03:58	1
2,3,7,8-TCDF	**0.32**	**J B**	9.5	0.087	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,7,8-PeCDD	ND		48	0.17	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,7,8-PeCDF	ND		48	0.14	pg/L		12/12/16 14:18	12/14/16 03:58	1
2,3,4,7,8-PeCDF	ND		48	0.15	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,4,7,8-HxCDD	ND		48	0.11	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,6,7,8-HxCDD	ND		48	0.10	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,7,8,9-HxCDD	ND		48	0.083	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,4,7,8-HxCDF	**0.54**	**J**	48	0.18	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,6,7,8-HxCDF	**0.36**	**J**	48	0.16	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,7,8,9-HxCDF	ND		48	0.17	pg/L		12/12/16 14:18	12/14/16 03:58	1
2,3,4,6,7,8-HxCDF	**0.27**	**J q B**	48	0.18	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,4,6,7,8-HpCDD	**1.6**	**J q B**	48	0.19	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,4,6,7,8-HpCDF	**1.5**	**J q B**	48	0.19	pg/L		12/12/16 14:18	12/14/16 03:58	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.21	pg/L		12/12/16 14:18	12/14/16 03:58	1
OCDD	**5.8**	**J B**	95	0.18	pg/L		12/12/16 14:18	12/14/16 03:58	1
OCDF	**3.7**	**J q B**	95	0.19	pg/L		12/12/16 14:18	12/14/16 03:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*91*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-2,3,7,8-TCDF	*82*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-1,2,3,7,8-PeCDD	*101*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-1,2,3,7,8-PeCDF	*92*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-1,2,3,6,7,8-HxCDD	*98*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*89*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*96*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*
13C-OCDD	*105*		*40 - 135*	*12/12/16 14:18*	*12/14/16 03:58*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		12/10/16 09:49	12/13/16 15:49	1
Antimony	**0.000089**	**J**	0.00040	0.000080	mg/L		12/10/16 09:49	12/13/16 15:49	1
Barium	**0.046**		0.0012	0.000054	mg/L		12/10/16 09:49	12/13/16 15:49	1
Beryllium	ND		0.00040	0.00010	mg/L		12/10/16 09:49	12/13/16 15:49	1
Cadmium	ND		0.00040	0.000028	mg/L		12/10/16 09:49	12/13/16 15:49	1
Chromium	**0.00020**	**J**	0.00040	0.00014	mg/L		12/10/16 09:49	12/13/16 15:49	1
Copper	ND		0.0020	0.00060	mg/L		12/10/16 09:49	12/13/16 15:49	1
Iron	**0.048**		0.040	0.0058	mg/L		12/10/16 09:49	12/13/16 15:49	1
Lead	ND		0.00040	0.000034	mg/L		12/10/16 09:49	12/13/16 15:49	1
Manganese	**0.0012**	**J**	0.0020	0.00035	mg/L		12/10/16 09:49	12/13/16 15:49	1
Nickel	ND		0.0030	0.00040	mg/L		12/10/16 09:49	12/13/16 15:49	1
Selenium	**0.00033**	**J B**	0.0010	0.00030	mg/L		12/10/16 09:49	12/13/16 15:49	1
Silver	ND		0.00040	0.000030	mg/L		12/10/16 09:49	12/13/16 15:49	1
Thallium	ND		0.0010	0.00014	mg/L		12/10/16 09:49	12/13/16 15:49	1
Vanadium	**0.0063**		0.0040	0.00098	mg/L		12/10/16 09:49	12/13/16 15:49	1
Zinc	ND		0.0070	0.0019	mg/L		12/10/16 09:49	12/13/16 15:49	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 21:30	1
Antimony	**0.00010**	**J**	0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 21:30	1
Barium	**0.047**	**B**	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 21:30	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 21:30	1
Cadmium	ND		0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 21:30	1
Chromium	**0.00019**	**J**	0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 21:30	1
Copper	ND		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 21:30	1
Iron	**0.019**	**J B**	0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 21:30	1
Lead	ND		0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 21:30	1
Manganese	**0.0012**	**J**	0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 21:30	1
Nickel	ND		0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 21:30	1
Selenium	**0.00072**	**J B**	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 21:30	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 21:30	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 21:30	1
Vanadium	**0.0061**		0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 21:30	1
Zinc	ND		0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 21:30	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 18:01	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:52	1

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Client Sample ID: SW-1:113016
Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:13	1
Ammonia (as N)	**0.17**		0.10	0.060	mg/L		12/15/16 12:39	12/16/16 10:34	1
Chemical Oxygen Demand	**11**	**J**	20	4.0	mg/L			12/12/16 16:38	1
Total Organic Carbon	**3.5**		1.0	0.50	mg/L			12/08/16 07:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**>2419.6**				MPN/100mL			12/01/16 10:45	1
Escherichia coli	**2.0**				MPN/100mL			12/01/16 10:45	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-9939/5
Matrix: Water
Analysis Batch: 9939

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.14	ug/L			12/08/16 01:41	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			12/08/16 01:41	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/16 01:41	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			12/08/16 01:41	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.20	ug/L			12/08/16 01:41	1
1,1-Dichloroethane	ND		1.0	0.10	ug/L			12/08/16 01:41	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			12/08/16 01:41	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/16 01:41	1
1,2,3-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/16 01:41	1
1,2,3-Trichloropropane	ND		1.0	0.50	ug/L			12/08/16 01:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/16 01:41	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/16 01:41	1
1,2-Dibromo-3-Chloropropane	ND		10	3.3	ug/L			12/08/16 01:41	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			12/08/16 01:41	1
1,2-Dichlorobenzene	ND		1.0	0.30	ug/L			12/08/16 01:41	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/08/16 01:41	1
1,2-Dichloropropane	ND		1.0	0.098	ug/L			12/08/16 01:41	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/16 01:41	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/16 01:41	1
1,3-Dichloropropane	ND		1.0	0.057	ug/L			12/08/16 01:41	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/16 01:41	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/16 01:41	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/16 01:41	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/16 01:41	1
2-Hexanone	ND		10	0.75	ug/L			12/08/16 01:41	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/16 01:41	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/16 01:41	1
Acetone	ND		25	4.1	ug/L			12/08/16 01:41	1
Benzene	ND		0.20	0.093	ug/L			12/08/16 01:41	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/16 01:41	1
Bromochloromethane	ND		1.0	0.44	ug/L			12/08/16 01:41	1
Bromodichloromethane	ND		1.0	0.43	ug/L			12/08/16 01:41	1
Bromoform	1.08	J	2.0	0.80	ug/L			12/08/16 01:41	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/16 01:41	1
Carbon disulfide	ND		1.0	0.052	ug/L			12/08/16 01:41	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/16 01:41	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/16 01:41	1
Chloroethane	ND		2.0	1.1	ug/L			12/08/16 01:41	1
Chloroform	ND		1.0	0.41	ug/L			12/08/16 01:41	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/16 01:41	1
cis-1,2-Dichloroethene	ND		1.0	0.075	ug/L			12/08/16 01:41	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/16 01:41	1
Dibromochloromethane	0.848	J	1.0	0.35	ug/L			12/08/16 01:41	1
Dibromomethane	ND		1.0	0.50	ug/L			12/08/16 01:41	1
Dichlorodifluoromethane	ND		2.0	0.90	ug/L			12/08/16 01:41	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/16 01:41	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/16 01:41	1
Hexachlorobutadiene	ND		2.0	0.62	ug/L			12/08/16 01:41	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-9939/5
Matrix: Water
Analysis Batch: 9939

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/08/16 01:41	1
Isopropylbenzene	ND		1.0	0.063	ug/L			12/08/16 01:41	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/16 01:41	1
Methyl tert-butyl ether	ND		1.0	0.27	ug/L			12/08/16 01:41	1
Methylene Chloride	ND		5.0	3.4	ug/L			12/08/16 01:41	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/16 01:41	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/16 01:41	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/16 01:41	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/16 01:41	1
p-Isopropyltoluene	ND		1.0	0.070	ug/L			12/08/16 01:41	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/16 01:41	1
Styrene	ND		1.0	0.10	ug/L			12/08/16 01:41	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/16 01:41	1
Tetrachloroethene	ND		1.0	0.45	ug/L			12/08/16 01:41	1
Toluene	ND		1.0	0.31	ug/L			12/08/16 01:41	1
trans-1,2-Dichloroethene	ND		1.0	0.46	ug/L			12/08/16 01:41	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/16 01:41	1
Trichloroethene	ND		1.0	0.44	ug/L			12/08/16 01:41	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/16 01:41	1
Vinyl chloride	ND		0.20	0.13	ug/L			12/08/16 01:41	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/16 01:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*12/08/16 01:41*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/08/16 01:41*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*12/08/16 01:41*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/08/16 01:41*	*1*

Lab Sample ID: LCS 590-9939/1003
Matrix: Water
Analysis Batch: 9939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.7		ug/L		107	75 - 124
1,1,1-Trichloroethane	10.0	12.0		ug/L		120	71 - 130
1,1,2,2-Tetrachloroethane	10.0	7.77		ug/L		78	66 - 122
1,1,2-Trichloroethane	10.0	9.21		ug/L		92	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	12.0		ug/L		120	70 - 127
1,1-Dichloroethane	10.0	10.1		ug/L		101	79 - 121
1,1-Dichloroethene	10.0	10.7		ug/L		107	69 - 127
1,1-Dichloropropene	10.0	11.0		ug/L		110	76 - 125
1,2,3-Trichlorobenzene	10.0	9.10		ug/L		91	60 - 125
1,2,3-Trichloropropane	10.0	8.52		ug/L		85	60 - 124
1,2,4-Trichlorobenzene	10.0	9.78		ug/L		98	66 - 124
1,2,4-Trimethylbenzene	10.0	9.96		ug/L		100	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.16	J	ug/L		82	36 - 140
1,2-Dichlorobenzene	10.0	10.3		ug/L		103	78 - 120
1,2-Dichloroethane	10.0	11.0		ug/L		110	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9939/1003
Matrix: Water
Analysis Batch: 9939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.2		ug/L		102	76 - 121
1,3,5-Trimethylbenzene	10.0	10.4		ug/L		104	75 - 122
1,3-Dichlorobenzene	10.0	10.1		ug/L		101	77 - 120
1,3-Dichloropropane	10.0	9.76		ug/L		98	75 - 120
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	77 - 121
2,2-Dichloropropane	10.0	11.5		ug/L		115	49 - 147
2-Butanone (MEK)	50.0	43.9		ug/L		88	40 - 150
2-Chlorotoluene	10.0	10.1		ug/L		101	75 - 121
2-Hexanone	50.0	39.5		ug/L		79	46 - 146
4-Chlorotoluene	10.0	10.5		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	42.1		ug/L		84	60 - 127
Acetone	50.0	42.8		ug/L		86	20 - 150
Benzene	10.0	9.69		ug/L		97	80 - 120
Bromobenzene	10.0	10.3		ug/L		103	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	11.3		ug/L		113	67 - 125
Bromoform	10.0	10.3		ug/L		103	60 - 122
Bromomethane	10.0	10.9		ug/L		109	45 - 150
Carbon disulfide	10.0	9.98		ug/L		100	67 - 129
Carbon tetrachloride	10.0	12.6		ug/L		126	68 - 134
Chlorobenzene	10.0	10.7		ug/L		107	79 - 125
Chloroethane	10.0	10.1		ug/L		101	48 - 150
Chloroform	10.0	10.9		ug/L		109	73 - 126
Chloromethane	10.0	10.2		ug/L		102	51 - 150
cis-1,2-Dichloroethene	10.0	9.70		ug/L		97	76 - 121
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	72 - 120
Dibromochloromethane	10.0	11.5		ug/L		115	72 - 120
Dibromomethane	10.0	9.96		ug/L		100	71 - 120
Dichlorodifluoromethane	10.0	10.0		ug/L		100	32 - 150
Dichlorofluoromethane	10.0	11.9		ug/L		119	60 - 140
Ethylbenzene	10.0	9.85		ug/L		99	80 - 120
Hexachlorobutadiene	10.0	10.6		ug/L		106	62 - 132
Hexane	10.0	10.2		ug/L		102	68 - 125
Isopropylbenzene	10.0	10.3		ug/L		103	77 - 123
m,p-Xylene	10.0	10.4		ug/L		104	80 - 120
Methyl tert-butyl ether	10.0	9.86		ug/L		99	71 - 128
Methylene Chloride	10.0	10.5		ug/L		105	20 - 150
Naphthalene	10.0	7.99		ug/L		80	63 - 124
n-Butylbenzene	10.0	9.64		ug/L		96	71 - 120
N-Propylbenzene	10.0	9.96		ug/L		100	76 - 120
o-Xylene	10.0	10.3		ug/L		103	80 - 120
p-Isopropyltoluene	10.0	10.3		ug/L		103	77 - 120
sec-Butylbenzene	10.0	10.2		ug/L		102	74 - 121
Styrene	10.0	10.0		ug/L		100	73 - 120
tert-Butylbenzene	10.0	10.1		ug/L		101	79 - 120
Tetrachloroethene	10.0	11.6		ug/L		116	71 - 132
Toluene	10.0	10.1		ug/L		101	80 - 123
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-9939/1003
Matrix: Water
Analysis Batch: 9939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
trans-1,3-Dichloropropene			10.0	9.38		ug/L		94	70 - 121		
Trichloroethene			10.0	11.1		ug/L		111	75 - 129		
Trichlorofluoromethane			10.0	11.3		ug/L		113	60 - 140		
Vinyl chloride			10.0	9.54		ug/L		95	42 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 125*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-9832/20
Matrix: Water
Analysis Batch: 9832

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	18	ug/L			12/01/16 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*12/01/16 12:18*	*1*

Lab Sample ID: LCS 590-9832/1005
Matrix: Water
Analysis Batch: 9832

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	1060		ug/L		106	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*

Lab Sample ID: 590-5101-1 DU
Matrix: Water
Analysis Batch: 9832

Client Sample ID: SW-1:113016
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	ND			ND		ug/L				NC	35

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Chlorophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
2-Nitrophenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
3-Nitroaniline	ND		0.40	0.12	ug/L		12/05/16 16:00	12/07/16 18:08	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chloroaniline	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitroaniline	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
4-Nitrophenol	ND		3.0	1.0	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthene	ND		0.10	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Acenaphthylene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Anthracene	0.0104	J	0.040	0.010	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzoic acid	ND		3.0	0.60	ug/L		12/05/16 16:00	12/07/16 18:08	1
Benzyl alcohol	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		12/05/16 16:00	12/07/16 18:08	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		12/05/16 16:00	12/07/16 18:08	1
Carbazole	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Chrysene	ND		0.040	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Dibenzofuran	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Diethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-233897/1-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		12/05/16 16:00	12/07/16 18:08	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluoranthene	ND		0.050	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1
Fluorene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Hexachloroethane	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Isophorone	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Naphthalene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Nitrobenzene	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pentachlorophenol	ND		0.70	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenanthrene	ND		0.080	0.020	ug/L		12/05/16 16:00	12/07/16 18:08	1
Phenol	ND		0.60	0.10	ug/L		12/05/16 16:00	12/07/16 18:08	1
Pyrene	ND		0.060	0.013	ug/L		12/05/16 16:00	12/07/16 18:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*78*		*57 - 132*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
2-Fluorophenol	*74*		*50 - 113*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Phenol-d5	*85*		*52 - 120*	*12/05/16 16:00*	*12/07/16 18:08*	*1*
Terphenyl-d14	*93*		*72 - 140*	*12/05/16 16:00*	*12/07/16 18:08*	*1*

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	40 - 115
1,2-Dichlorobenzene	2.00	1.55		ug/L		77	44 - 119
1,3-Dichlorobenzene	2.00	1.49		ug/L		74	34 - 116
1,4-Dichlorobenzene	2.00	1.41		ug/L		70	40 - 118
1-Methylnaphthalene	2.00	1.90		ug/L		95	54 - 119
2,4,5-Trichlorophenol	2.00	2.28		ug/L		114	56 - 122
2,4,6-Trichlorophenol	2.00	2.36		ug/L		118	55 - 134
2,4-Dichlorophenol	2.00	2.17		ug/L		108	50 - 125
2,4-Dimethylphenol	2.00	1.96	J	ug/L		98	20 - 106
2,4-Dinitrophenol	4.00	3.65	J	ug/L		91	24 - 139
2,4-Dinitrotoluene	2.00	2.60		ug/L		130	40 - 143
2,6-Dinitrotoluene	2.00	2.37		ug/L		118	45 - 134
2-Chloronaphthalene	2.00	2.05		ug/L		102	55 - 125
2-Chlorophenol	2.00	1.88		ug/L		94	57 - 125
2-Methylnaphthalene	2.00	1.84		ug/L		92	56 - 117

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	2.00	1.99		ug/L		99	53 - 118
2-Nitroaniline	2.00	2.40		ug/L		120	58 - 124
2-Nitrophenol	2.00	1.88		ug/L		94	20 - 150
3 & 4 Methylphenol	2.00	1.94		ug/L		97	54 - 112
3,3'-Dichlorobenzidine	4.00	3.35		ug/L		84	20 - 121
3-Nitroaniline	2.00	2.20		ug/L		110	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.55	J	ug/L		89	20 - 150
4-Bromophenyl phenyl ether	2.00	2.06		ug/L		103	62 - 132
4-Chloro-3-methylphenol	2.00	2.43		ug/L		121	56 - 133
4-Chloroaniline	2.00	1.49		ug/L		74	20 - 110
4-Chlorophenyl phenyl ether	2.00	2.11		ug/L		105	59 - 125
4-Nitroaniline	2.00	2.30		ug/L		115	40 - 118
4-Nitrophenol	4.00	4.79		ug/L		120	20 - 150
Acenaphthene	2.00	2.19		ug/L		109	55 - 113
Acenaphthylene	2.00	2.16		ug/L		108	24 - 135
Anthracene	2.00	1.79		ug/L		90	20 - 125
Benzo[a]anthracene	2.00	1.98		ug/L		99	49 - 115
Benzo[a]pyrene	2.00	1.70		ug/L		85	20 - 115
Benzo[b]fluoranthene	2.00	2.25		ug/L		112	63 - 129
Benzo[g,h,i]perylene	2.00	2.08		ug/L		104	58 - 127
Benzo[k]fluoranthene	2.00	1.97		ug/L		98	60 - 134
Benzoic acid	4.00	2.96	J	ug/L		74	20 - 150
Benzyl alcohol	2.00	1.63		ug/L		81	52 - 124
bis (2-chloroisopropyl) ether	2.00	1.81		ug/L		90	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.90		ug/L		95	59 - 125
Bis(2-chloroethyl)ether	2.00	1.85		ug/L		93	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.19	J	ug/L		110	22 - 150
Butyl benzyl phthalate	2.00	2.43		ug/L		121	46 - 150
Carbazole	2.00	2.43		ug/L		122	68 - 142
Chrysene	2.00	2.04		ug/L		102	57 - 131
Dibenz(a,h)anthracene	2.00	2.16		ug/L		108	56 - 124
Dibenzofuran	2.00	2.25		ug/L		113	60 - 125
Diethyl phthalate	2.00	2.56		ug/L		128	60 - 134
Dimethyl phthalate	2.00	2.42		ug/L		121	65 - 134
Di-n-butyl phthalate	2.00	2.39		ug/L		120	67 - 140
Di-n-octyl phthalate	2.00	2.27		ug/L		113	55 - 150
Fluoranthene	2.00	2.16		ug/L		108	70 - 135
Fluorene	2.00	2.29		ug/L		115	57 - 125
Hexachlorobenzene	2.00	2.09		ug/L		104	55 - 135
Hexachlorobutadiene	2.00	1.01		ug/L		50	25 - 125
Hexachlorocyclopentadiene	2.00	0.640	J	ug/L		32	20 - 110
Hexachloroethane	2.00	1.11		ug/L		55	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.41		ug/L		121	54 - 124
Isophorone	2.00	2.00		ug/L		100	64 - 125
Naphthalene	2.00	1.91		ug/L		96	56 - 119
Nitrobenzene	2.00	1.98		ug/L		99	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.88		ug/L		94	54 - 120
N-Nitrosodiphenylamine	2.00	1.75		ug/L		87	40 - 124

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-233897/2-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	4.00	3.86		ug/L		96	30 - 122
Phenanthrene	2.00	2.06		ug/L		103	57 - 125
Phenol	2.00	1.97		ug/L		99	53 - 113
Pyrene	2.00	2.12		ug/L		106	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*102*		*57 - 132*
2-Fluorobiphenyl	*85*		*50 - 120*
2-Fluorophenol	*83*		*50 - 113*
Nitrobenzene-d5	*88*		*59 - 120*
Phenol-d5	*83*		*52 - 120*
Terphenyl-d14	*96*		*72 - 140*

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.56		ug/L		78	40 - 115	8	20
1,2-Dichlorobenzene	2.00	1.72		ug/L		86	44 - 119	11	20
1,3-Dichlorobenzene	2.00	1.66		ug/L		83	34 - 116	11	29
1,4-Dichlorobenzene	2.00	1.55		ug/L		77	40 - 118	9	20
1-Methylnaphthalene	2.00	2.06		ug/L		103	54 - 119	8	20
2,4,5-Trichlorophenol	2.00	2.32		ug/L		116	56 - 122	2	20
2,4,6-Trichlorophenol	2.00	2.21		ug/L		111	55 - 134	7	20
2,4-Dichlorophenol	2.00	2.11		ug/L		106	50 - 125	3	26
2,4-Dimethylphenol	2.00	1.81	J	ug/L		90	20 - 106	8	35
2,4-Dinitrophenol	4.00	3.79	J	ug/L		95	24 - 139	4	35
2,4-Dinitrotoluene	2.00	2.65		ug/L		133	40 - 143	2	29
2,6-Dinitrotoluene	2.00	2.35		ug/L		118	45 - 134	1	31
2-Chloronaphthalene	2.00	2.08		ug/L		104	55 - 125	2	20
2-Chlorophenol	2.00	2.11		ug/L		105	57 - 125	11	20
2-Methylnaphthalene	2.00	2.02		ug/L		101	56 - 117	9	20
2-Methylphenol	2.00	2.13		ug/L		106	53 - 118	7	33
2-Nitroaniline	2.00	2.47		ug/L		124	58 - 124	3	20
2-Nitrophenol	2.00	1.91		ug/L		95	20 - 150	2	35
3 & 4 Methylphenol	2.00	2.10		ug/L		105	54 - 112	8	20
3,3'-Dichlorobenzidine	4.00	2.88		ug/L		72	20 - 121	15	35
3-Nitroaniline	2.00	2.22		ug/L		111	22 - 124	1	35
4,6-Dinitro-2-methylphenol	4.00	3.85	J	ug/L		96	20 - 150	8	30
4-Bromophenyl phenyl ether	2.00	2.01		ug/L		101	62 - 132	2	20
4-Chloro-3-methylphenol	2.00	2.42		ug/L		121	56 - 133	0	20
4-Chloroaniline	2.00	1.35		ug/L		68	20 - 110	9	35
4-Chlorophenyl phenyl ether	2.00	2.16		ug/L		108	59 - 125	3	20
4-Nitroaniline	2.00	2.19		ug/L		110	40 - 118	5	20
4-Nitrophenol	4.00	5.45		ug/L		136	20 - 150	13	29
Acenaphthene	2.00	2.20		ug/L		110	55 - 113	1	20
Acenaphthylene	2.00	2.13		ug/L		106	24 - 135	2	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-233897/3-A
Matrix: Water
Analysis Batch: 234074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Anthracene			2.00	1.74		ug/L		87	20 - 125	3	26
Benzo[a]anthracene			2.00	1.95		ug/L		98	49 - 115	1	20
Benzo[a]pyrene			2.00	1.65		ug/L		83	20 - 115	3	35
Benzo[b]fluoranthene			2.00	2.35		ug/L		117	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	2.21		ug/L		110	58 - 127	6	20
Benzo[k]fluoranthene			2.00	2.09		ug/L		104	60 - 134	6	20
Benzoic acid			4.00	3.19		ug/L		80	20 - 150	8	35
Benzyl alcohol			2.00	1.86		ug/L		93	52 - 124	14	20
bis (2-chloroisopropyl) ether			2.00	1.93		ug/L		97	44 - 123	7	20
Bis(2-chloroethoxy)methane			2.00	2.09		ug/L		104	59 - 125	9	20
Bis(2-chloroethyl)ether			2.00	2.14		ug/L		107	55 - 125	14	20
Bis(2-ethylhexyl) phthalate			2.00	2.13	J	ug/L		107	22 - 150	3	20
Butyl benzyl phthalate			2.00	2.43		ug/L		121	46 - 150	0	20
Carbazole			2.00	2.49		ug/L		124	68 - 142	2	20
Chrysene			2.00	2.01		ug/L		100	57 - 131	2	20
Dibenz(a,h)anthracene			2.00	2.26		ug/L		113	56 - 124	5	20
Dibenzofuran			2.00	2.31		ug/L		115	60 - 125	2	20
Diethyl phthalate			2.00	2.46		ug/L		123	60 - 134	4	20
Dimethyl phthalate			2.00	2.44		ug/L		122	65 - 134	1	20
Di-n-butyl phthalate			2.00	2.38		ug/L		119	67 - 140	1	20
Di-n-octyl phthalate			2.00	2.40		ug/L		120	55 - 150	6	20
Fluoranthene			2.00	2.18		ug/L		109	70 - 135	1	20
Fluorene			2.00	2.39		ug/L		120	57 - 125	4	20
Hexachlorobenzene			2.00	2.09		ug/L		104	55 - 135	0	20
Hexachlorobutadiene			2.00	1.15		ug/L		58	25 - 125	13	31
Hexachlorocyclopentadiene			2.00	0.668	J	ug/L		33	20 - 110	4	35
Hexachloroethane			2.00	1.21		ug/L		60	24 - 125	9	35
Indeno[1,2,3-cd]pyrene			2.00	2.29		ug/L		114	54 - 124	5	20
Isophorone			2.00	2.17		ug/L		109	64 - 125	8	20
Naphthalene			2.00	2.04		ug/L		102	56 - 119	7	20
Nitrobenzene			2.00	2.16		ug/L		108	62 - 125	9	20
N-Nitrosodi-n-propylamine			2.00	2.13		ug/L		106	54 - 120	12	20
N-Nitrosodiphenylamine			2.00	1.83		ug/L		92	40 - 124	5	20
Pentachlorophenol			4.00	3.85		ug/L		96	30 - 122	0	35
Phenanthrene			2.00	2.10		ug/L		105	57 - 125	2	20
Phenol			2.00	2.01		ug/L		101	53 - 113	2	20
Pyrene			2.00	2.18		ug/L		109	64 - 128	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*57 - 132*
2-Fluorobiphenyl	*88*		*50 - 120*
2-Fluorophenol	*90*		*50 - 113*
Nitrobenzene-d5	*96*		*59 - 120*
Phenol-d5	*91*		*52 - 120*
Terphenyl-d14	*98*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-9920/2-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9920

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/07/16 10:14	12/07/16 12:07	1

Lab Sample ID: LCS 590-9920/3-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.130		ug/L		104	60 - 140

Lab Sample ID: LCSD 590-9920/4-A
Matrix: Water
Analysis Batch: 9921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9920

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.129		ug/L		103	60 - 140	1	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-233792/1-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233792

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		12/03/16 15:20	12/06/16 23:33	1
4,4'-DDE	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
4,4'-DDT	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
Aldrin	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/06/16 23:33	1
alpha-BHC	ND		0.030	0.0070	ug/L		12/03/16 15:20	12/06/16 23:33	1
alpha-Chlordane	0.00970	J	0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
beta-BHC	ND		0.050	0.012	ug/L		12/03/16 15:20	12/06/16 23:33	1
delta-BHC	ND		0.050	0.010	ug/L		12/03/16 15:20	12/06/16 23:33	1
Dieldrin	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan I	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan II	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin aldehyde	ND		0.20	0.034	ug/L		12/03/16 15:20	12/06/16 23:33	1
Endrin ketone	ND		0.020	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		12/03/16 15:20	12/06/16 23:33	1
gamma-Chlordane	0.00508	J	0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Heptachlor	ND		0.020	0.0040	ug/L		12/03/16 15:20	12/06/16 23:33	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		12/03/16 15:20	12/06/16 23:33	1
Methoxychlor	ND		0.10	0.0020	ug/L		12/03/16 15:20	12/06/16 23:33	1
Toxaphene	ND		1.0	0.22	ug/L		12/03/16 15:20	12/06/16 23:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*12/03/16 15:20*	*12/06/16 23:33*	*1*
Tetrachloro-m-xylene	*66*		*40 - 113*	*12/03/16 15:20*	*12/06/16 23:33*	*1*

Lab Sample ID: LCS 580-233792/2-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233792

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD			0.200	0.160		ug/L		80	32 - 133		
4,4'-DDE			0.200	0.147		ug/L		74	30 - 138		
4,4'-DDT			0.200	0.189		ug/L		95	34 - 131		
Aldrin			0.200	0.131		ug/L		66	35 - 124		
alpha-BHC			0.200	0.148		ug/L		74	39 - 126		
alpha-Chlordane			0.200	0.160		ug/L		80	37 - 133		
beta-BHC			0.200	0.150		ug/L		75	38 - 114		
delta-BHC			0.200	0.156		ug/L		78	20 - 138		
Dieldrin			0.200	0.148		ug/L		74	39 - 140		
Endosulfan I			0.200	0.144		ug/L		72	23 - 142		
Endosulfan II			0.200	0.150		ug/L		75	20 - 150		
Endosulfan sulfate			0.200	0.148		ug/L		74	36 - 130		
Endrin			0.200	0.168		ug/L		84	32 - 130		
Endrin aldehyde			0.200	0.166	J	ug/L		83	37 - 139		
Endrin ketone			0.200	0.159		ug/L		80	32 - 136		
gamma-BHC (Lindane)			0.200	0.145		ug/L		72	40 - 121		
gamma-Chlordane			0.200	0.159		ug/L		79	38 - 136		
Heptachlor			0.200	0.153		ug/L		76	39 - 129		
Heptachlor epoxide			0.200	0.147		ug/L		74	34 - 135		
Methoxychlor			0.200	0.189		ug/L		94	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*81*		*22 - 150*
Tetrachloro-m-xylene	*67*		*40 - 113*

Lab Sample ID: LCSD 580-233792/3-A
Matrix: Water
Analysis Batch: 234067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 233792

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.171		ug/L		86	32 - 133	7	35
4,4'-DDE			0.200	0.162		ug/L		81	30 - 138	9	35
4,4'-DDT			0.200	0.203		ug/L		101	34 - 131	7	35
Aldrin			0.200	0.144		ug/L		72	35 - 124	9	35
alpha-BHC			0.200	0.163		ug/L		82	39 - 126	10	35
alpha-Chlordane			0.200	0.160		ug/L		80	37 - 133	0	35
beta-BHC			0.200	0.164		ug/L		82	38 - 114	9	35
delta-BHC			0.200	0.171		ug/L		85	20 - 138	9	35
Dieldrin			0.200	0.162		ug/L		81	39 - 140	9	35
Endosulfan I			0.200	0.160		ug/L		80	23 - 142	11	35
Endosulfan II			0.200	0.164		ug/L		82	20 - 150	9	35
Endosulfan sulfate			0.200	0.162		ug/L		81	36 - 130	9	35
Endrin			0.200	0.180		ug/L		90	32 - 130	7	35
Endrin aldehyde			0.200	0.187	J	ug/L		93	37 - 139	12	35
Endrin ketone			0.200	0.176		ug/L		88	32 - 136	10	35
gamma-BHC (Lindane)			0.200	0.158		ug/L		79	40 - 121	9	35
gamma-Chlordane			0.200	0.160		ug/L		80	38 - 136	1	35
Heptachlor			0.200	0.164		ug/L		82	39 - 129	7	35
Heptachlor epoxide			0.200	0.161		ug/L		81	34 - 135	9	35
Methoxychlor			0.200	0.203		ug/L		101	33 - 139	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	88		22 - 150
Tetrachloro-m-xylene	71		40 - 113

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-9949/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9953 — **Prep Batch: 9949**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1221	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1232	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1242	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1248	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1254	ND		0.10	0.062	ug/L		12/08/16 10:51	12/08/16 13:10	1
PCB-1260	ND		0.10	0.043	ug/L		12/08/16 10:51	12/08/16 13:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		20 - 120	12/08/16 10:51	12/08/16 13:10	1
DCB Decachlorobiphenyl (Surr)	87		36 - 138	12/08/16 10:51	12/08/16 13:10	1

Lab Sample ID: LCS 590-9949/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9953 — **Prep Batch: 9949**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.12		ug/L		70	23 - 140		
PCB-1260			1.60	1.09		ug/L		68	22 - 139		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	52		20 - 120
DCB Decachlorobiphenyl (Surr)	77		36 - 138

Lab Sample ID: LCSD 590-9949/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 9953 — **Prep Batch: 9949**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.09		ug/L		68	23 - 140	2	35
PCB-1260			1.60	1.07		ug/L		67	22 - 139	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	48		20 - 120
DCB Decachlorobiphenyl (Surr)	78		36 - 138

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-354183/1-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		12/05/16 09:51	12/12/16 17:45	1
Azinphos-methyl	ND		2.5	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Bolstar	ND		1.0	0.31	ug/L		12/05/16 09:51	12/12/16 17:45	1
Chlorpyrifos	ND		1.5	0.36	ug/L		12/05/16 09:51	12/12/16 17:45	1
Coumaphos	ND		1.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Demeton, Total	ND		3.0	0.21	ug/L		12/05/16 09:51	12/12/16 17:45	1
Diazinon	ND		0.50	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Dichlorvos	ND		0.50	0.16	ug/L		12/05/16 09:51	12/12/16 17:45	1
Dimethoate	ND		1.5	0.45	ug/L		12/05/16 09:51	12/12/16 17:45	1
Disulfoton	ND		1.0	0.32	ug/L		12/05/16 09:51	12/12/16 17:45	1
EPN	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Famphur	ND		1.0	0.18	ug/L		12/05/16 09:51	12/12/16 17:45	1
Fensulfothion	ND		2.5	0.54	ug/L		12/05/16 09:51	12/12/16 17:45	1
Fenthion	ND		2.5	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Malathion	ND		2.0	0.13	ug/L		12/05/16 09:51	12/12/16 17:45	1
Merphos	ND		5.0	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Methyl parathion	ND		4.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Mevinphos	ND		6.2	0.46	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ethyl Parathion	ND		1.0	0.14	ug/L		12/05/16 09:51	12/12/16 17:45	1
Phorate	ND		1.2	0.15	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ronnel	ND		10	0.12	ug/L		12/05/16 09:51	12/12/16 17:45	1
Simazine	ND		10	0.22	ug/L		12/05/16 09:51	12/12/16 17:45	1
Sulfotepp	ND		1.5	0.17	ug/L		12/05/16 09:51	12/12/16 17:45	1
Thionazin	ND		1.0	0.31	ug/L		12/05/16 09:51	12/12/16 17:45	1
Tokuthion	ND		1.6	0.12	ug/L		12/05/16 09:51	12/12/16 17:45	1
Trichloronate	ND		1.5	0.24	ug/L		12/05/16 09:51	12/12/16 17:45	1
Ethoprop	ND		1.5	0.18	ug/L		12/05/16 09:51	12/12/16 17:45	1
Propazine	ND		10	0.29	ug/L		12/05/16 09:51	12/12/16 17:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*71*		*49 - 171*	*12/05/16 09:51*	*12/12/16 17:45*	*1*
Triphenylphosphate	*86*		*60 - 154*	*12/05/16 09:51*	*12/12/16 17:45*	*1*

Lab Sample ID: LCS 280-354183/2-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.72	J	ug/L		68	52 - 115
Azinphos-methyl	4.00	4.58		ug/L		114	59 - 115
Chlorpyrifos	4.00	4.25		ug/L		106	54 - 115
Coumaphos	4.00	4.75	*	ug/L		119	63 - 118
Demeton, Total	4.00	3.34		ug/L		84	44 - 115
Diazinon	4.00	3.25		ug/L		81	47 - 115
Dichlorvos	4.00	5.42	*	ug/L		135	53 - 128
Dimethoate	4.00	2.59		ug/L		65	42 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-354183/2-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Disulfoton	4.00	3.17		ug/L		79	45 - 115
EPN	4.00	4.12		ug/L		103	56 - 115
Famphur	4.00	3.85		ug/L		96	62 - 115
Fensulfothion	4.00	4.38		ug/L		110	50 - 115
Fenthion	4.00	4.02		ug/L		101	55 - 115
Malathion	4.00	3.46		ug/L		86	52 - 115
Merphos	4.00	2.91	J	ug/L		73	31 - 115
Methyl parathion	4.00	4.44		ug/L		111	58 - 115
Mevinphos	4.00	3.23	J	ug/L		81	42 - 115
Ethyl Parathion	4.00	4.17		ug/L		104	55 - 115
Phorate	4.00	2.89		ug/L		72	40 - 115
Ronnel	4.00	4.09	J	ug/L		102	55 - 115
Simazine	4.00	3.08	J	ug/L		77	39 - 115
Sulfotepp	4.00	3.57		ug/L		89	53 - 115
Thionazin	4.00	3.48		ug/L		87	54 - 115
Trichloronate	4.00	3.97		ug/L		99	48 - 115
Ethoprop	4.00	3.60		ug/L		90	50 - 115
BolstarFamphur	8.00	7.93		ug/L		99	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*86*		*49 - 171*
Triphenylphosphate	*92*		*60 - 154*

Lab Sample ID: LCSD 280-354183/3-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	2.35	J	ug/L		59	52 - 115	15	45
Azinphos-methyl	4.00	4.87	*	ug/L		122	59 - 115	6	20
Chlorpyrifos	4.00	4.19		ug/L		105	54 - 115	1	24
Coumaphos	4.00	5.20	*	ug/L		130	63 - 118	9	20
Demeton, Total	4.00	2.77	J	ug/L		69	44 - 115	19	38
Diazinon	4.00	3.49		ug/L		87	47 - 115	7	37
Dichlorvos	4.00	0.997	*	ug/L		25	53 - 128	138	37
Dimethoate	4.00	2.04		ug/L		51	42 - 115	24	38
Disulfoton	4.00	3.29		ug/L		82	45 - 115	4	31
EPN	4.00	4.39		ug/L		110	56 - 115	6	20
Famphur	4.00	4.14		ug/L		104	62 - 115	7	20
Fensulfothion	4.00	3.76		ug/L		94	50 - 115	15	27
Fenthion	4.00	3.92		ug/L		98	55 - 115	3	22
Malathion	4.00	3.43		ug/L		86	52 - 115	1	20
Merphos	4.00	2.95	J	ug/L		74	31 - 115	1	25
Methyl parathion	4.00	4.14		ug/L		103	58 - 115	7	20
Mevinphos	4.00	1.92	J *	ug/L		48	42 - 115	51	27
Ethyl Parathion	4.00	4.12		ug/L		103	55 - 115	1	20
Phorate	4.00	2.58		ug/L		65	40 - 115	11	32

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCSD 280-354183/3-A
Matrix: Water
Analysis Batch: 355174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ronnel	4.00	3.74	J	ug/L		93	55 - 115	9	28
Simazine	4.00	1.89	J	ug/L		47	39 - 115	48	53
Sulfotepp	4.00	3.36		ug/L		84	53 - 115	6	27
Thionazin	4.00	2.86		ug/L		71	54 - 115	20	27
Trichloronate	4.00	3.87		ug/L		97	48 - 115	3	26
Ethoprop	4.00	3.22		ug/L		81	50 - 115	11	29
BolstarFamphur	8.00	8.27		ug/L		103		4	

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*37*	*X*	*49 - 171*
Triphenylphosphate	*99*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-354292/1-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 354292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		12/05/16 15:38	12/09/16 05:24	1
2,4-D	ND		4.0	0.21	ug/L		12/05/16 15:38	12/09/16 05:24	1
2,4-DB	ND		4.0	0.36	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dalapon	ND		2.0	0.91	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dicamba	ND		2.0	0.15	ug/L		12/05/16 15:38	12/09/16 05:24	1
Dichlorprop	ND		4.0	0.65	ug/L		12/05/16 15:38	12/09/16 05:24	1
MCPA	ND		400	17	ug/L		12/05/16 15:38	12/09/16 05:24	1
MCPP	ND		400	33	ug/L		12/05/16 15:38	12/09/16 05:24	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		12/05/16 15:38	12/09/16 05:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*39 - 135*	*12/05/16 15:38*	*12/09/16 05:24*	*1*

Lab Sample ID: LCS 280-354292/2-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354292

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.73		ug/L		75	45 - 135
2,4-D	5.00	3.98	J	ug/L		80	46 - 126
2,4-DB	5.00	3.81	J	ug/L		76	18 - 135
Dalapon	5.00	4.19		ug/L		84	52 - 119
Dicamba	5.00	4.25		ug/L		85	50 - 128
Dichlorprop	5.00	3.86	J	ug/L		77	44 - 121
MCPA	500	382	J	ug/L		76	43 - 118
MCPP	500	409		ug/L		82	45 - 121
Silvex (2,4,5-TP)	5.00	3.92		ug/L		78	48 - 127

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-354292/2-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 354292

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	94		39 - 135

Lab Sample ID: LCSD 280-354292/3-A
Matrix: Water
Analysis Batch: 354926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 354292

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	3.83		ug/L		77	45 - 135	2	30
2,4-D			5.00	4.05		ug/L		81	46 - 126	2	30
2,4-DB			5.00	3.41	J	ug/L		68	18 - 135	11	30
Dalapon			5.00	4.19		ug/L		84	52 - 119	0	30
Dicamba			5.00	4.36		ug/L		87	50 - 128	3	30
Dichlorprop			5.00	3.98	J	ug/L		80	44 - 121	3	30
MCPA			500	386	J	ug/L		77	43 - 118	1	30
MCPP			500	418		ug/L		84	45 - 121	2	30
Silvex (2,4,5-TP)			5.00	3.97		ug/L		79	48 - 127	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	97		39 - 135

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-9893/1-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 9893

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		12/05/16 14:09	12/05/16 19:19	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		12/05/16 14:09	12/05/16 19:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	12/05/16 14:09	12/05/16 19:19	1
n-Triacontane-d62	98		50 - 150	12/05/16 14:09	12/05/16 19:19	1

Lab Sample ID: LCS 590-9893/2-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 9893

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			1.61	1.42		mg/L		88	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.51		mg/L		94	50 - 150		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	96		50 - 150

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-9893/2-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 9893

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Triacontane-d62	*97*		*50 - 150*

Lab Sample ID: LCSD 590-9893/3-A
Matrix: Water
Analysis Batch: 9885

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 9893

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.61	1.51		mg/L		94	50 - 150	6	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.63		mg/L		102	50 - 150	8	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*100*		*50 - 150*
n-Triacontane-d62	*103*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-9823/1016
Matrix: Water
Analysis Batch: 9823

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			12/01/16 13:15	1
Sulfate	ND		0.50	0.13	mg/L			12/01/16 13:15	1

Lab Sample ID: LCS 590-9823/1015
Matrix: Water
Analysis Batch: 9823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			12.5	12.3		mg/L		98	90 - 110
Sulfate			12.5	12.6		mg/L		101	90 - 110

Lab Sample ID: MB 590-9824/1016
Matrix: Water
Analysis Batch: 9824

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/01/16 13:15	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/16 13:15	1

Lab Sample ID: LCS 590-9824/1015
Matrix: Water
Analysis Batch: 9824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N			5.00	4.93		mg/L		99	90 - 110
Nitrite as N			5.00	4.83		mg/L		97	90 - 110

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-141742/1-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141742

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.18	pg/L		12/12/16 14:18	12/14/16 00:08	1
2,3,7,8-TCDF	0.177	J q	10	0.11	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8-PeCDD	ND		50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8-PeCDF	ND		50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
2,3,4,7,8-PeCDF	ND		50	0.16	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,7,8-HxCDD	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,6,7,8-HxCDD	ND		50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8,9-HxCDD	ND		50	0.13	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,7,8-HxCDF	ND		50	0.18	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,6,7,8-HxCDF	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,7,8,9-HxCDF	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
2,3,4,6,7,8-HxCDF	0.280	J	50	0.18	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,6,7,8-HpCDD	0.758	J q	50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,6,7,8-HpCDF	0.560	J	50	0.15	pg/L		12/12/16 14:18	12/14/16 00:08	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.17	pg/L		12/12/16 14:18	12/14/16 00:08	1
OCDD	2.24	J q	100	0.16	pg/L		12/12/16 14:18	12/14/16 00:08	1
OCDF	0.840	J	100	0.26	pg/L		12/12/16 14:18	12/14/16 00:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,7,8-PeCDD	*97*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,7,8-PeCDF	*88*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,6,7,8-HxCDD	*87*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*
13C-OCDD	*92*		*40 - 135*	*12/12/16 14:18*	*12/14/16 00:08*	*1*

Lab Sample ID: LCS 320-141742/2-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	202		pg/L		101	64 - 142
2,3,7,8-TCDF	200	207		pg/L		103	71 - 142
1,2,3,7,8-PeCDD	1000	1100		pg/L		110	71 - 140
1,2,3,7,8-PeCDF	1000	1060		pg/L		106	76 - 135
2,3,4,7,8-PeCDF	1000	1050		pg/L		105	74 - 137
1,2,3,4,7,8-HxCDD	1000	994		pg/L		99	56 - 146
1,2,3,6,7,8-HxCDD	1000	1030		pg/L		103	73 - 144
1,2,3,7,8,9-HxCDD	1000	1020		pg/L		102	71 - 151
1,2,3,4,7,8-HxCDF	1000	1030		pg/L		103	75 - 131
1,2,3,6,7,8-HxCDF	1000	1100		pg/L		110	76 - 133
1,2,3,7,8,9-HxCDF	1000	1080		pg/L		108	77 - 142
2,3,4,6,7,8-HxCDF	1000	1190		pg/L		119	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	1010		pg/L		101	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1020		pg/L		102	79 - 133

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-141742/2-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,7,8,9-HpCDF	1000	976		pg/L		98	83 - 130
OCDD	2000	1900		pg/L		95	80 - 132
OCDF	2000	1890		pg/L		94	72 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*91*		*40 - 135*
13C-2,3,7,8-TCDF	*84*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*101*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*92*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*85*		*40 - 135*
13C-OCDD	*93*		*40 - 135*

Lab Sample ID: LCSD 320-141742/3-A
Matrix: Water
Analysis Batch: 142008

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 141742

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	200	211		pg/L		105	64 - 142	4	20
2,3,7,8-TCDF	200	213		pg/L		107	71 - 142	3	20
1,2,3,7,8-PeCDD	1000	1130		pg/L		113	71 - 140	3	20
1,2,3,7,8-PeCDF	1000	1100		pg/L		110	76 - 135	3	20
2,3,4,7,8-PeCDF	1000	1110		pg/L		111	74 - 137	5	20
1,2,3,4,7,8-HxCDD	1000	1080		pg/L		108	56 - 146	9	20
1,2,3,6,7,8-HxCDD	1000	1100		pg/L		110	73 - 144	7	20
1,2,3,7,8,9-HxCDD	1000	1080		pg/L		108	71 - 151	5	20
1,2,3,4,7,8-HxCDF	1000	1120		pg/L		112	75 - 131	8	20
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133	4	20
1,2,3,7,8,9-HxCDF	1000	1120		pg/L		112	77 - 142	4	20
2,3,4,6,7,8-HxCDF	1000	1240		pg/L		124	80 - 137	5	20
1,2,3,4,6,7,8-HpCDD	1000	1070		pg/L		107	78 - 139	6	20
1,2,3,4,6,7,8-HpCDF	1000	1080		pg/L		108	79 - 133	6	20
1,2,3,4,7,8,9-HpCDF	1000	1020		pg/L		102	83 - 130	4	20
OCDD	2000	2020		pg/L		101	80 - 132	6	20
OCDF	2000	1990		pg/L		100	72 - 140	5	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*87*		*40 - 135*
13C-2,3,7,8-TCDF	*80*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*96*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*89*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*88*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*87*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*
13C-OCDD	*93*		*40 - 135*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-234077/11-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234077

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/07/16 19:34	12/08/16 20:18	1
Antimony	ND		0.00040	0.000080	mg/L		12/07/16 19:34	12/08/16 20:18	1
Barium	0.00109	J	0.0012	0.000054	mg/L		12/07/16 19:34	12/08/16 20:18	1
Beryllium	ND		0.00040	0.00010	mg/L		12/07/16 19:34	12/08/16 20:18	1
Cadmium	ND		0.00040	0.000028	mg/L		12/07/16 19:34	12/08/16 20:18	1
Chromium	ND		0.00040	0.00014	mg/L		12/07/16 19:34	12/08/16 20:18	1
Copper	ND		0.0020	0.00060	mg/L		12/07/16 19:34	12/08/16 20:18	1
Iron	0.0144	J	0.040	0.0058	mg/L		12/07/16 19:34	12/08/16 20:18	1
Lead	ND		0.00040	0.000034	mg/L		12/07/16 19:34	12/08/16 20:18	1
Manganese	ND		0.0020	0.00035	mg/L		12/07/16 19:34	12/08/16 20:18	1
Nickel	ND		0.0030	0.00040	mg/L		12/07/16 19:34	12/08/16 20:18	1
Selenium	0.000452	J	0.0010	0.00030	mg/L		12/07/16 19:34	12/08/16 20:18	1
Silver	ND		0.00040	0.000030	mg/L		12/07/16 19:34	12/08/16 20:18	1
Thallium	ND		0.0010	0.00014	mg/L		12/07/16 19:34	12/08/16 20:18	1
Vanadium	ND		0.0040	0.00098	mg/L		12/07/16 19:34	12/08/16 20:18	1
Zinc	ND		0.0070	0.0019	mg/L		12/07/16 19:34	12/08/16 20:18	1

Lab Sample ID: LCS 580-234077/12-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.102		mg/L		102	85 - 115
Antimony	0.100	0.103		mg/L		103	85 - 115
Barium	0.100	0.104		mg/L		104	85 - 115
Beryllium	0.100	0.101		mg/L		101	85 - 115
Cadmium	0.100	0.105		mg/L		105	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.101		mg/L		101	85 - 115
Iron	10.0	10.2		mg/L		102	85 - 115
Lead	0.100	0.105		mg/L		105	85 - 115
Manganese	0.100	0.103		mg/L		103	85 - 115
Nickel	0.100	0.101		mg/L		101	85 - 115
Selenium	0.100	0.102		mg/L		102	85 - 115
Silver	0.100	0.105		mg/L		105	85 - 115
Thallium	0.100	0.105		mg/L		105	85 - 115
Vanadium	0.100	0.101		mg/L		101	85 - 115
Zinc	0.100	0.104		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-234077/13-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.102		mg/L		102	85 - 115	0	20
Antimony	0.100	0.104		mg/L		104	85 - 115	1	20
Barium	0.100	0.105		mg/L		105	85 - 115	1	20
Beryllium	0.100	0.0999		mg/L		100	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-234077/13-A
Matrix: Water
Analysis Batch: 234155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.100	0.104		mg/L		104	85 - 115	1	20
Chromium	0.100	0.0998		mg/L		100	85 - 115	1	20
Copper	0.100	0.100		mg/L		100	85 - 115	0	20
Iron	10.0	10.1		mg/L		101	85 - 115	2	20
Lead	0.100	0.106		mg/L		106	85 - 115	1	20
Manganese	0.100	0.103		mg/L		103	85 - 115	0	20
Nickel	0.100	0.100		mg/L		100	85 - 115	0	20
Selenium	0.100	0.101		mg/L		101	85 - 115	1	20
Silver	0.100	0.104		mg/L		104	85 - 115	0	20
Thallium	0.100	0.104		mg/L		104	85 - 115	1	20
Vanadium	0.100	0.101		mg/L		101	85 - 115	1	20
Zinc	0.100	0.103		mg/L		103	85 - 115	1	20

Lab Sample ID: MB 580-234239/15-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/10/16 09:49	12/13/16 14:46	1
Antimony	ND		0.00040	0.000080	mg/L		12/10/16 09:49	12/13/16 14:46	1
Barium	ND		0.0012	0.000054	mg/L		12/10/16 09:49	12/13/16 14:46	1
Beryllium	ND		0.00040	0.00010	mg/L		12/10/16 09:49	12/13/16 14:46	1
Cadmium	ND		0.00040	0.000028	mg/L		12/10/16 09:49	12/13/16 14:46	1
Chromium	ND		0.00040	0.00014	mg/L		12/10/16 09:49	12/13/16 14:46	1
Copper	ND		0.0020	0.00060	mg/L		12/10/16 09:49	12/13/16 14:46	1
Iron	ND		0.040	0.0058	mg/L		12/10/16 09:49	12/13/16 14:46	1
Lead	ND		0.00040	0.000034	mg/L		12/10/16 09:49	12/13/16 14:46	1
Manganese	ND		0.0020	0.00035	mg/L		12/10/16 09:49	12/13/16 14:46	1
Nickel	ND		0.0030	0.00040	mg/L		12/10/16 09:49	12/13/16 14:46	1
Selenium	0.000318	J	0.0010	0.00030	mg/L		12/10/16 09:49	12/13/16 14:46	1
Silver	ND		0.00040	0.000030	mg/L		12/10/16 09:49	12/13/16 14:46	1
Thallium	ND		0.0010	0.00014	mg/L		12/10/16 09:49	12/13/16 14:46	1
Vanadium	ND		0.0040	0.00098	mg/L		12/10/16 09:49	12/13/16 14:46	1
Zinc	ND		0.0070	0.0019	mg/L		12/10/16 09:49	12/13/16 14:46	1

Lab Sample ID: LCS 580-234239/16-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0979		mg/L		98	85 - 115
Antimony	0.100	0.0991		mg/L		99	85 - 115
Barium	0.100	0.100		mg/L		100	85 - 115
Beryllium	0.100	0.0968		mg/L		97	85 - 115
Cadmium	0.100	0.0977		mg/L		98	85 - 115
Chromium	0.100	0.0899		mg/L		90	85 - 115
Copper	0.100	0.0974		mg/L		97	85 - 115
Iron	10.0	8.79		mg/L		88	85 - 115
Lead	0.100	0.0968		mg/L		97	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-234239/16-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.100	0.0910		mg/L		91	85 - 115
Nickel	0.100	0.0956		mg/L		96	85 - 115
Selenium	0.100	0.0973		mg/L		97	85 - 115
Silver	0.100	0.0984		mg/L		98	85 - 115
Thallium	0.100	0.0991		mg/L		99	85 - 115
Vanadium	0.100	0.0902		mg/L		90	85 - 115
Zinc	0.100	0.0963		mg/L		96	85 - 115

Lab Sample ID: LCSD 580-234239/17-A
Matrix: Water
Analysis Batch: 234457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234239

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0976		mg/L		98	85 - 115	0	20
Antimony	0.100	0.0981		mg/L		98	85 - 115	1	20
Barium	0.100	0.0985		mg/L		98	85 - 115	2	20
Beryllium	0.100	0.0960		mg/L		96	85 - 115	1	20
Cadmium	0.100	0.0979		mg/L		98	85 - 115	0	20
Chromium	0.100	0.0931		mg/L		93	85 - 115	3	20
Copper	0.100	0.0976		mg/L		98	85 - 115	0	20
Iron	10.0	9.15		mg/L		91	85 - 115	4	20
Lead	0.100	0.0985		mg/L		98	85 - 115	2	20
Manganese	0.100	0.0943		mg/L		94	85 - 115	4	20
Nickel	0.100	0.0963		mg/L		96	85 - 115	1	20
Selenium	0.100	0.0961		mg/L		96	85 - 115	1	20
Silver	0.100	0.0991		mg/L		99	85 - 115	1	20
Thallium	0.100	0.101		mg/L		101	85 - 115	2	20
Vanadium	0.100	0.0928		mg/L		93	85 - 115	3	20
Zinc	0.100	0.0967		mg/L		97	85 - 115	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: LCS 580-234386/19-A
Matrix: Water
Analysis Batch: 234490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00207		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-234386/20-A
Matrix: Water
Analysis Batch: 234490

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234386

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00198		mg/L		99	85 - 115	4	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: MB 580-234409/22-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 12:59	12/13/16 17:07	1

Lab Sample ID: LCS 580-234409/23-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00203		mg/L		101	85 - 115

Lab Sample ID: LCSD 580-234409/24-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234490 — **Prep Batch: 234409**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00201		mg/L		101	85 - 115	1	20

Lab Sample ID: MB 580-233779/15-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234386**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/13/16 11:54	12/13/16 14:25	1

Lab Sample ID: 590-5101-1 MS — **Client Sample ID: SW-1:113016**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234386**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00209		mg/L		104	70 - 130

Lab Sample ID: 590-5101-1 MSD — **Client Sample ID: SW-1:113016**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 234490 — **Prep Batch: 234386**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00206		mg/L		103	70 - 130	1	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-392115/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392251 — **Prep Batch: 392115**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		12/06/16 12:58	12/06/16 22:03	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 490-392115/2-A
Matrix: Water
Analysis Batch: 392251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 392115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.110		mg/L		110	90 - 110

Lab Sample ID: 590-5101-1 MS
Matrix: Water
Analysis Batch: 392251

Client Sample ID: SW-1:113016
Prep Type: Total/NA
Prep Batch: 392115

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	0.124	F1	mg/L		124	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-394645/1-A
Matrix: Water
Analysis Batch: 394988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394645

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		12/15/16 12:39	12/16/16 10:25	1

Lab Sample ID: LCS 490-394645/2-A
Matrix: Water
Analysis Batch: 394988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394645

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.21		mg/L		104	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-393741/3
Matrix: Water
Analysis Batch: 393741

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			12/12/16 16:38	1

Lab Sample ID: LCS 490-393741/4
Matrix: Water
Analysis Batch: 393741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	51.7		mg/L		103	90 - 110

Lab Sample ID: LCSD 490-393741/5
Matrix: Water
Analysis Batch: 393741

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	49.1		mg/L		98	90 - 110	5	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-392868/1
Matrix: Water
Analysis Batch: 392868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			12/08/16 07:38	1

Lab Sample ID: LCS 490-392868/4
Matrix: Water
Analysis Batch: 392868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.2		mg/L		102	90 - 110
TOC Result 1	10.0	10.2		mg/L		102	90 - 110
TOC Result 2	10.0	10.1		mg/L		101	90 - 110

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Client Sample ID: SW-1:113016

Date Collected: 11/30/16 15:30
Date Received: 11/30/16 16:50

Lab Sample ID: 590-5101-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	9939	12/08/16 09:29	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	9832	12/01/16 15:51	MRS	TAL SPK
Total/NA	Prep	3520C			1047.8 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		1			234074	12/08/16 01:02	D1R	TAL SEA
Total/NA	Prep	3520C			1047.8 mL	2 mL	233897	12/05/16 16:00	DSO	TAL SEA
Total/NA	Analysis	8270D		10			234083	12/08/16 14:17	ERB	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	9920	12/07/16 10:14	NMI	TAL SPK
Total/NA	Analysis	8011		1			9921	12/07/16 17:50	NMI	TAL SPK
Total/NA	Prep	3510C			258.7 mL	2.5 mL	233792	12/03/16 15:20	JCV	TAL SEA
Total/NA	Analysis	8081B		1			234067	12/07/16 03:57	JDR	TAL SEA
Total/NA	Prep	3510C			253.6 mL	2 mL	9949	12/08/16 10:51	NMI	TAL SPK
Total/NA	Analysis	8082A		1			9953	12/08/16 16:35	NMI	TAL SPK
Total/NA	Prep	3510C			1034.8 mL	2 mL	354183	12/05/16 09:51	JDW	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	355174	12/13/16 06:20	TEM	TAL DEN
Total/NA	Prep	8151A			1048.7 mL	10 mL	354292	12/05/16 15:38	RPC	TAL DEN
Total/NA	Analysis	8151A		1			354926	12/09/16 09:36	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			236.4 mL	2 mL	9893	12/05/16 14:09	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			9885	12/05/16 20:09	NMI	TAL SPK
Total/NA	Analysis	300.0		1			9823	12/01/16 12:53	MRS	TAL SPK
Total/NA	Analysis	300.0		1			9824	12/01/16 12:53	MRS	TAL SPK
Total/NA	Prep	8290			1048.9 mL	20 uL	141742	12/12/16 14:18	DXD	TAL SAC
Total/NA	Analysis	8290A		1			142008	12/14/16 03:58	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	234077	12/07/16 19:34	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	234155	12/08/16 21:30	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	234239	12/10/16 09:49	R1K	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	234457	12/13/16 15:49	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	233779	12/02/16 19:11	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	234386	12/13/16 11:54	PAB	TAL SEA
Dissolved	Analysis	245.1		1			234490	12/13/16 14:52	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	234409	12/13/16 12:59	PAB	TAL SEA
Total/NA	Analysis	245.1		1			234490	12/13/16 18:01	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	392115	12/06/16 12:58	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	392251	12/06/16 22:13	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	394645	12/15/16 12:39	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	394988	12/16/16 10:34	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	393741	12/12/16 16:38	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	392868	12/08/16 07:38	RN	TAL NSH
Total/NA	Analysis	SM 9223B		1			9837	12/01/16 10:45	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-L	01-29-17

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / JWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	420.4, 5310C	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
SW-1 : 113016	11/30/16	1530	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	7.5 L in 1-L
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-5101 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Sheila Kal	11/30/16 1650	TAS PDX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.6, 4.7, 5.1 C IR003

12/21/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / JWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-1993-727.4
Client Contact: Josh Lee	Phone: 406-239-7816	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Leach II	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
SW-1:113016	11/30/16	1530	G	Water	N		X	X	X	23	7.5 L in 1L
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Sheila Knapp	11/30/16 1650	TAS Spok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.6°C, 4.4°C, 5.1°C IR003

12/21/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2329.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5101-1
Address: 4955 Yarrow Street,	Due Date Requested: 12/12/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SW-1:113016 (590-5101-1)	11/30/16	15:30 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sheila Hardy	12/1/16 1146	TA Spok	Reed Pitts	12-2-16 950	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.9, 1.2, 0.7 IR #5 -0.2 Transfer RP 12-2-16

12/21/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2327.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5101-1
Address: 880 Riverside Parkway,	Due Date Requested: 12/14/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SW-1:113016 (590-5101-1)	11/30/16	15:30 Pacific		Water			X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kraft	12/1/16 1115	TA-SPOK	[signature]	12/2/16 0940	TAL-SPK
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6 7.4 CMB 12/5/16

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 580-42932.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5101-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/14/2016			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SW-1:113016 (590-5101-1)	11/30/16	15:30 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
B. Hall	12.9.16 1536	SEA TA	Hi Zeigami	12/10/16 0930	TAWS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.3

12/21/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-5101 Chain of Custody

Cooler Received/Opened On 12/2/2016 @ 0950

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 2297 (last 4 digits, FedEx) Courier: ____FedEx_____

   IR Gun ID__17960358__ pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 3.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

   If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) SLV

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? 12-2AT YES...NO...NA

   b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) AB

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO...NA

   b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) SLV

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) SLV

I certify that I attached a label with the unique LIMS number to each container (intial) SLV

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-5101

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

12/21/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-2334.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-5101-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/12/2016			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
SW-1:113016 (590-5101-1)	11/30/16	15:30 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 12/11/16 1520	Company TAS	Received by:	Date/Time: 12/12/16 0950	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2326.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5101-1
Address: 5755 8th Street East,	Due Date Requested: 12/12/2016			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
SW-1:113016 (590-5101-1)	11/30/16	15:30 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:		
Relinquished by: Sheila Khatry	Date/Time: 12/1/16 1100	Company TA-Spok	Received by: Tom Blank	Date/Time: 12/2/16 1020	Company TA-Sea		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR3 -0.1/0.2

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5101-1

Login Number: 5101
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5101-1

Login Number: 5101
List Number: 2
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 12/02/16 01:32 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5101-1

Login Number: 5101
List Number: 3
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 12/02/16 06:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5101-1

Login Number: 5101
List Number: 5
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 12/05/16 10:22 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5101-1

Login Number: 5101
List Number: 4
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 12/02/16 05:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1°, -0.1°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	Verified at TA-Spokane
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5101-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5101-1	SW-1:113016	91	82	101	92	98	89	96	94
LCS 320-141742/2-A	Lab Control Sample	91	84	101	92	91	82	86	85
LCSD 320-141742/3-A	Lab Control Sample Dup	87	80	96	89	88	81	87	84
MB 320-141742/1-A	Method Blank	85	81	97	88	87	77	83	81

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5101-1	SW-1:113016	105
LCS 320-141742/2-A	Lab Control Sample	93
LCSD 320-141742/3-A	Lab Control Sample Dup	93
MB 320-141742/1-A	Method Blank	92

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

GeoEngineers

523 East Second Avenue, Spokane, Washington 99202, Telephone: 509.363.3125 www.geoengineers.com

Data Validation Report

Project:	Marshall Landfill Site February 2017 Samples
GEI File No:	00504-104-00
Date:	March 31, 2017

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA 2009) of analytical data from the analyses of water and air samples collected as part of the February 2017 sampling events, and the associated laboratory and field quality control samples. The samples were obtained from the Marshall Landfill site located in Spokane County, Washington.

In summary and in our opinion, the quality and accuracy of the analytical data are acceptable for the intended use, with the qualifications applied from the data validation. The primary data validation qualifiers were: (1) GeoEngineers, Inc. (GeoEngineers) qualified selected data as non-detected (U) because of method blank contamination; and (2) GeoEngineers qualified selected data as estimated (J) because of accuracy, precision, and ion abundance ratio (dioxin/furans only) outliers.

The evaluation criteria and qualifications are discussed in greater detail below; a summary of qualified samples is listed in Table 2.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), Inorganic Superfund Data Review (EPA 2010), and Chlorinated Dioxin/Furan Data Review (EPA 2011) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Remedial Investigation/Feasibility Study Work Plan (GeoEngineers 2015), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation

- Surrogate Recoveries
- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory and Field Duplicates
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-5548-1	MW-8A:022017, MW-8B:022017, MW-16A:022017
590-5551-1	MW-2A:022117, MW-3:022117, MW-4A:022117, MW-11A:022117, MW-14:022117, MW-16:022117
590-5559-1	MW-5:022217, MW-5A:022217, MW-7B:022217, MW-7D:022217, MW-9A:022217, MW-12A:022217, Dup:022217, MW-15:022217, MW-15A:022217
590-5571-1	LFB-3:022417, LFB-4:022417, LFB-5:022417, LFB-8:022417, LFB-9:022417, LFB-10:022417, LFB-11:022417, LFB-15:022417, LFB-16:022417, LFB-17:022417
590-5564-1	SW-1:022317

CHEMICAL ANALYSIS PERFORMED

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

Water

- Gasoline-range Hydrocarbons (NWTPH-Gx) by Method NWTPH-Gx;
- Petroleum Hydrocarbons with Silica Gel (SG) Cleanup (NWTPH-Dx/SG) by Method NWTPH-Dx/SG;
- Volatile Organic Compounds (VOCs) by Methods SW8260C;
- 1,2-Dibromoethane (EDB) by Method SW8011;
- Semi-volatile Organic Compounds (SVOCs) by Method SW8270D;
- Polychlorinated Biphenyls (PCBs) by Method SW8082A;
- Organochlorine Pesticides by Method SW8081B;
- Organophosphorous Pesticides by Method SW8141B;
- Chlorinated Herbicides by Method SW8151A;
- Dioxins and Furans by Method SW8290A;

- Total Metals by Methods EPA200.8/EPA245.1;
- Dissolved Metals by Methods EPA200.8/EPA245.1;
- Anions by Method EPA300.0;
- Total Cyanide by Method EPA335.4;
- Ammonia (as N) by Method EPA350.1;
- Chemical Oxygen Demand (COD) by Method EPA410.4;
- Total Organic Carbon (TOC) by Method SM5310C; and
- Total Coliform and Escherichia coli by Method SM9223B.

Air

Volatile Organic Compounds in Air (VOCs-Air) by Method TO-15

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory, with the following exceptions:

SDG 590-5551-1: The laboratory noted that one 250mL unpreserved sample vial and one 100mL coliform bacteria sample vial were received without sample vial labels. The sample vials were identified through process of elimination to be for Samples MW-11A:022117 and MW-14:022117, respectively.

SDG 590-5559-1: The laboratory noted one 1L unpreserved glass amber sample vial for Samples MW-7B:022217, MW-7D:022217, and MW-15:022217 were not received by the laboratory on 2/2/2017. The laboratory notified GeoEngineers and the missing sample vial for these samples were received by the laboratory on 2/23/2017.

The laboratory noted that sample ID for Sample MW-5:022217 was changed from MW-5B:022217, as listed on the COC, at GeoEngineers request.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

SDG 590-5548-1: One sample cooler temperature recorded at the laboratory was 0.3 degrees Celsius. Since the samples were not frozen, this temperature should likely not affect the sample analytical results.

SDG 590-5559-1: One sample cooler temperature recorded at the laboratory was 1.8 degrees Celsius. Since the samples were not frozen, this temperature should likely not affect the sample analytical results.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-5571-1: (VOCs-Air) The percent recoveries for surrogate 4-Bromofluorobenzene were greater than the control limits in Samples LFB-4:022417 and LFB-11:022417; however, the samples were spiked with two additional surrogates and in each case the percent recoveries were within their respective control limits. No action was required for these outliers.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exceptions:

SDG 590-5548-1: (VOCs) There was a positive result for dichlorofluoromethane detected above the method detection limit, but below the reporting limit in the method blank extracted on 3/1/2017. The positive result for dichlorofluoromethane was qualified as non-detected (U) in Sample MW-8A:022017. There were no positive results for dichlorofluoromethane in Samples MW-8B:022017 and MW-16A:022017; therefore, no qualifications were required.

(Total Metals) There was a positive result for total selenium detected above the method detection limit, but below the reporting limit in the method blank digested on 3/8/2017. The positive results for total selenium were qualified as non-detected (U) in Samples MW-8A:022017, MW-8B:022017, and MW-16A:022017.

(Dissolved Metals) There was a positive result for dissolved chromium detected above the method detection limit, but below the reporting limit in the method blank digested on 2/23/2017. The positive results for dissolved chromium were qualified as non-detected (U) in Samples MW-8A:022017, MW-8B:022017, and MW-16A:022017.

(Dioxins/Furans) There was a positive result for OCDD detected at a concentration of less than 3X the reporting limit in the method blank extracted on 3/8/2017. The positive results for OCDD were qualified as non-detected (U) in Samples MW-8A:022017, MW-8B:022017, and MW-16A:022017.

Additionally, there were positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8-PeCDD, and 2,3,4,6,7,8-HxCDF detected above the estimated detection limit, but below the reporting limit in the

same method blank. The positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8-PeCDD, and 2,3,4,6,7,8-HxCDF were qualified as non-detected (U) in Samples MW-8A:022017 and MW-8B:022017. The positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, and 2,3,4,6,7,8-HxCDF were qualified as non-detected (U) in Sample MW-16A:022017. There were no positive results for 1,2,3,7,8-PeCDD in Sample MW-16A:022017; therefore, no qualification was required.

SDG 590-5551-1: (VOCs) There was a positive result for dichlorofluoromethane detected above the method detection limit, but below the reporting limit in the method blank extracted on 3/1/2017. The positive result for dichlorofluoromethane was qualified as non-detected (U) in Sample MW-16:022117. There were no positive results for dichlorofluoromethane in Samples MW-2A:022117, MW-3:022117, MW-4A:022117, MW-11A:022117, and MW-14:022117; therefore, no qualifications were required.

(Dissolved Metals) There was a positive result for dissolved selenium detected above the method detection limit, but below the reporting limit in the method blank digested on 3/1/2017. The positive results for dissolved selenium were qualified as non-detected (U) in Samples MW-4A:022117, MW-11A:022117, and MW-16:022117. There were no positive results for dissolved selenium in Samples MW-2A:022117, MW-3:022117, and MW-14:022117; therefore, no qualifications were required.

(Dioxins/Furans) There was a positive result for OCDF detected at a concentration of less than 3X the reporting limit in the method blank extracted on 3/9/2017. The positive results for OCDF were qualified as non-detected (U) in Samples MW-3:022117, MW-4A:022117, MW-11A:022117, MW-14:022117, and MW-16:022117. There were no positive results for OCDF in Sample MW-2A:022117; therefore, no qualification was required.

SDG 590-5559-1: (VOCs) There was a positive result for dichlorofluoromethane detected above the method detection limit, but below the reporting limit in the method blank extracted on 3/1/2017. The positive results for dichlorofluoromethane were qualified as non-detected (U) in Samples MW-5:022217 and Dup:022217. There were no positive results for dichlorofluoromethane in Samples MW-5A:022217, MW-7B:022217, MW-7D:022217, MW-9A:022217, MW-12A:022217, MW-15:022217, and MW-15A:022217; therefore, no qualifications were required.

(Dioxins/Furans) There was a positive result for OCDF detected at a concentration of less than 3X the reporting limit in the method blank extracted on 3/9/2017. The positive result for OCDF was qualified as non-detected (U) in Sample MW-7D:022217.

SDG 590-5564-1: (VOCs) There was a positive result for dichlorofluoromethane detected above the method detection limit, but below the reporting limit in the method blank extracted on 3/1/2017. There were no positive results for dichlorofluoromethane in Sample SW-1:022317; therefore, no qualification was required.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference

(RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-5548-1: (Total Cyanide) The laboratory performed a matrix spike on Sample MW-16A:022017. The percent recovery for total cyanide was greater than the control limits in the MS extracted on 2/27/2017. There were no positive results for total cyanide in Sample MW-16A:022017; therefore, no qualification was required.

SDG 590-5551-1: (Anions) The laboratory performed an MS/MSD sample set on Sample MW-3:022117. The percent recoveries for chloride and sulfate were less than the control limits in the MS/MSD extracted on 2/22/2017. The positive results for chloride and sulfate were qualified as estimated (J) in Sample MW-3:022117.

SDG 590-5559-1: (Anions) The laboratory performed an MS/MSD sample set on Sample MW-5:022217. The percent recoveries for chloride were less than the control limits in the MS/MSD extracted on 2/23/2017. The positive result for chloride was qualified as estimated (J) in Sample MW-5:022217.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-5548-1: (SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits and the percent recovery for bis(2-ethylhexyl) phthalate was greater than the control limits in the LCSD extracted on 2/27/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the RPD values for 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, and bis(2-ethylhexyl) phthalate were greater than the control limits. There were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

SDG 590-5551-1: (SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits and the percent recovery for bis(2-ethylhexyl) phthalate was greater than the control limits in the LCSD extracted on 2/27/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

Additionally, in the same LCS/LCSD sample set, the RPD values for 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, and bis(2-ethylhexyl) phthalate were greater than the control limits. The positive results for bis(2-ethylhexyl) phthalate were qualified as estimated (J) in Samples MW-3:022117 and MW-11A:022117. There were no positive results for 4,6-Dinitro-2-methylphenol and 4-Chloroaniline in Samples MW-3:022117 and MW-11A:022117; and there were no positive results for 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, and bis(2-ethylhexyl) phthalate in Samples MW-2A:022117, MW-4A:022117, MW-14:022117, and MW-16:022117; therefore, no qualifications were required.

SDG 590-5559-1: (SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits and the percent recovery for bis(2-ethylhexyl) phthalate was greater than the control limits in the LCSD extracted on 2/27/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

Additionally, in the same LCS/LCSD sample set, the RPD values for 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, and bis(2-ethylhexyl) phthalate were greater than the control limits. The positive results for bis(2-ethylhexyl) phthalate were qualified as estimated (J) in Samples MW-5A:022217, MW-7D:022217, MW-15A:022217, and Dup:022217. There were no positive results for 4,6-Dinitro-2-methylphenol and 4-Chloroaniline in Samples MW-5A:022217, MW-7D:022217, MW-15A:022217, and Dup:022217; and there were no positive results for 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, and bis(2-ethylhexyl) phthalate in Samples MW-5:022217, MW-7B:022217, MW-9A:022217, MW-12A:022217, and MW-15:022217; therefore, no qualifications were required.

SDG 590-5564-1: (SVOCs) The percent recovery for 4-Chloroaniline was less than the control limits and the percent recovery for bis(2-ethylhexyl) phthalate was greater than the control limits in the LCSD extracted on 2/27/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers. Additionally, in the same LCS/LCSD sample set, the RPD values for 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, and bis(2-ethylhexyl) phthalate were greater than the control limits. There were no positive results for these target analytes in the associated field sample; therefore, no qualifications were required.

LABORATORY DUPLICATES

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration greater than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 35 percent.

SDG 590-5559-1: One field duplicate sample pair, MW-12A:022217 and Dup:022217, was submitted with this SDG. The precision criteria for all target analytes were met for this sample pair, with the exception of total chromium. The positive results for this target analyte was qualified as estimated (J) in this sample pair.

MISCELLANEOUS

SDG 590-5548-1: (Dioxins/Furans) The positive results for 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8-PeCDF, and 2,3,7,8-TCDD in Sample MW-8A:022017; the positive results for 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, 2,3,7,8-TCDD, and OCDF in Sample MW-8B:022017; and the positive results for 1,2,3,4,7,8-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, 2,3,4,7,8-PeCDF, and 2,3,7,8-TCDD in Sample MW-16A:022017 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in these samples, accordingly.

SDG 590-5551-1: (Dioxins/Furans) The positive results for 1,2,3,6,7,8-HxCDF and 1,2,3,7,8,9-HxCDF in Sample MW-2A:022117; the positive results for 1,2,3,4,6,7,8-HpCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, and OCDD in Sample MW-4A:022117; the positive result for OCDD in Sample MW-11A:022117; the positive result for 1,2,3,4,6,7,8-HpCDF in Sample MW-14:022117; and the positive results for 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 2,3,4,7,8-PeCDF, and OCDD in Sample MW-16:022117 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in these samples, accordingly.

SDG 590-5559-1: (Dioxins/Furans) The positive results for 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8,9-HxCDF, and 2,3,4,6,7,8-HxCDF in Sample MW-5:022217; the positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,7,8-PeCDF, and 2,3,4,6,7,8-HxCDF in Sample MW-5A:022217; the positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, and 2,3,7,8-TCDF in Sample MW-7B:022217; the positive results for 1,2,3,4,6,7,8-HpCDF, OCDD, and OCDF in Sample MW-9A:022217; the positive results for 1,2,3,4,6,7,8-HpCDD and 1,2,3,4,6,7,8-HpCDF in Sample MW-12A:022217; the positive results for 1,2,3,4,7,8,9-HpCDF, 2,3,4,6,7,8-HxCDF, and OCDF in Sample Dup:022217; the positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,6,7,8-HxCDF, and 1,2,3,7,8,9-HxCDF in Sample MW-15:022217; and the positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, and OCDD in Sample MW-15A:022217 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in these samples, accordingly.

SDG 590-5564-1: (Dioxins/Furans) The positive results 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, and OCDD in Sample SW-1:022317 were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion

abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in this sample.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
MW-2A:022117	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
MW-3:022117	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
	Chloride	J	MS/MSD Recovery
	OCDF	U	Method Blank Contamination
	Sulfate	J	MS/MSD Recovery
MW-4A:022117	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
	OCDD	J	See Miscellaneous
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
MW-5:022217	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	J	See Miscellaneous
	Chloride	J	MS/MSD Recovery
	Dichlorofluoromethane	U	Method Blank Contamination
MW-5A:022217	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	1,2,3,4,7,8,9-HpCDF	J	See Miscellaneous
	1,2,3,7,8-PeCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	J	See Miscellaneous
	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
MW-7B:022217	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,4,7,8-HxCDF	J	See Miscellaneous
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8-PeCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	J	See Miscellaneous
	2,3,4,7,8-PeCDF	J	See Miscellaneous
	2,3,7,8-TCDF	J	See Miscellaneous

Sample ID	Analyte	Qualifier	Reason
MW-7D:022217	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
	OCDF	U	Method Blank Contamination
MW-8A:022017	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDD	J	See Miscellaneous
	1,2,3,7,8-PeCDD	U	Method Blank Contamination
	1,2,3,7,8-PeCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	U	Method Blank Contamination
	2,3,7,8-TCDD	J	See Miscellaneous
	Dissolved chromium	U	Method Blank Contamination
	Dichlorofluoromethane	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	Total selenium	U	Method Blank Contamination
MW-8B:022017	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	1,2,3,4,7,8-HxCDF	J	See Miscellaneous
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8-PeCDD	U	Method Blank Contamination
	2,3,4,6,7,8-HxCDF	U	Method Blank Contamination
	2,3,4,7,8-PeCDF	J	See Miscellaneous
	2,3,7,8-TCDD	J	See Miscellaneous
	Dissolved chromium	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	OCDF	J	See Miscellaneous
	Total selenium	U	Method Blank Contamination
MW-9A:022217	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	OCDD	J	See Miscellaneous
	OCDF	J	See Miscellaneous
MW-11A:022117	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
	OCDD	J	See Miscellaneous
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
MW-12A:022217	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	Total chromium	J	Field Duplicate RPD
Dup:022217	1,2,3,4,7,8,9-HpCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	J	See Miscellaneous
	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
	Total chromium	J	Field Duplicate RPD
	Dichlorofluoromethane	U	Method Blank Contamination
	OCDF	J	See Miscellaneous
MW-14:022117	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	OCDF	U	Method Blank Contamination

Sample ID	Analyte	Qualifier	Reason
MW-15:022217	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
MW-15A:022217	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	Bis(2-ethylhexyl) phthalate	J	LCS/LCSD RPD
	OCDD	J	See Miscellaneous
MW-16:022117	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	1,2,3,4,7,8,9-HpCDF	J	See Miscellaneous
	1,2,3,4,7,8-HxCDD	J	See Miscellaneous
	1,2,3,6,7,8-HxCDD	J	See Miscellaneous
	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDD	J	See Miscellaneous
	2,3,4,7,8-PeCDF	J	See Miscellaneous
	Dichlorofluoromethane	U	Method Blank Contamination
	OCDD	J	See Miscellaneous
	OCDF	U	Method Blank Contamination
	Dissolved selenium	U	Method Blank Contamination
MW-16A:022017	1,2,3,4,6,7,8-HpCDD	U	Method Blank Contamination
	1,2,3,4,6,7,8-HpCDF	U	Method Blank Contamination
	1,2,3,4,7,8,9-HpCDF	J	See Miscellaneous
	1,2,3,4,7,8-HxCDD	J	See Miscellaneous
	1,2,3,4,7,8-HxCDF	J	See Miscellaneous
	1,2,3,7,8,9-HxCDD	J	See Miscellaneous
	1,2,3,7,8,9-HxCDF	J	See Miscellaneous
	2,3,4,6,7,8-HxCDF	U	Method Blank Contamination
	2,3,4,7,8-PeCDF	J	See Miscellaneous
	2,3,7,8-TCDD	J	See Miscellaneous
	Dissolved chromium	U	Method Blank Contamination
	OCDD	U	Method Blank Contamination
	Total selenium	U	Method Blank Contamination
SW-1:022317	1,2,3,4,6,7,8-HpCDD	J	See Miscellaneous
	1,2,3,4,6,7,8-HpCDF	J	See Miscellaneous
	OCDD	J	See Miscellaneous

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GeoEngineers, Inc. "Remedial Investigation/Feasibility Study Work Plan," prepared for Washington State Department of Ecology. May 14, 2015.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5548-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
3/17/2017 9:37:32 AM

Randee Arrington, Project Manager II
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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5548-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 2/21/2017 10:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.3º C, 2.9º C and 3.3º C.

GC/MS VOA
Method 8260C: The method blank for analytical batch 590-10912 contained Dichlorofluoromethane above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-239702 recovered outside acceptance criteria, low biased, for 2,4-Dinitrophenol and Benzoic acid. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-239702 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-239396 recovered outside control limits for the following analytes: 4,6-Dinitro-2-methylphenol, Bis(2-ethylhexyl) phthalate and 4-Chloroaniline.

Method 8270D: The following analytes recovered outside control limits for the LCSD associated with preparation batch 580-239396 and analytical batch 580-239702: 4-Chloroaniline and Bis(2-ethylhexyl) phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8141B: The surrogate recovery for the method blank associated with preparation batch 280-363590 and analytical batch 280-365610 was outside control limits (low). Surrogate recoveries for the associated samples were all within control limits and the samples were ND for all target analytes; therefore, the data is reported.

Method 8141B: The initial calibration verification (ICV) result for batch 280-365610 was below the lower control limit for Malathion on the front column and for Mevinphos on the back column. The back column was in control for Malathion and the front column was in control for Mevinphos. Sample results were non-detects for the affected analytes; therefore, the data have been reported from the column that was in control in the ICV.

Method 8081B: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside the upper control limit: (CCB 580-239335/15) and (CCB 580-239335/32). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The following CCV fell outside the control limits for surrogate Tetrachloro-m-xylene on the primary column only. Since all associated samples had surrogate recoveries within the control limits on both columns, the data has been reported.

Method 8081B: The continuing calibration verification (CCV) associated with batch 580-239335 recovered outside acceptance criteria, low biased, for delta-BHC on the confirmation column only. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 590-5548-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Metals
Method 200.8: The method blank for prep batch 580-239965 contained Selenium above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

Method 200.8: The method blank for prep batch 580-239192 contained Chromium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 335.4: The matrix spike (MS) recovery for preparation batch 490-410666 and analytical batch 490-411080 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-363575.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5548-1	MW-8A:022017	Water	02/20/17 10:14	02/21/17 10:35
590-5548-2	MW-8B:022017	Water	02/20/17 12:14	02/21/17 10:35
590-5548-3	MW-16A:022017	Water	02/20/17 15:21	02/21/17 10:35

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8A:022017
Date Collected: 02/20/17 10:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 11:40	1
1,1,1-Trichloroethane	**0.34**	**J**	1.0	0.17	ug/L			03/01/17 11:40	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 11:40	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 11:40	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 11:40	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 11:40	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 11:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 11:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 11:40	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 11:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 11:40	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 11:40	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 11:40	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 11:40	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 11:40	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 11:40	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 11:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 11:40	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 11:40	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 11:40	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 11:40	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 11:40	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 11:40	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 11:40	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 11:40	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 11:40	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 11:40	1
Acetone	ND		30	14	ug/L			03/01/17 11:40	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 11:40	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 11:40	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 11:40	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 11:40	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 11:40	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 11:40	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 11:40	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 11:40	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 11:40	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 11:40	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 11:40	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 11:40	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 11:40	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 11:40	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 11:40	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 11:40	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 11:40	1
Dichlorofluoromethane	**0.44**	**J B**	1.0	0.30	ug/L			03/01/17 11:40	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 11:40	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 11:40	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 11:40	1

Client Sample ID: MW-8A:022017
Date Collected: 02/20/17 10:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 11:40	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 11:40	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 11:40	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 11:40	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 11:40	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 11:40	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 11:40	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 11:40	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 11:40	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 11:40	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 11:40	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 11:40	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 11:40	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 11:40	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 11:40	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 11:40	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 11:40	1
Trichlorofluoromethane	**0.29**	**J**	1.0	0.074	ug/L			03/01/17 11:40	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 11:40	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*03/01/17 11:40*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*03/01/17 11:40*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*03/01/17 11:40*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/01/17 11:40*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*03/01/17 11:40*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,4-Dinitrophenol	ND		4.9	0.97	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8A:022017
Date Collected: 02/20/17 10:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
3 & 4 Methylphenol	ND		0.78	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 17:26	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/03/17 17:26	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/03/17 17:26	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Acenaphthylene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzo[b]fluoranthene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 17:26	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 17:26	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 17:26	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 17:26	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		02/27/17 16:44	03/03/17 17:26	1
Di-n-octyl phthalate	ND		0.39	0.18	ug/L		02/27/17 16:44	03/03/17 17:26	1
Fluoranthene	ND		0.049	0.013	ug/L		02/27/17 16:44	03/03/17 17:26	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1

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Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Phenanthrene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/03/17 17:26	1
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 17:26	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*66*		*57 - 132*	*02/27/17 16:44*	*03/03/17 17:26*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*02/27/17 16:44*	*03/03/17 17:26*	*1*
2-Fluorophenol	*70*		*50 - 113*	*02/27/17 16:44*	*03/03/17 17:26*	*1*
Nitrobenzene-d5	*72*		*59 - 120*	*02/27/17 16:44*	*03/03/17 17:26*	*1*
Phenol-d5	*74*		*52 - 120*	*02/27/17 16:44*	*03/03/17 17:26*	*1*
Terphenyl-d14	*94*		*72 - 140*	*02/27/17 16:44*	*03/03/17 17:26*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 11:19	02/22/17 14:50	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0061	ug/L		02/24/17 10:35	02/27/17 15:26	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 15:26	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 15:26	1
Aldrin	ND		0.030	0.0071	ug/L		02/24/17 10:35	02/27/17 15:26	1
alpha-BHC	ND		0.030	0.0071	ug/L		02/24/17 10:35	02/27/17 15:26	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 15:26	1
beta-BHC	ND		0.050	0.012	ug/L		02/24/17 10:35	02/27/17 15:26	1
delta-BHC	ND		0.050	0.010	ug/L		02/24/17 10:35	02/27/17 15:26	1
Dieldrin	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 15:26	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 15:26	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 15:26	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 15:26	1
Endrin	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 15:26	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/24/17 10:35	02/27/17 15:26	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 15:26	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 15:26	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 15:26	1
Heptachlor	ND		0.020	0.0040	ug/L		02/24/17 10:35	02/27/17 15:26	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 15:26	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/24/17 10:35	02/27/17 15:26	1
Toxaphene	ND		1.0	0.22	ug/L		02/24/17 10:35	02/27/17 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*95*		*22 - 150*	*02/24/17 10:35*	*02/27/17 15:26*	*1*
Tetrachloro-m-xylene	*100*		*40 - 113*	*02/24/17 10:35*	*02/27/17 15:26*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.064	ug/L		02/23/17 12:49	02/23/17 17:10	1
PCB-1221	ND		0.10	0.064	ug/L		02/23/17 12:49	02/23/17 17:10	1
PCB-1232	ND		0.10	0.064	ug/L		02/23/17 12:49	02/23/17 17:10	1
PCB-1242	ND		0.10	0.064	ug/L		02/23/17 12:49	02/23/17 17:10	1

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Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.064	ug/L		02/23/17 12:49	02/23/17 17:10	1
PCB-1254	ND		0.10	0.064	ug/L		02/23/17 12:49	02/23/17 17:10	1
PCB-1260	ND		0.10	0.045	ug/L		02/23/17 12:49	02/23/17 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*20 - 120*	*02/23/17 12:49*	*02/23/17 17:10*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*36 - 138*	*02/23/17 12:49*	*02/23/17 17:10*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.9	0.29	ug/L		02/27/17 19:29	03/16/17 01:32	1
Azinphos-methyl	ND		2.5	0.17	ug/L		02/27/17 19:29	03/16/17 01:32	1
Bolstar	ND		0.99	0.31	ug/L		02/27/17 19:29	03/16/17 01:32	1
Chlorpyrifos	ND		1.5	0.36	ug/L		02/27/17 19:29	03/16/17 01:32	1
Coumaphos	ND		0.99	0.13	ug/L		02/27/17 19:29	03/16/17 01:32	1
Demeton, Total	ND		3.0	0.21	ug/L		02/27/17 19:29	03/16/17 01:32	1
Diazinon	ND		0.50	0.15	ug/L		02/27/17 19:29	03/16/17 01:32	1
Dichlorvos	ND		0.50	0.16	ug/L		02/27/17 19:29	03/16/17 01:32	1
Dimethoate	ND		1.5	0.45	ug/L		02/27/17 19:29	03/16/17 01:32	1
Disulfoton	ND		0.99	0.32	ug/L		02/27/17 19:29	03/16/17 01:32	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/16/17 01:32	1
Famphur	ND		0.99	0.18	ug/L		02/27/17 19:29	03/16/17 01:32	1
Fensulfothion	ND		2.5	0.54	ug/L		02/27/17 19:29	03/16/17 01:32	1
Fenthion	ND		2.5	0.15	ug/L		02/27/17 19:29	03/16/17 01:32	1
Malathion	ND		2.0	0.13	ug/L		02/27/17 19:29	03/16/17 01:32	1
Merphos	ND		5.0	0.17	ug/L		02/27/17 19:29	03/16/17 01:32	1
Methyl parathion	ND		4.0	0.14	ug/L		02/27/17 19:29	03/16/17 01:32	1
Mevinphos	ND		6.2	0.46	ug/L		02/27/17 19:29	03/16/17 01:32	1
Ethyl Parathion	ND		0.99	0.14	ug/L		02/27/17 19:29	03/16/17 01:32	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/16/17 01:32	1
Ronnel	ND		9.9	0.12	ug/L		02/27/17 19:29	03/16/17 01:32	1
Simazine	ND		9.9	0.22	ug/L		02/27/17 19:29	03/16/17 01:32	1
Sulfotepp	ND		1.5	0.17	ug/L		02/27/17 19:29	03/16/17 01:32	1
Thionazin	ND		0.99	0.31	ug/L		02/27/17 19:29	03/16/17 01:32	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/16/17 01:32	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/16/17 01:32	1
Ethoprop	ND		1.5	0.18	ug/L		02/27/17 19:29	03/16/17 01:32	1
Propazine	ND		9.9	0.29	ug/L		02/27/17 19:29	03/16/17 01:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*65*		*49 - 171*	*02/27/17 19:29*	*03/16/17 01:32*	*1*
Triphenylphosphate	*79*		*60 - 154*	*02/27/17 19:29*	*03/16/17 01:32*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		02/27/17 15:30	03/02/17 11:34	1
2,4-D	ND		3.9	0.20	ug/L		02/27/17 15:30	03/02/17 11:34	1
2,4-DB	**0.48**	**J**	3.9	0.35	ug/L		02/27/17 15:30	03/02/17 11:34	1
Dalapon	ND		1.9	0.88	ug/L		02/27/17 15:30	03/02/17 11:34	1
Dicamba	ND		1.9	0.14	ug/L		02/27/17 15:30	03/02/17 11:34	1

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Lab Sample ID: 590-5548-1

Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.9	0.63	ug/L		02/27/17 15:30	03/02/17 11:34	1
MCPA	ND		390	16	ug/L		02/27/17 15:30	03/02/17 11:34	1
MCPP	ND		390	32	ug/L		02/27/17 15:30	03/02/17 11:34	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		02/27/17 15:30	03/02/17 11:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*75*		*39 - 135*	*02/27/17 15:30*	*03/02/17 11:34*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		02/28/17 09:16	02/28/17 12:31	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		02/28/17 09:16	02/28/17 12:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*02/28/17 09:16*	*02/28/17 12:31*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*02/28/17 09:16*	*02/28/17 12:31*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.1**		0.80	0.42	mg/L			02/21/17 12:16	1
Nitrate as N	**1.3**		0.20	0.039	mg/L			02/21/17 12:16	1
Nitrite as N	ND		0.20	0.069	mg/L			02/21/17 12:16	1
Sulfate	**10**		0.50	0.13	mg/L			02/21/17 12:16	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**1.1**	**J q B**	10	0.27	pg/L		03/08/17 06:51	03/13/17 18:47	1
2,3,7,8-TCDF	**1.1**	**J B**	10	0.34	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,7,8-PeCDD	**3.2**	**J B**	50	0.49	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,7,8-PeCDF	**2.6**	**J q B**	50	0.42	pg/L		03/08/17 06:51	03/13/17 18:47	1
2,3,4,7,8-PeCDF	**2.5**	**J B**	50	0.43	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,4,7,8-HxCDD	**2.8**	**J B**	50	0.39	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,6,7,8-HxCDD	**3.0**	**J B**	50	0.35	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,7,8,9-HxCDD	**2.5**	**J q B**	50	0.32	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,4,7,8-HxCDF	**3.2**	**J B**	50	0.38	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,6,7,8-HxCDF	**3.2**	**J q B**	50	0.35	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,7,8,9-HxCDF	**3.3**	**J B**	50	0.41	pg/L		03/08/17 06:51	03/13/17 18:47	1
2,3,4,6,7,8-HxCDF	**2.1**	**J q B**	50	0.38	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,4,6,7,8-HpCDD	**4.8**	**J B**	50	0.49	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,4,6,7,8-HpCDF	**3.8**	**J B**	50	0.63	pg/L		03/08/17 06:51	03/13/17 18:47	1
1,2,3,4,7,8,9-HpCDF	**3.2**	**J B**	50	0.80	pg/L		03/08/17 06:51	03/13/17 18:47	1
OCDD	**17**	**J B**	100	0.68	pg/L		03/08/17 06:51	03/13/17 18:47	1
OCDF	**10**	**J B**	100	0.81	pg/L		03/08/17 06:51	03/13/17 18:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-1,2,3,7,8-PeCDD	*71*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-1,2,3,7,8-PeCDF	*74*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-1,2,3,6,7,8-HxCDD	*70*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*

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Lab Sample ID: 590-5548-1

Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*69*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*
13C-OCDD	*63*		*40 - 135*	*03/08/17 06:51*	*03/13/17 18:47*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00060**	**J**	0.0010	0.00027	mg/L		03/08/17 09:18	03/08/17 19:28	1
Antimony	**0.00032**	**J**	0.00040	0.000080	mg/L		03/08/17 09:18	03/08/17 19:28	1
Barium	**0.031**		0.0012	0.000054	mg/L		03/08/17 09:18	03/08/17 19:28	1
Beryllium	ND		0.00040	0.00010	mg/L		03/08/17 09:18	03/08/17 19:28	1
Cadmium	**0.000046**	**J**	0.00040	0.000028	mg/L		03/08/17 09:18	03/08/17 19:28	1
Chromium	**0.00051**		0.00040	0.00014	mg/L		03/08/17 09:18	03/08/17 19:28	1
Copper	**0.0041**		0.0020	0.00060	mg/L		03/08/17 09:18	03/08/17 19:28	1
Iron	**0.0091**	**J**	0.040	0.0058	mg/L		03/08/17 09:18	03/08/17 19:28	1
Lead	**0.00060**		0.00040	0.000034	mg/L		03/08/17 09:18	03/08/17 19:28	1
Manganese	ND		0.0020	0.00035	mg/L		03/08/17 09:18	03/08/17 19:28	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		03/08/17 09:18	03/08/17 19:28	1
Selenium	**0.00061**	**J B**	0.0010	0.00030	mg/L		03/08/17 09:18	03/08/17 19:28	1
Silver	ND		0.00040	0.000030	mg/L		03/08/17 09:18	03/08/17 19:28	1
Thallium	ND		0.0010	0.00014	mg/L		03/08/17 09:18	03/08/17 19:28	1
Vanadium	**0.0022**	**J**	0.0040	0.00098	mg/L		03/08/17 09:18	03/08/17 19:28	1
Zinc	**0.012**		0.0070	0.0019	mg/L		03/08/17 09:18	03/08/17 19:28	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00059**	**J**	0.0010	0.00027	mg/L		02/23/17 16:53	02/24/17 12:31	1
Antimony	**0.00032**	**J**	0.00040	0.000080	mg/L		02/23/17 16:53	02/24/17 12:31	1
Barium	**0.031**		0.0012	0.000054	mg/L		02/23/17 16:53	02/24/17 12:31	1
Beryllium	ND		0.00040	0.00010	mg/L		02/23/17 16:53	02/24/17 12:31	1
Cadmium	**0.000044**	**J**	0.00040	0.000028	mg/L		02/23/17 16:53	02/24/17 12:31	1
Chromium	**0.00053**	**B**	0.00040	0.00014	mg/L		02/23/17 16:53	02/24/17 12:31	1
Copper	**0.0040**		0.0020	0.00060	mg/L		02/23/17 16:53	02/24/17 12:31	1
Iron	**0.020**	**J**	0.040	0.0058	mg/L		02/23/17 16:53	02/24/17 12:31	1
Lead	**0.00043**		0.00040	0.000034	mg/L		02/23/17 16:53	02/24/17 12:31	1
Manganese	ND		0.0020	0.00035	mg/L		02/23/17 16:53	02/24/17 12:31	1
Nickel	**0.0013**	**J**	0.0030	0.00040	mg/L		02/23/17 16:53	02/24/17 12:31	1
Selenium	**0.00036**	**J**	0.0010	0.00030	mg/L		02/23/17 16:53	02/24/17 12:31	1
Silver	ND		0.00040	0.000030	mg/L		02/23/17 16:53	02/24/17 12:31	1
Thallium	ND		0.0010	0.00014	mg/L		02/23/17 16:53	02/24/17 12:31	1
Vanadium	**0.0024**	**J**	0.0040	0.00098	mg/L		02/23/17 16:53	02/24/17 12:31	1
Zinc	**0.012**		0.0070	0.0019	mg/L		02/23/17 16:53	02/24/17 12:31	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:39	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:38	03/02/17 10:25	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8A:022017

Lab Sample ID: 590-5548-1

Date Collected: 02/20/17 10:14

Matrix: Water

Date Received: 02/21/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/27/17 10:14	02/28/17 15:57	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/23/17 09:55	02/23/17 14:43	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/24/17 14:42	1
Total Organic Carbon	ND		1.0	0.50	mg/L			02/28/17 18:00	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/21/17 11:12	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/21/17 11:12	1

Client Sample ID: MW-8B:022017

Lab Sample ID: 590-5548-2

Date Collected: 02/20/17 12:14

Matrix: Water

Date Received: 02/21/17 10:35

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 12:24	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 12:24	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 12:24	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 12:24	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 12:24	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 12:24	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 12:24	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 12:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 12:24	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 12:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 12:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 12:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 12:24	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 12:24	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 12:24	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 12:24	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 12:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 12:24	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 12:24	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 12:24	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 12:24	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 12:24	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 12:24	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 12:24	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 12:24	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 12:24	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 12:24	1
Acetone	ND		30	14	ug/L			03/01/17 12:24	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 12:24	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 12:24	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 12:24	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 12:24	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 12:24	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 12:24	1

Client Sample ID: MW-8B:022017
Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 12:24	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 12:24	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 12:24	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 12:24	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 12:24	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 12:24	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 12:24	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 12:24	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 12:24	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 12:24	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 12:24	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 12:24	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 12:24	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 12:24	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 12:24	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 12:24	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 12:24	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 12:24	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 12:24	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 12:24	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 12:24	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 12:24	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 12:24	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 12:24	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 12:24	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 12:24	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 12:24	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 12:24	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 12:24	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 12:24	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 12:24	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 12:24	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 12:24	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 12:24	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*03/01/17 12:24*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*03/01/17 12:24*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*03/01/17 12:24*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*03/01/17 12:24*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*03/01/17 12:24*	*1*

Client Sample ID: MW-8B:022017
Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
1,2-Dichlorobenzene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
1,3-Dichlorobenzene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
1,4-Dichlorobenzene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
1-Methylnaphthalene	ND		0.057	0.028	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,4-Dichlorophenol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,4-Dimethylphenol	ND		1.9	0.28	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,4-Dinitrotoluene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2,6-Dinitrotoluene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2-Chloronaphthalene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
2-Chlorophenol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
2-Methylphenol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2-Nitroaniline	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
2-Nitrophenol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
3 & 4 Methylphenol	ND		0.76	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
3,3'-Dichlorobenzidine	ND		1.9	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
3-Nitroaniline	ND		0.38	0.11	ug/L		02/27/17 16:44	03/03/17 17:50	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.95	ug/L		02/27/17 16:44	03/03/17 17:50	1
4-Bromophenyl phenyl ether	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
4-Chloro-3-methylphenol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
4-Chloroaniline	ND	*	0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
4-Chlorophenyl phenyl ether	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
4-Nitroaniline	ND		0.57	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
4-Nitrophenol	ND		2.8	0.95	ug/L		02/27/17 16:44	03/03/17 17:50	1
Acenaphthene	ND		0.095	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Acenaphthylene	ND		0.076	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Anthracene	ND		0.038	0.0095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzo[a]anthracene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzo[b]fluoranthene	ND		0.076	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzo[g,h,i]perylene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzo[k]fluoranthene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzoic acid	ND		2.8	0.57	ug/L		02/27/17 16:44	03/03/17 17:50	1
Benzyl alcohol	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
bis (2-chloroisopropyl) ether	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Bis(2-chloroethoxy)methane	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Bis(2-chloroethyl)ether	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Bis(2-ethylhexyl) phthalate	ND	*	2.8	1.1	ug/L		02/27/17 16:44	03/03/17 17:50	1
Butyl benzyl phthalate	ND		0.57	0.19	ug/L		02/27/17 16:44	03/03/17 17:50	1
Carbazole	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Chrysene	ND		0.038	0.012	ug/L		02/27/17 16:44	03/03/17 17:50	1
Dibenz(a,h)anthracene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Dibenzofuran	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Diethyl phthalate	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Dimethyl phthalate	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8B:022017
Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.38	0.12	ug/L		02/27/17 16:44	03/03/17 17:50	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		02/27/17 16:44	03/03/17 17:50	1
Fluoranthene	ND		0.047	0.012	ug/L		02/27/17 16:44	03/03/17 17:50	1
Fluorene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Hexachlorobenzene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Hexachlorobutadiene	ND		0.57	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Hexachlorocyclopentadiene	ND		1.9	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Hexachloroethane	ND		0.57	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Indeno[1,2,3-cd]pyrene	ND		0.057	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Isophorone	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Naphthalene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Nitrobenzene	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
N-Nitrosodi-n-propylamine	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
N-Nitrosodiphenylamine	ND		0.38	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Pentachlorophenol	ND		0.66	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Phenanthrene	ND		0.076	0.019	ug/L		02/27/17 16:44	03/03/17 17:50	1
Phenol	ND		0.57	0.095	ug/L		02/27/17 16:44	03/03/17 17:50	1
Pyrene	ND		0.057	0.012	ug/L		02/27/17 16:44	03/03/17 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*72*		*57 - 132*	*02/27/17 16:44*	*03/03/17 17:50*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*02/27/17 16:44*	*03/03/17 17:50*	*1*
2-Fluorophenol	*76*		*50 - 113*	*02/27/17 16:44*	*03/03/17 17:50*	*1*
Nitrobenzene-d5	*78*		*59 - 120*	*02/27/17 16:44*	*03/03/17 17:50*	*1*
Phenol-d5	*81*		*52 - 120*	*02/27/17 16:44*	*03/03/17 17:50*	*1*
Terphenyl-d14	*103*		*72 - 140*	*02/27/17 16:44*	*03/03/17 17:50*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 11:19	02/22/17 15:14	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		02/24/17 10:35	02/27/17 15:45	1
4,4'-DDE	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 15:45	1
4,4'-DDT	ND		0.029	0.0048	ug/L		02/24/17 10:35	02/27/17 15:45	1
Aldrin	ND		0.029	0.0068	ug/L		02/24/17 10:35	02/27/17 15:45	1
alpha-BHC	ND		0.029	0.0068	ug/L		02/24/17 10:35	02/27/17 15:45	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 15:45	1
beta-BHC	ND		0.048	0.012	ug/L		02/24/17 10:35	02/27/17 15:45	1
delta-BHC	ND		0.048	0.0097	ug/L		02/24/17 10:35	02/27/17 15:45	1
Dieldrin	ND		0.029	0.0048	ug/L		02/24/17 10:35	02/27/17 15:45	1
Endosulfan I	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 15:45	1
Endosulfan II	ND		0.019	0.0019	ug/L		02/24/17 10:35	02/27/17 15:45	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		02/24/17 10:35	02/27/17 15:45	1
Endrin	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 15:45	1
Endrin aldehyde	ND		0.19	0.033	ug/L		02/24/17 10:35	02/27/17 15:45	1
Endrin ketone	ND		0.019	0.0019	ug/L		02/24/17 10:35	02/27/17 15:45	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		02/24/17 10:35	02/27/17 15:45	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 15:45	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8B:022017
Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0039	ug/L		02/24/17 10:35	02/27/17 15:45	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 15:45	1
Methoxychlor	ND		0.097	0.0019	ug/L		02/24/17 10:35	02/27/17 15:45	1
Toxaphene	ND		0.97	0.21	ug/L		02/24/17 10:35	02/27/17 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*95*		*22 - 150*	*02/24/17 10:35*	*02/27/17 15:45*	*1*
Tetrachloro-m-xylene	*105*		*40 - 113*	*02/24/17 10:35*	*02/27/17 15:45*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 17:31	1
PCB-1221	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 17:31	1
PCB-1232	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 17:31	1
PCB-1242	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 17:31	1
PCB-1248	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 17:31	1
PCB-1254	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 17:31	1
PCB-1260	ND		0.097	0.042	ug/L		02/23/17 12:49	02/23/17 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*50*		*20 - 120*	*02/23/17 12:49*	*02/23/17 17:31*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*36 - 138*	*02/23/17 12:49*	*02/23/17 17:31*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		02/27/17 19:29	03/16/17 02:04	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/16/17 02:04	1
Bolstar	ND		0.95	0.30	ug/L		02/27/17 19:29	03/16/17 02:04	1
Chlorpyrifos	ND		1.4	0.34	ug/L		02/27/17 19:29	03/16/17 02:04	1
Coumaphos	ND		0.95	0.13	ug/L		02/27/17 19:29	03/16/17 02:04	1
Demeton, Total	ND		2.9	0.20	ug/L		02/27/17 19:29	03/16/17 02:04	1
Diazinon	ND		0.48	0.14	ug/L		02/27/17 19:29	03/16/17 02:04	1
Dichlorvos	ND		0.48	0.15	ug/L		02/27/17 19:29	03/16/17 02:04	1
Dimethoate	ND		1.4	0.43	ug/L		02/27/17 19:29	03/16/17 02:04	1
Disulfoton	ND		0.95	0.31	ug/L		02/27/17 19:29	03/16/17 02:04	1
EPN	ND		1.1	0.14	ug/L		02/27/17 19:29	03/16/17 02:04	1
Famphur	ND		0.95	0.17	ug/L		02/27/17 19:29	03/16/17 02:04	1
Fensulfothion	ND		2.4	0.52	ug/L		02/27/17 19:29	03/16/17 02:04	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/16/17 02:04	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/16/17 02:04	1
Merphos	ND		4.8	0.17	ug/L		02/27/17 19:29	03/16/17 02:04	1
Methyl parathion	ND		3.8	0.13	ug/L		02/27/17 19:29	03/16/17 02:04	1
Mevinphos	ND		5.9	0.44	ug/L		02/27/17 19:29	03/16/17 02:04	1
Ethyl Parathion	ND		0.95	0.14	ug/L		02/27/17 19:29	03/16/17 02:04	1
Phorate	ND		1.1	0.15	ug/L		02/27/17 19:29	03/16/17 02:04	1
Ronnel	ND		9.5	0.11	ug/L		02/27/17 19:29	03/16/17 02:04	1
Simazine	ND		9.5	0.21	ug/L		02/27/17 19:29	03/16/17 02:04	1
Sulfotepp	ND		1.4	0.16	ug/L		02/27/17 19:29	03/16/17 02:04	1
Thionazin	ND		0.95	0.30	ug/L		02/27/17 19:29	03/16/17 02:04	1
Tokuthion	ND		1.5	0.12	ug/L		02/27/17 19:29	03/16/17 02:04	1

Client Sample ID: MW-8B:022017

Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2

Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		02/27/17 19:29	03/16/17 02:04	1
Ethoprop	ND		1.4	0.17	ug/L		02/27/17 19:29	03/16/17 02:04	1
Propazine	ND		9.5	0.28	ug/L		02/27/17 19:29	03/16/17 02:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*63*		*49 - 171*	*02/27/17 19:29*	*03/16/17 02:04*	*1*
Triphenylphosphate	*80*		*60 - 154*	*02/27/17 19:29*	*03/16/17 02:04*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		02/27/17 15:30	03/02/17 11:57	1
2,4-D	ND		3.9	0.20	ug/L		02/27/17 15:30	03/02/17 11:57	1
2,4-DB	ND		3.9	0.35	ug/L		02/27/17 15:30	03/02/17 11:57	1
Dalapon	ND		1.9	0.88	ug/L		02/27/17 15:30	03/02/17 11:57	1
Dicamba	ND		1.9	0.14	ug/L		02/27/17 15:30	03/02/17 11:57	1
Dichlorprop	ND		3.9	0.63	ug/L		02/27/17 15:30	03/02/17 11:57	1
MCPA	ND		390	16	ug/L		02/27/17 15:30	03/02/17 11:57	1
MCPP	**34**	**J**	390	32	ug/L		02/27/17 15:30	03/02/17 11:57	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		02/27/17 15:30	03/02/17 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*02/27/17 15:30*	*03/02/17 11:57*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		02/28/17 09:16	02/28/17 12:49	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		02/28/17 09:16	02/28/17 12:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*02/28/17 09:16*	*02/28/17 12:49*	*1*
n-Triacontane-d62	*101*		*50 - 150*	*02/28/17 09:16*	*02/28/17 12:49*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17**		0.80	0.42	mg/L			02/21/17 13:05	1
Nitrate as N	**3.9**		0.20	0.039	mg/L			02/21/17 13:05	1
Nitrite as N	ND		0.20	0.069	mg/L			02/21/17 13:05	1
Sulfate	**20**		0.50	0.13	mg/L			02/21/17 13:05	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.81**	**J q B**	9.8	0.24	pg/L		03/08/17 06:51	03/13/17 19:29	1
2,3,7,8-TCDF	**0.45**	**J B**	9.8	0.22	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,7,8-PeCDD	**1.7**	**J B**	49	0.46	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,7,8-PeCDF	**1.6**	**J B**	49	0.34	pg/L		03/08/17 06:51	03/13/17 19:29	1
2,3,4,7,8-PeCDF	**0.98**	**J q B**	49	0.35	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,4,7,8-HxCDD	ND		49	0.45	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,6,7,8-HxCDD	ND		49	0.40	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,7,8,9-HxCDD	**1.9**	**J B**	49	0.37	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,4,7,8-HxCDF	**1.5**	**J q B**	49	0.35	pg/L		03/08/17 06:51	03/13/17 19:29	1

Client Sample ID: MW-8B:022017
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Lab Sample ID: 590-5548-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	1.3	J q B	49	0.32	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,7,8,9-HxCDF	1.9	J B	49	0.38	pg/L		03/08/17 06:51	03/13/17 19:29	1
2,3,4,6,7,8-HxCDF	1.4	J q B	49	0.35	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,4,6,7,8-HpCDD	3.5	J B	49	0.37	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,4,6,7,8-HpCDF	2.9	J B	49	0.54	pg/L		03/08/17 06:51	03/13/17 19:29	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.69	pg/L		03/08/17 06:51	03/13/17 19:29	1
OCDD	11	J q B	98	0.81	pg/L		03/08/17 06:51	03/13/17 19:29	1
OCDF	5.2	J q B	98	0.69	pg/L		03/08/17 06:51	03/13/17 19:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-1,2,3,7,8-PeCDD	*71*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-1,2,3,6,7,8-HxCDD	*73*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*71*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*
13C-OCDD	*64*		*40 - 135*	*03/08/17 06:51*	*03/13/17 19:29*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0012		0.0010	0.00027	mg/L		03/08/17 09:18	03/08/17 19:32	1
Antimony	0.00010	J	0.00040	0.000080	mg/L		03/08/17 09:18	03/08/17 19:32	1
Barium	0.16		0.0012	0.000054	mg/L		03/08/17 09:18	03/08/17 19:32	1
Beryllium	ND		0.00040	0.00010	mg/L		03/08/17 09:18	03/08/17 19:32	1
Cadmium	ND		0.00040	0.000028	mg/L		03/08/17 09:18	03/08/17 19:32	1
Chromium	0.00059		0.00040	0.00014	mg/L		03/08/17 09:18	03/08/17 19:32	1
Copper	0.00072	J	0.0020	0.00060	mg/L		03/08/17 09:18	03/08/17 19:32	1
Iron	0.62		0.040	0.0058	mg/L		03/08/17 09:18	03/08/17 19:32	1
Lead	0.00032	J	0.00040	0.000034	mg/L		03/08/17 09:18	03/08/17 19:32	1
Manganese	0.014		0.0020	0.00035	mg/L		03/08/17 09:18	03/08/17 19:32	1
Nickel	0.00076	J	0.0030	0.00040	mg/L		03/08/17 09:18	03/08/17 19:32	1
Selenium	0.00041	J B	0.0010	0.00030	mg/L		03/08/17 09:18	03/08/17 19:32	1
Silver	ND		0.00040	0.000030	mg/L		03/08/17 09:18	03/08/17 19:32	1
Thallium	ND		0.0010	0.00014	mg/L		03/08/17 09:18	03/08/17 19:32	1
Vanadium	0.0034	J	0.0040	0.00098	mg/L		03/08/17 09:18	03/08/17 19:32	1
Zinc	0.0026	J	0.0070	0.0019	mg/L		03/08/17 09:18	03/08/17 19:32	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0012		0.0010	0.00027	mg/L		02/23/17 16:53	02/24/17 12:36	1
Antimony	0.000097	J	0.00040	0.000080	mg/L		02/23/17 16:53	02/24/17 12:36	1
Barium	0.16		0.0012	0.000054	mg/L		02/23/17 16:53	02/24/17 12:36	1
Beryllium	ND		0.00040	0.00010	mg/L		02/23/17 16:53	02/24/17 12:36	1
Cadmium	0.000034	J	0.00040	0.000028	mg/L		02/23/17 16:53	02/24/17 12:36	1
Chromium	0.00038	J B	0.00040	0.00014	mg/L		02/23/17 16:53	02/24/17 12:36	1
Copper	0.00060	J	0.0020	0.00060	mg/L		02/23/17 16:53	02/24/17 12:36	1
Iron	ND		0.040	0.0058	mg/L		02/23/17 16:53	02/24/17 12:36	1
Lead	ND		0.00040	0.000034	mg/L		02/23/17 16:53	02/24/17 12:36	1
Manganese	ND		0.0020	0.00035	mg/L		02/23/17 16:53	02/24/17 12:36	1

Client Sample ID: MW-8B:022017

Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.00055**	**J**	0.0030	0.00040	mg/L		02/23/17 16:53	02/24/17 12:36	1
Selenium	ND		0.0010	0.00030	mg/L		02/23/17 16:53	02/24/17 12:36	1
Silver	ND		0.00040	0.000030	mg/L		02/23/17 16:53	02/24/17 12:36	1
Thallium	ND		0.0010	0.00014	mg/L		02/23/17 16:53	02/24/17 12:36	1
Vanadium	**0.0028**	**J**	0.0040	0.00098	mg/L		02/23/17 16:53	02/24/17 12:36	1
Zinc	ND		0.0070	0.0019	mg/L		02/23/17 16:53	02/24/17 12:36	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:41	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:38	03/02/17 10:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/27/17 10:14	02/28/17 15:58	1
Ammonia (as N)	**0.28**		0.10	0.060	mg/L		02/23/17 09:55	02/23/17 14:46	1
Chemical Oxygen Demand	**4.3**	**J**	20	4.0	mg/L			02/24/17 14:42	1
Total Organic Carbon	**0.67**	**J**	1.0	0.50	mg/L			02/28/17 18:16	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/21/17 11:12	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/21/17 11:12	1

Client Sample ID: MW-16A:022017

Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 12:46	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 12:46	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 12:46	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 12:46	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 12:46	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 12:46	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 12:46	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 12:46	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 12:46	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 12:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 12:46	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 12:46	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 12:46	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 12:46	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 12:46	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 12:46	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 12:46	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 12:46	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-16A:022017
Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 12:46	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 12:46	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 12:46	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 12:46	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 12:46	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 12:46	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 12:46	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 12:46	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 12:46	1
Acetone	ND		30	14	ug/L			03/01/17 12:46	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 12:46	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 12:46	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 12:46	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 12:46	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 12:46	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 12:46	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 12:46	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 12:46	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 12:46	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 12:46	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 12:46	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 12:46	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 12:46	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 12:46	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 12:46	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 12:46	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 12:46	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 12:46	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 12:46	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 12:46	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 12:46	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 12:46	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 12:46	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 12:46	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 12:46	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 12:46	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 12:46	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 12:46	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 12:46	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 12:46	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 12:46	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 12:46	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 12:46	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 12:46	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 12:46	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 12:46	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 12:46	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 12:46	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 12:46	1

Client Sample ID: MW-16A:022017
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Lab Sample ID: 590-5548-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 12:46	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*		*03/01/17 12:46*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*03/01/17 12:46*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*03/01/17 12:46*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/01/17 12:46*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*03/01/17 12:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
3 & 4 Methylphenol	ND		0.77	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 18:15	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/03/17 18:15	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/03/17 18:15	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-16A:022017
Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 18:15	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 18:15	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 18:15	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 18:15	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		02/27/17 16:44	03/03/17 18:15	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/03/17 18:15	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 18:15	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 18:15	1
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 18:15	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*80*		*57 - 132*	*02/27/17 16:44*	*03/03/17 18:15*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*	*02/27/17 16:44*	*03/03/17 18:15*	*1*
2-Fluorophenol	*82*		*50 - 113*	*02/27/17 16:44*	*03/03/17 18:15*	*1*
Nitrobenzene-d5	*79*		*59 - 120*	*02/27/17 16:44*	*03/03/17 18:15*	*1*
Phenol-d5	*87*		*52 - 120*	*02/27/17 16:44*	*03/03/17 18:15*	*1*
Terphenyl-d14	*112*		*72 - 140*	*02/27/17 16:44*	*03/03/17 18:15*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 11:19	02/22/17 15:39	1

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Date Collected: 02/20/17 15:21
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Lab Sample ID: 590-5548-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0059	ug/L		02/24/17 10:35	02/27/17 16:05	1
4,4'-DDE	ND		0.020	0.0029	ug/L		02/24/17 10:35	02/27/17 16:05	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/24/17 10:35	02/27/17 16:05	1
Aldrin	ND		0.029	0.0069	ug/L		02/24/17 10:35	02/27/17 16:05	1
alpha-BHC	ND		0.029	0.0069	ug/L		02/24/17 10:35	02/27/17 16:05	1
alpha-Chlordane	ND		0.020	0.0029	ug/L		02/24/17 10:35	02/27/17 16:05	1
beta-BHC	ND		0.049	0.012	ug/L		02/24/17 10:35	02/27/17 16:05	1
delta-BHC	ND		0.049	0.0098	ug/L		02/24/17 10:35	02/27/17 16:05	1
Dieldrin	ND		0.029	0.0049	ug/L		02/24/17 10:35	02/27/17 16:05	1
Endosulfan I	ND		0.020	0.0029	ug/L		02/24/17 10:35	02/27/17 16:05	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:05	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:05	1
Endrin	ND		0.020	0.0029	ug/L		02/24/17 10:35	02/27/17 16:05	1
Endrin aldehyde	ND		0.20	0.033	ug/L		02/24/17 10:35	02/27/17 16:05	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:05	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/24/17 10:35	02/27/17 16:05	1
gamma-Chlordane	ND		0.020	0.0029	ug/L		02/24/17 10:35	02/27/17 16:05	1
Heptachlor	ND		0.020	0.0039	ug/L		02/24/17 10:35	02/27/17 16:05	1
Heptachlor epoxide	ND		0.020	0.0029	ug/L		02/24/17 10:35	02/27/17 16:05	1
Methoxychlor	ND		0.098	0.0020	ug/L		02/24/17 10:35	02/27/17 16:05	1
Toxaphene	ND		0.98	0.22	ug/L		02/24/17 10:35	02/27/17 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*98*		*22 - 150*	*02/24/17 10:35*	*02/27/17 16:05*	*1*
Tetrachloro-m-xylene	*109*		*40 - 113*	*02/24/17 10:35*	*02/27/17 16:05*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 17:51	1
PCB-1221	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 17:51	1
PCB-1232	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 17:51	1
PCB-1242	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 17:51	1
PCB-1248	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 17:51	1
PCB-1254	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 17:51	1
PCB-1260	ND		0.099	0.043	ug/L		02/23/17 12:49	02/23/17 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*51*		*20 - 120*	*02/23/17 12:49*	*02/23/17 17:51*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*36 - 138*	*02/23/17 12:49*	*02/23/17 17:51*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.5	0.28	ug/L		02/27/17 19:29	03/16/17 02:35	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/16/17 02:35	1
Bolstar	ND		0.95	0.30	ug/L		02/27/17 19:29	03/16/17 02:35	1
Chlorpyrifos	ND		1.4	0.34	ug/L		02/27/17 19:29	03/16/17 02:35	1
Coumaphos	ND		0.95	0.13	ug/L		02/27/17 19:29	03/16/17 02:35	1
Demeton, Total	ND		2.8	0.20	ug/L		02/27/17 19:29	03/16/17 02:35	1
Diazinon	ND		0.47	0.14	ug/L		02/27/17 19:29	03/16/17 02:35	1
Dichlorvos	ND		0.47	0.15	ug/L		02/27/17 19:29	03/16/17 02:35	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-16A:022017
Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		02/27/17 19:29	03/16/17 02:35	1
Disulfoton	ND		0.95	0.31	ug/L		02/27/17 19:29	03/16/17 02:35	1
EPN	ND		1.1	0.14	ug/L		02/27/17 19:29	03/16/17 02:35	1
Famphur	ND		0.95	0.17	ug/L		02/27/17 19:29	03/16/17 02:35	1
Fensulfothion	ND		2.4	0.52	ug/L		02/27/17 19:29	03/16/17 02:35	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/16/17 02:35	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/16/17 02:35	1
Merphos	ND		4.7	0.17	ug/L		02/27/17 19:29	03/16/17 02:35	1
Methyl parathion	ND		3.8	0.13	ug/L		02/27/17 19:29	03/16/17 02:35	1
Mevinphos	ND		5.9	0.44	ug/L		02/27/17 19:29	03/16/17 02:35	1
Ethyl Parathion	ND		0.95	0.14	ug/L		02/27/17 19:29	03/16/17 02:35	1
Phorate	ND		1.1	0.15	ug/L		02/27/17 19:29	03/16/17 02:35	1
Ronnel	ND		9.5	0.11	ug/L		02/27/17 19:29	03/16/17 02:35	1
Simazine	ND		9.5	0.21	ug/L		02/27/17 19:29	03/16/17 02:35	1
Sulfotepp	ND		1.4	0.16	ug/L		02/27/17 19:29	03/16/17 02:35	1
Thionazin	ND		0.95	0.30	ug/L		02/27/17 19:29	03/16/17 02:35	1
Tokuthion	ND		1.5	0.12	ug/L		02/27/17 19:29	03/16/17 02:35	1
Trichloronate	ND		1.4	0.23	ug/L		02/27/17 19:29	03/16/17 02:35	1
Ethoprop	ND		1.4	0.17	ug/L		02/27/17 19:29	03/16/17 02:35	1
Propazine	ND		9.5	0.28	ug/L		02/27/17 19:29	03/16/17 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*57*		*49 - 171*	*02/27/17 19:29*	*03/16/17 02:35*	*1*
Triphenylphosphate	*80*		*60 - 154*	*02/27/17 19:29*	*03/16/17 02:35*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/27/17 15:30	03/02/17 12:20	1
2,4-D	ND		3.9	0.20	ug/L		02/27/17 15:30	03/02/17 12:20	1
2,4-DB	ND		3.9	0.35	ug/L		02/27/17 15:30	03/02/17 12:20	1
Dalapon	ND		1.9	0.89	ug/L		02/27/17 15:30	03/02/17 12:20	1
Dicamba	ND		1.9	0.15	ug/L		02/27/17 15:30	03/02/17 12:20	1
Dichlorprop	ND		3.9	0.63	ug/L		02/27/17 15:30	03/02/17 12:20	1
MCPA	ND		390	17	ug/L		02/27/17 15:30	03/02/17 12:20	1
MCPP	**32**	**J p**	390	32	ug/L		02/27/17 15:30	03/02/17 12:20	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		02/27/17 15:30	03/02/17 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*73*		*39 - 135*	*02/27/17 15:30*	*03/02/17 12:20*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		02/28/17 09:16	02/28/17 13:07	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		02/28/17 09:16	02/28/17 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*02/28/17 09:16*	*02/28/17 13:07*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*02/28/17 09:16*	*02/28/17 13:07*	*1*

Client Sample ID: MW-16A:022017

Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47**		0.80	0.42	mg/L			02/21/17 13:41	1
Nitrate as N	**1.2**		0.20	0.039	mg/L			02/21/17 13:41	1
Nitrite as N	ND		0.20	0.069	mg/L			02/21/17 13:41	1
Sulfate	**25**		0.50	0.13	mg/L			02/21/17 13:41	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.80**	**J q B**	9.7	0.26	pg/L		03/08/17 06:51	03/13/17 20:12	1
2,3,7,8-TCDF	ND		9.7	0.21	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,7,8-PeCDD	ND		49	0.42	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,7,8-PeCDF	ND		49	0.35	pg/L		03/08/17 06:51	03/13/17 20:12	1
2,3,4,7,8-PeCDF	**1.1**	**J q B**	49	0.36	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,4,7,8-HxCDD	**0.86**	**J q B**	49	0.33	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,6,7,8-HxCDD	ND		49	0.29	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,7,8,9-HxCDD	**0.83**	**J q B**	49	0.27	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,4,7,8-HxCDF	**0.86**	**J q B**	49	0.24	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,6,7,8-HxCDF	**1.1**	**J B**	49	0.22	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,7,8,9-HxCDF	**1.0**	**J q B**	49	0.26	pg/L		03/08/17 06:51	03/13/17 20:12	1
2,3,4,6,7,8-HxCDF	**1.2**	**J B**	49	0.24	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,4,6,7,8-HpCDD	**1.8**	**J q B**	49	0.25	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,4,6,7,8-HpCDF	**2.0**	**J B**	49	0.39	pg/L		03/08/17 06:51	03/13/17 20:12	1
1,2,3,4,7,8,9-HpCDF	**0.86**	**J q B**	49	0.50	pg/L		03/08/17 06:51	03/13/17 20:12	1
OCDD	**8.5**	**J B**	97	0.53	pg/L		03/08/17 06:51	03/13/17 20:12	1
OCDF	**3.5**	**J B**	97	0.41	pg/L		03/08/17 06:51	03/13/17 20:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*81*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-2,3,7,8-TCDF	*78*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-1,2,3,7,8-PeCDD	*81*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-1,2,3,7,8-PeCDF	*80*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*88*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*85*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*
13C-OCDD	*84*		*40 - 135*	*03/08/17 06:51*	*03/13/17 20:12*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		03/08/17 09:18	03/08/17 19:37	1
Antimony	**0.00011**	**J**	0.00040	0.000080	mg/L		03/08/17 09:18	03/08/17 19:37	1
Barium	**0.040**		0.0012	0.000054	mg/L		03/08/17 09:18	03/08/17 19:37	1
Beryllium	ND		0.00040	0.00010	mg/L		03/08/17 09:18	03/08/17 19:37	1
Cadmium	ND		0.00040	0.000028	mg/L		03/08/17 09:18	03/08/17 19:37	1
Chromium	ND		0.00040	0.00014	mg/L		03/08/17 09:18	03/08/17 19:37	1
Copper	**0.0043**		0.0020	0.00060	mg/L		03/08/17 09:18	03/08/17 19:37	1
Iron	ND		0.040	0.0058	mg/L		03/08/17 09:18	03/08/17 19:37	1
Lead	**0.00020**	**J**	0.00040	0.000034	mg/L		03/08/17 09:18	03/08/17 19:37	1
Manganese	**0.0024**		0.0020	0.00035	mg/L		03/08/17 09:18	03/08/17 19:37	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		03/08/17 09:18	03/08/17 19:37	1
Selenium	**0.00050**	**J B**	0.0010	0.00030	mg/L		03/08/17 09:18	03/08/17 19:37	1
Silver	ND		0.00040	0.000030	mg/L		03/08/17 09:18	03/08/17 19:37	1

Client Sample ID: MW-16A:022017
Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		03/08/17 09:18	03/08/17 19:37	1
Vanadium	**0.0059**		0.0040	0.00098	mg/L		03/08/17 09:18	03/08/17 19:37	1
Zinc	ND		0.0070	0.0019	mg/L		03/08/17 09:18	03/08/17 19:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		02/23/17 16:53	02/24/17 12:40	1
Antimony	**0.00011**	**J**	0.00040	0.000080	mg/L		02/23/17 16:53	02/24/17 12:40	1
Barium	**0.045**		0.0012	0.000054	mg/L		02/23/17 16:53	02/24/17 12:40	1
Beryllium	ND		0.00040	0.00010	mg/L		02/23/17 16:53	02/24/17 12:40	1
Cadmium	ND		0.00040	0.000028	mg/L		02/23/17 16:53	02/24/17 12:40	1
Chromium	**0.00017**	**J B**	0.00040	0.00014	mg/L		02/23/17 16:53	02/24/17 12:40	1
Copper	**0.0038**		0.0020	0.00060	mg/L		02/23/17 16:53	02/24/17 12:40	1
Iron	ND		0.040	0.0058	mg/L		02/23/17 16:53	02/24/17 12:40	1
Lead	**0.000049**	**J**	0.00040	0.000034	mg/L		02/23/17 16:53	02/24/17 12:40	1
Manganese	**0.0023**		0.0020	0.00035	mg/L		02/23/17 16:53	02/24/17 12:40	1
Nickel	**0.0016**	**J**	0.0030	0.00040	mg/L		02/23/17 16:53	02/24/17 12:40	1
Selenium	ND		0.0010	0.00030	mg/L		02/23/17 16:53	02/24/17 12:40	1
Silver	ND		0.00040	0.000030	mg/L		02/23/17 16:53	02/24/17 12:40	1
Thallium	ND		0.0010	0.00014	mg/L		02/23/17 16:53	02/24/17 12:40	1
Vanadium	**0.0066**		0.0040	0.00098	mg/L		02/23/17 16:53	02/24/17 12:40	1
Zinc	**0.0020**	**J**	0.0070	0.0019	mg/L		02/23/17 16:53	02/24/17 12:40	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:43	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:38	03/02/17 10:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0070	mg/L		02/27/17 10:14	02/28/17 15:59	1
Ammonia (as N)	**0.083**	**J**	0.10	0.060	mg/L		02/23/17 09:55	02/23/17 14:48	1
Chemical Oxygen Demand	**10**	**J**	20	4.0	mg/L			02/24/17 14:42	1
Total Organic Carbon	**2.6**		1.0	0.50	mg/L			02/28/17 18:32	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/21/17 11:12	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/21/17 11:12	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 10:56	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 10:56	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 10:56	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 10:56	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 10:56	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 10:56	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 10:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 10:56	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 10:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 10:56	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 10:56	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 10:56	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 10:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 10:56	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 10:56	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 10:56	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 10:56	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 10:56	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 10:56	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 10:56	1
Acetone	ND		30	14	ug/L			03/01/17 10:56	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 10:56	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 10:56	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 10:56	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 10:56	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 10:56	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 10:56	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 10:56	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 10:56	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 10:56	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 10:56	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 10:56	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 10:56	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 10:56	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 10:56	1
Dichlorofluoromethane	0.341	J	1.0	0.30	ug/L			03/01/17 10:56	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 10:56	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			03/01/17 10:56	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 10:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 10:56	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 10:56	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 10:56	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 10:56	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 10:56	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 10:56	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 10:56	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 10:56	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 10:56	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 10:56	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 10:56	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*03/01/17 10:56*	*1*
4-Bromofluorobenzene (Surr)	*108*		*69 - 120*		*03/01/17 10:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/01/17 10:56*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.77		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	71 - 130
1,1,2,2-Tetrachloroethane	10.0	9.74		ug/L		97	66 - 122
1,1,2-Trichloroethane	10.0	9.86		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	10.1		ug/L		101	70 - 127
1,1-Dichloroethane	10.0	9.77		ug/L		98	79 - 121
1,1-Dichloroethene	10.0	9.57		ug/L		96	69 - 127
1,1-Dichloropropene	10.0	9.83		ug/L		98	76 - 125
1,2,3-Trichlorobenzene	10.0	9.57		ug/L		96	60 - 125
1,2,3-Trichloropropane	10.0	9.70		ug/L		97	60 - 124
1,2,4-Trichlorobenzene	10.0	9.75		ug/L		98	66 - 124
1,2,4-Trimethylbenzene	10.0	10.2		ug/L		102	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.91	J	ug/L		89	36 - 140
1,2-Dichlorobenzene	10.0	9.95		ug/L		99	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	9.74		ug/L		97	76 - 121
1,3,5-Trimethylbenzene	10.0	10.2		ug/L		102	75 - 122
1,3-Dichlorobenzene	10.0	10.0		ug/L		100	77 - 120
1,3-Dichloropropane	10.0	10.1		ug/L		101	75 - 120
1,4-Dichlorobenzene	10.0	9.38		ug/L		94	77 - 121
2,2-Dichloropropane	10.0	11.1		ug/L		111	49 - 147
2-Butanone (MEK)	50.0	51.5		ug/L		103	40 - 150
2-Chlorotoluene	10.0	9.80		ug/L		98	75 - 121
2-Hexanone	50.0	45.7		ug/L		91	46 - 146
4-Chlorotoluene	10.0	10.4		ug/L		104	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	47.0		ug/L		94	60 - 127
Acetone	50.0	46.9		ug/L		94	20 - 150
Benzene	10.0	9.81		ug/L		98	80 - 120
Bromobenzene	10.0	9.65		ug/L		97	74 - 121
Bromochloromethane	10.0	9.93		ug/L		99	70 - 126
Bromodichloromethane	10.0	9.74		ug/L		97	67 - 125
Bromoform	10.0	9.76		ug/L		98	60 - 122
Bromomethane	10.0	10.2		ug/L		102	45 - 150
Carbon disulfide	10.0	9.59		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.95		ug/L		99	68 - 134
Chlorobenzene	10.0	9.97		ug/L		100	79 - 125
Chloroethane	10.0	10.3		ug/L		103	48 - 150
Chloroform	10.0	10.0		ug/L		100	73 - 126
Chloromethane	10.0	9.03		ug/L		90	51 - 150
cis-1,2-Dichloroethene	10.0	9.74		ug/L		97	76 - 121
cis-1,3-Dichloropropene	10.0	9.04		ug/L		90	72 - 120
Dibromochloromethane	10.0	10.3		ug/L		103	72 - 120
Dibromomethane	10.0	10.3		ug/L		103	71 - 120
Dichlorodifluoromethane	10.0	8.24		ug/L		82	32 - 150
Dichlorofluoromethane	10.0	9.98		ug/L		100	60 - 140
Ethylbenzene	10.0	9.95		ug/L		99	80 - 120
Hexachlorobutadiene	10.0	9.76		ug/L		98	62 - 132
Hexane	10.0	9.50		ug/L		95	68 - 125
Isopropylbenzene	10.0	9.58		ug/L		96	77 - 123
m,p-Xylene	10.0	9.48		ug/L		95	80 - 120
Methyl tert-butyl ether	10.0	9.43		ug/L		94	71 - 128
Methylene Chloride	10.0	9.67		ug/L		97	20 - 150
Naphthalene	10.0	8.71		ug/L		87	63 - 124
n-Butylbenzene	10.0	9.50		ug/L		95	71 - 120
N-Propylbenzene	10.0	9.61		ug/L		96	76 - 120
o-Xylene	10.0	9.48		ug/L		95	80 - 120
p-Isopropyltoluene	10.0	9.47		ug/L		95	77 - 120
sec-Butylbenzene	10.0	9.96		ug/L		100	74 - 121
Styrene	10.0	9.61		ug/L		96	73 - 120
tert-Butylbenzene	10.0	9.42		ug/L		94	79 - 120
Tetrachloroethene	10.0	10.2		ug/L		102	71 - 132
Toluene	10.0	10.0		ug/L		100	80 - 123
trans-1,2-Dichloroethene	10.0	9.53		ug/L		95	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	70 - 121
Trichloroethene	10.0	10.2		ug/L		102	75 - 129
Trichlorofluoromethane	10.0	9.70		ug/L		97	60 - 140
Vinyl chloride	10.0	9.31		ug/L		93	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 590-5548-1 DU
Matrix: Water
Analysis Batch: 10912

Client Sample ID: MW-8A:022017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		ND		ug/L		NC	20
1,1,1-Trichloroethane	0.34	J	ND		ug/L		NC	20
1,1,2,2-Tetrachloroethane	ND		ND		ug/L		NC	20
1,1,2-Trichloroethane	ND		ND		ug/L		NC	20
1,1,2-Trichlorotrifluoroethane	ND		ND		ug/L		NC	20
1,1-Dichloroethane	ND		ND		ug/L		NC	20
1,1-Dichloroethene	ND		ND		ug/L		NC	20
1,1-Dichloropropene	ND		ND		ug/L		NC	20
1,2,3-Trichlorobenzene	ND		ND		ug/L		NC	20
1,2,3-Trichloropropane	ND		ND		ug/L		NC	20
1,2,4-Trichlorobenzene	ND		ND		ug/L		NC	20
1,2,4-Trimethylbenzene	ND		ND		ug/L		NC	20
1,2-Dibromo-3-Chloropropane	ND		ND		ug/L		NC	20
1,2-Dibromoethane (EDB)	ND		ND		ug/L		NC	20
1,2-Dichlorobenzene	ND		ND		ug/L		NC	20
1,2-Dichloroethane	ND		ND		ug/L		NC	20
1,2-Dichloropropane	ND		ND		ug/L		NC	20
1,3,5-Trimethylbenzene	ND		ND		ug/L		NC	20
1,3-Dichlorobenzene	ND		ND		ug/L		NC	20
1,3-Dichloropropane	ND		ND		ug/L		NC	20
1,4-Dichlorobenzene	ND		ND		ug/L		NC	20
2,2-Dichloropropane	ND		ND		ug/L		NC	20
2-Butanone (MEK)	ND		ND		ug/L		NC	20
2-Chlorotoluene	ND		ND		ug/L		NC	20
2-Hexanone	ND		ND		ug/L		NC	20
4-Chlorotoluene	ND		ND		ug/L		NC	20
4-Methyl-2-pentanone (MIBK)	ND		ND		ug/L		NC	20
Acetone	ND		ND		ug/L		NC	20
Benzene	ND		ND		ug/L		NC	20
Bromobenzene	ND		ND		ug/L		NC	20
Bromochloromethane	ND		ND		ug/L		NC	20
Bromodichloromethane	ND		ND		ug/L		NC	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 590-5548-1 DU
Matrix: Water
Analysis Batch: 10912

Client Sample ID: MW-8A:022017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Bromoform	ND			ND		ug/L				NC	20
Bromomethane	ND			ND		ug/L				NC	20
Carbon disulfide	ND			ND		ug/L				NC	20
Carbon tetrachloride	ND			ND		ug/L				NC	20
Chlorobenzene	ND			ND		ug/L				NC	20
Chloroethane	ND			ND		ug/L				NC	20
Chloroform	ND			ND		ug/L				NC	20
Chloromethane	ND			ND		ug/L				NC	20
cis-1,2-Dichloroethene	ND			ND		ug/L				NC	20
cis-1,3-Dichloropropene	ND			ND		ug/L				NC	20
Dibromochloromethane	ND			ND		ug/L				NC	20
Dibromomethane	ND			ND		ug/L				NC	20
Dichlorodifluoromethane	ND			ND		ug/L				NC	20
Dichlorofluoromethane	0.44	J B		0.438	J	ug/L				1	20
Ethylbenzene	ND			ND		ug/L				NC	20
Hexachlorobutadiene	ND			ND		ug/L				NC	20
Hexane	ND			ND		ug/L				NC	20
Isopropylbenzene	ND			ND		ug/L				NC	20
m,p-Xylene	ND			ND		ug/L				NC	20
Methyl tert-butyl ether	ND			ND		ug/L				NC	20
Methylene Chloride	ND			ND		ug/L				NC	20
Naphthalene	ND			ND		ug/L				NC	20
n-Butylbenzene	ND			ND		ug/L				NC	20
N-Propylbenzene	ND			ND		ug/L				NC	20
o-Xylene	ND			ND		ug/L				NC	20
p-Isopropyltoluene	ND			ND		ug/L				NC	20
sec-Butylbenzene	ND			ND		ug/L				NC	20
Styrene	ND			ND		ug/L				NC	20
tert-Butylbenzene	ND			ND		ug/L				NC	20
Tetrachloroethene	ND			ND		ug/L				NC	20
Toluene	ND			ND		ug/L				NC	20
trans-1,2-Dichloroethene	ND			ND		ug/L				NC	20
trans-1,3-Dichloropropene	ND			ND		ug/L				NC	20
Trichloroethene	ND			ND		ug/L				NC	20
Trichlorofluoromethane	0.29	J		0.248	J	ug/L				16	20
Vinyl chloride	ND			ND		ug/L				NC	20
Xylenes, Total	ND			ND		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*
Dibromofluoromethane (Surr)	*107*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-10911/5
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10911/1004
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	919		ug/L		92	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*68.7 - 141*

Lab Sample ID: 590-5548-1 DU
Matrix: Water
Analysis Batch: 10911

Client Sample ID: MW-8A:022017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	ND			ND		ug/L				NC	35

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		02/27/17 16:44	03/03/17 16:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthene	ND		0.10	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Anthracene	ND		0.040	0.010	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzoic acid	ND		3.0	0.60	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		02/27/17 16:44	03/03/17 16:12	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		02/27/17 16:44	03/03/17 16:12	1
Carbazole	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Chrysene	ND		0.040	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluoranthene	ND		0.050	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluorene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Isophorone	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Naphthalene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.70	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenanthrene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pyrene	ND		0.060	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*57 - 132*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Nitrobenzene-d5	*81*		*59 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Phenol-d5	*85*		*52 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Terphenyl-d14	*101*		*72 - 140*	*02/27/17 16:44*	*03/03/17 16:12*	*1*

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.91		ug/L		95	40 - 115
1,2-Dichlorobenzene	2.00	1.79		ug/L		89	44 - 119
1,3-Dichlorobenzene	2.00	1.71		ug/L		86	34 - 116
1,4-Dichlorobenzene	2.00	1.70		ug/L		85	40 - 118
1-Methylnaphthalene	2.00	1.95		ug/L		97	54 - 119
2,4,5-Trichlorophenol	2.00	1.75		ug/L		88	56 - 122
2,4,6-Trichlorophenol	2.00	1.96		ug/L		98	55 - 134
2,4-Dichlorophenol	2.00	2.06		ug/L		103	50 - 125
2,4-Dimethylphenol	2.00	1.66	J	ug/L		83	20 - 106
2,4-Dinitrophenol	4.00	1.72	J	ug/L		43	24 - 139
2,4-Dinitrotoluene	2.00	1.86		ug/L		93	40 - 143
2,6-Dinitrotoluene	2.00	1.86		ug/L		93	45 - 134
2-Chloronaphthalene	2.00	1.99		ug/L		100	55 - 125
2-Chlorophenol	2.00	1.97		ug/L		99	57 - 125
2-Methylnaphthalene	2.00	2.01		ug/L		101	56 - 117
2-Methylphenol	2.00	1.81		ug/L		91	53 - 118
2-Nitroaniline	2.00	1.81		ug/L		90	58 - 124
2-Nitrophenol	2.00	1.56		ug/L		78	20 - 150
3 & 4 Methylphenol	2.00	1.92		ug/L		96	54 - 112
3,3'-Dichlorobenzidine	4.00	2.65		ug/L		66	20 - 121
3-Nitroaniline	2.00	1.43		ug/L		71	22 - 124
4,6-Dinitro-2-methylphenol	4.00	2.00	J	ug/L		50	20 - 150
4-Bromophenyl phenyl ether	2.00	2.07		ug/L		104	62 - 132
4-Chloro-3-methylphenol	2.00	1.91		ug/L		95	56 - 133
4-Chloroaniline	2.00	0.422		ug/L		21	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.99		ug/L		99	59 - 125
4-Nitroaniline	2.00	1.74		ug/L		87	40 - 118
4-Nitrophenol	4.00	3.75		ug/L		94	20 - 150
Acenaphthene	2.00	1.84		ug/L		92	55 - 113
Acenaphthylene	2.00	1.80		ug/L		90	24 - 135

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	2.00	1.83		ug/L		91	20 - 125
Benzo[a]anthracene	2.00	2.03		ug/L		101	49 - 115
Benzo[a]pyrene	2.00	1.54		ug/L		77	20 - 115
Benzo[b]fluoranthene	2.00	2.07		ug/L		103	63 - 129
Benzo[g,h,i]perylene	2.00	1.83		ug/L		91	58 - 127
Benzo[k]fluoranthene	2.00	1.91		ug/L		96	60 - 134
Benzoic acid	4.00	1.95	J	ug/L		49	20 - 150
Benzyl alcohol	2.00	2.01		ug/L		100	52 - 124
bis (2-chloroisopropyl) ether	2.00	2.01		ug/L		100	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.98		ug/L		99	59 - 125
Bis(2-chloroethyl)ether	2.00	1.91		ug/L		95	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.26	J	ug/L		113	22 - 150
Butyl benzyl phthalate	2.00	2.38		ug/L		119	46 - 150
Carbazole	2.00	2.34		ug/L		117	68 - 142
Chrysene	2.00	2.03		ug/L		101	57 - 131
Dibenz(a,h)anthracene	2.00	1.51		ug/L		76	56 - 124
Dibenzofuran	2.00	1.97		ug/L		98	60 - 125
Diethyl phthalate	2.00	2.05		ug/L		102	60 - 134
Dimethyl phthalate	2.00	2.14		ug/L		107	65 - 134
Di-n-butyl phthalate	2.00	2.47		ug/L		123	67 - 140
Di-n-octyl phthalate	2.00	2.03		ug/L		102	55 - 150
Fluoranthene	2.00	2.25		ug/L		113	70 - 135
Fluorene	2.00	1.95		ug/L		98	57 - 125
Hexachlorobenzene	2.00	1.84		ug/L		92	55 - 135
Hexachlorobutadiene	2.00	1.83		ug/L		91	25 - 125
Hexachlorocyclopentadiene	2.00	0.793	J	ug/L		40	20 - 110
Hexachloroethane	2.00	1.65		ug/L		82	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.81		ug/L		91	54 - 124
Isophorone	2.00	1.91		ug/L		95	64 - 125
Naphthalene	2.00	1.88		ug/L		94	56 - 119
Nitrobenzene	2.00	1.85		ug/L		92	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.77		ug/L		89	54 - 120
N-Nitrosodiphenylamine	2.00	1.68		ug/L		84	40 - 124
Pentachlorophenol	4.00	2.30		ug/L		58	30 - 122
Phenanthrene	2.00	2.00		ug/L		100	57 - 125
Phenol	2.00	1.85		ug/L		93	53 - 113
Pyrene	2.00	2.24		ug/L		112	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*85*		*59 - 120*
Phenol-d5	*88*		*52 - 120*
Terphenyl-d14	*102*		*72 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.91		ug/L		95	40 - 115	0	20
1,2-Dichlorobenzene	2.00	1.85		ug/L		92	44 - 119	3	20
1,3-Dichlorobenzene	2.00	1.82		ug/L		91	34 - 116	6	29
1,4-Dichlorobenzene	2.00	1.78		ug/L		89	40 - 118	5	20
1-Methylnaphthalene	2.00	1.92		ug/L		96	54 - 119	1	20
2,4,5-Trichlorophenol	2.00	1.76		ug/L		88	56 - 122	1	20
2,4,6-Trichlorophenol	2.00	1.91		ug/L		96	55 - 134	2	20
2,4-Dichlorophenol	2.00	2.06		ug/L		103	50 - 125	0	26
2,4-Dimethylphenol	2.00	1.57	J	ug/L		79	20 - 106	5	35
2,4-Dinitrophenol	4.00	2.34	J	ug/L		59	24 - 139	31	35
2,4-Dinitrotoluene	2.00	1.95		ug/L		98	40 - 143	5	29
2,6-Dinitrotoluene	2.00	1.92		ug/L		96	45 - 134	3	31
2-Chloronaphthalene	2.00	2.03		ug/L		102	55 - 125	2	20
2-Chlorophenol	2.00	2.02		ug/L		101	57 - 125	3	20
2-Methylnaphthalene	2.00	2.00		ug/L		100	56 - 117	1	20
2-Methylphenol	2.00	1.83		ug/L		92	53 - 118	1	33
2-Nitroaniline	2.00	1.92		ug/L		96	58 - 124	6	20
2-Nitrophenol	2.00	1.69		ug/L		85	20 - 150	8	35
3 & 4 Methylphenol	2.00	1.93		ug/L		96	54 - 112	0	20
3,3'-Dichlorobenzidine	4.00	2.70		ug/L		67	20 - 121	2	35
3-Nitroaniline	2.00	1.47		ug/L		74	22 - 124	3	35
4,6-Dinitro-2-methylphenol	4.00	2.85	J *	ug/L		71	20 - 150	35	30
4-Bromophenyl phenyl ether	2.00	2.08		ug/L		104	62 - 132	0	20
4-Chloro-3-methylphenol	2.00	1.91		ug/L		95	56 - 133	0	20
4-Chloroaniline	2.00	ND	*	ug/L		5	20 - 110	128	35
4-Chlorophenyl phenyl ether	2.00	2.02		ug/L		101	59 - 125	2	20
4-Nitroaniline	2.00	1.98		ug/L		99	40 - 118	13	20
4-Nitrophenol	4.00	3.95		ug/L		99	20 - 150	5	29
Acenaphthene	2.00	1.91		ug/L		95	55 - 113	4	20
Acenaphthylene	2.00	1.86		ug/L		93	24 - 135	3	20
Anthracene	2.00	1.71		ug/L		85	20 - 125	7	26
Benzo[a]anthracene	2.00	2.01		ug/L		101	49 - 115	1	20
Benzo[a]pyrene	2.00	1.45		ug/L		73	20 - 115	6	35
Benzo[b]fluoranthene	2.00	2.16		ug/L		108	63 - 129	4	20
Benzo[g,h,i]perylene	2.00	1.84		ug/L		92	58 - 127	1	20
Benzo[k]fluoranthene	2.00	1.96		ug/L		98	60 - 134	3	20
Benzoic acid	4.00	1.96	J	ug/L		49	20 - 150	0	35
Benzyl alcohol	2.00	2.07		ug/L		104	52 - 124	3	20
bis (2-chloroisopropyl) ether	2.00	2.05		ug/L		102	44 - 123	2	20
Bis(2-chloroethoxy)methane	2.00	2.03		ug/L		101	59 - 125	2	20
Bis(2-chloroethyl)ether	2.00	1.97		ug/L		98	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	3.09	*	ug/L		154	22 - 150	31	20
Butyl benzyl phthalate	2.00	2.39		ug/L		119	46 - 150	0	20
Carbazole	2.00	2.33		ug/L		117	68 - 142	0	20
Chrysene	2.00	2.04		ug/L		102	57 - 131	1	20
Dibenz(a,h)anthracene	2.00	1.57		ug/L		78	56 - 124	3	20
Dibenzofuran	2.00	2.00		ug/L		100	60 - 125	2	20
Diethyl phthalate	2.00	2.10		ug/L		105	60 - 134	3	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dimethyl phthalate			2.00	2.21		ug/L		110	65 - 134	3	20
Di-n-butyl phthalate			2.00	2.51		ug/L		126	67 - 140	2	20
Di-n-octyl phthalate			2.00	2.07		ug/L		103	55 - 150	2	20
Fluoranthene			2.00	2.27		ug/L		113	70 - 135	1	20
Fluorene			2.00	2.00		ug/L		100	57 - 125	3	20
Hexachlorobenzene			2.00	1.80		ug/L		90	55 - 135	2	20
Hexachlorobutadiene			2.00	1.90		ug/L		95	25 - 125	4	31
Hexachlorocyclopentadiene			2.00	1.01	J	ug/L		51	20 - 110	24	35
Hexachloroethane			2.00	1.81		ug/L		91	24 - 125	9	35
Indeno[1,2,3-cd]pyrene			2.00	1.87		ug/L		93	54 - 124	3	20
Isophorone			2.00	1.99		ug/L		99	64 - 125	4	20
Naphthalene			2.00	1.87		ug/L		93	56 - 119	0	20
Nitrobenzene			2.00	1.97		ug/L		98	62 - 125	6	20
N-Nitrosodi-n-propylamine			2.00	1.84		ug/L		92	54 - 120	4	20
N-Nitrosodiphenylamine			2.00	1.71		ug/L		86	40 - 124	2	20
Pentachlorophenol			4.00	2.47		ug/L		62	30 - 122	7	35
Phenanthrene			2.00	1.99		ug/L		99	57 - 125	1	20
Phenol			2.00	1.85		ug/L		92	53 - 113	0	20
Pyrene			2.00	2.23		ug/L		111	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*
2-Fluorobiphenyl	*82*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*84*		*59 - 120*
Phenol-d5	*86*		*52 - 120*
Terphenyl-d14	*104*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-10821/2-A
Matrix: Water
Analysis Batch: 10820

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10821

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 11:19	02/22/17 13:36	1

Lab Sample ID: LCS 590-10821/3-A
Matrix: Water
Analysis Batch: 10820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10821

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.125	0.127		ug/L		102	60 - 140		

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCSD 590-10821/4-A
Matrix: Water
Analysis Batch: 10820

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10821

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.124		ug/L		99	60 - 140	3	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-239224/1-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239224

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/24/17 10:35	02/27/17 14:28	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 14:28	1
Aldrin	ND		0.030	0.0070	ug/L		02/24/17 10:35	02/27/17 14:28	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/24/17 10:35	02/27/17 14:28	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
beta-BHC	ND		0.050	0.012	ug/L		02/24/17 10:35	02/27/17 14:28	1
delta-BHC	ND		0.050	0.010	ug/L		02/24/17 10:35	02/27/17 14:28	1
Dieldrin	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endrin	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 14:28	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Heptachlor	ND		0.020	0.0040	ug/L		02/24/17 10:35	02/27/17 14:28	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
Toxaphene	ND		1.0	0.22	ug/L		02/24/17 10:35	02/27/17 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*98*		*22 - 150*	*02/24/17 10:35*	*02/27/17 14:28*	*1*
Tetrachloro-m-xylene	*104*		*40 - 113*	*02/24/17 10:35*	*02/27/17 14:28*	*1*

Lab Sample ID: LCS 580-239224/2-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239224

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.193		ug/L		96	32 - 133
4,4'-DDE	0.200	0.191		ug/L		96	30 - 138
4,4'-DDT	0.200	0.185		ug/L		92	34 - 131
Aldrin	0.200	0.172		ug/L		86	35 - 124
alpha-BHC	0.200	0.192		ug/L		96	39 - 126
alpha-Chlordane	0.200	0.168		ug/L		84	37 - 133
beta-BHC	0.200	0.180		ug/L		90	38 - 114
delta-BHC	0.200	0.199		ug/L		99	20 - 138

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-239224/2-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239224

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dieldrin			0.200	0.182		ug/L		91	39 - 140		
Endosulfan I			0.200	0.178		ug/L		89	23 - 142		
Endosulfan II			0.200	0.200		ug/L		100	20 - 150		
Endosulfan sulfate			0.200	0.179		ug/L		89	36 - 130		
Endrin			0.200	0.201		ug/L		101	32 - 130		
Endrin aldehyde			0.200	0.256		ug/L		128	37 - 139		
Endrin ketone			0.200	0.186		ug/L		93	32 - 136		
gamma-BHC (Lindane)			0.200	0.204		ug/L		102	40 - 121		
gamma-Chlordane			0.200	0.177		ug/L		88	38 - 136		
Heptachlor			0.200	0.177		ug/L		88	39 - 129		
Heptachlor epoxide			0.200	0.182		ug/L		91	34 - 135		
Methoxychlor			0.200	0.187		ug/L		93	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*22 - 150*
Tetrachloro-m-xylene	*107*		*40 - 113*

Lab Sample ID: LCSD 580-239224/3-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239224

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.196		ug/L		98	32 - 133	2	35
4,4'-DDE			0.200	0.203		ug/L		101	30 - 138	6	35
4,4'-DDT			0.200	0.174		ug/L		87	34 - 131	6	35
Aldrin			0.200	0.186		ug/L		93	35 - 124	8	35
alpha-BHC			0.200	0.197		ug/L		98	39 - 126	2	35
alpha-Chlordane			0.200	0.185		ug/L		92	37 - 133	10	35
beta-BHC			0.200	0.181		ug/L		91	38 - 114	1	35
delta-BHC			0.200	0.200		ug/L		100	20 - 138	1	35
Dieldrin			0.200	0.186		ug/L		93	39 - 140	2	35
Endosulfan I			0.200	0.187		ug/L		93	23 - 142	5	35
Endosulfan II			0.200	0.205		ug/L		102	20 - 150	2	35
Endosulfan sulfate			0.200	0.177		ug/L		89	36 - 130	1	35
Endrin			0.200	0.193		ug/L		96	32 - 130	4	35
Endrin aldehyde			0.200	0.261		ug/L		130	37 - 139	2	35
Endrin ketone			0.200	0.188		ug/L		94	32 - 136	1	35
gamma-BHC (Lindane)			0.200	0.209		ug/L		105	40 - 121	3	35
gamma-Chlordane			0.200	0.187		ug/L		93	38 - 136	5	35
Heptachlor			0.200	0.173		ug/L		86	39 - 129	2	35
Heptachlor epoxide			0.200	0.185		ug/L		93	34 - 135	2	35
Methoxychlor			0.200	0.173		ug/L		87	33 - 139	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*98*		*22 - 150*
Tetrachloro-m-xylene	*107*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-10839/1-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10839

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1221	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1232	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1242	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1248	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1254	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1260	ND		0.10	0.043	ug/L		02/23/17 12:49	02/23/17 16:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*20 - 120*	*02/23/17 12:49*	*02/23/17 16:08*	*1*
DCB Decachlorobiphenyl (Surr)	*110*		*36 - 138*	*02/23/17 12:49*	*02/23/17 16:08*	*1*

Lab Sample ID: LCS 590-10839/2-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10839

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.33		ug/L		83	23 - 140		
PCB-1260			1.60	1.07		ug/L		67	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*94*		*36 - 138*

Lab Sample ID: LCSD 590-10839/3-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10839

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.35		ug/L		84	23 - 140	1	35
PCB-1260			1.60	1.13		ug/L		71	22 - 139	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*65*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*96*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-363590/1-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363590

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 18:43	1
Azinphos-methyl	ND		2.5	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Bolstar	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 18:43	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: MB 280-363590/1-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363590

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.5	0.36	ug/L		02/27/17 19:29	03/15/17 18:43	1
Coumaphos	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Demeton, Total	ND		3.0	0.21	ug/L		02/27/17 19:29	03/15/17 18:43	1
Diazinon	ND		0.50	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Dichlorvos	ND		0.50	0.16	ug/L		02/27/17 19:29	03/15/17 18:43	1
Dimethoate	ND		1.5	0.45	ug/L		02/27/17 19:29	03/15/17 18:43	1
Disulfoton	ND		1.0	0.32	ug/L		02/27/17 19:29	03/15/17 18:43	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Famphur	ND		1.0	0.18	ug/L		02/27/17 19:29	03/15/17 18:43	1
Fensulfothion	ND		2.5	0.54	ug/L		02/27/17 19:29	03/15/17 18:43	1
Fenthion	ND		2.5	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Malathion	ND		2.0	0.13	ug/L		02/27/17 19:29	03/15/17 18:43	1
Merphos	ND		5.0	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Methyl parathion	ND		4.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Mevinphos	ND		6.2	0.46	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ethyl Parathion	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ronnel	ND		10	0.12	ug/L		02/27/17 19:29	03/15/17 18:43	1
Simazine	ND		10	0.22	ug/L		02/27/17 19:29	03/15/17 18:43	1
Sulfotepp	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Thionazin	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 18:43	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 18:43	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ethoprop	ND		1.5	0.18	ug/L		02/27/17 19:29	03/15/17 18:43	1
Propazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 18:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*25*	*X*	*49 - 171*	*02/27/17 19:29*	*03/15/17 18:43*	*1*
Triphenylphosphate	*81*		*60 - 154*	*02/27/17 19:29*	*03/15/17 18:43*	*1*

Lab Sample ID: LCS 280-363590/2-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.95	J	ug/L		74	52 - 115
Azinphos-methyl	4.00	3.67		ug/L		92	59 - 115
Chlorpyrifos	4.00	3.38		ug/L		84	54 - 115
Coumaphos	4.00	3.85		ug/L		96	63 - 118
Demeton, Total	4.00	2.34	J	ug/L		58	44 - 115
Diazinon	4.00	3.35		ug/L		84	47 - 115
Dichlorvos	4.00	3.02		ug/L		76	53 - 128
Dimethoate	4.00	2.32		ug/L		58	42 - 115
Disulfoton	4.00	2.86		ug/L		72	45 - 115
EPN	4.00	3.16		ug/L		79	56 - 115
Famphur	4.00	3.19		ug/L		80	62 - 115
Fensulfothion	4.00	2.86		ug/L		71	50 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-363590/2-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fenthion	4.00	3.00		ug/L		75	55 - 115
Malathion	4.00	2.91		ug/L		73	52 - 115
Merphos	4.00	3.28	J	ug/L		82	31 - 115
Methyl parathion	4.00	3.15	J	ug/L		79	58 - 115
Mevinphos	4.00	2.60	J	ug/L		65	42 - 115
Ethyl Parathion	4.00	3.23		ug/L		81	55 - 115
Phorate	4.00	2.59		ug/L		65	40 - 115
Ronnel	4.00	3.36	J	ug/L		84	55 - 115
Simazine	4.00	2.15	J	ug/L		54	39 - 115
Sulfotepp	4.00	3.22		ug/L		81	53 - 115
Thionazin	4.00	3.06		ug/L		77	54 - 115
Trichloronate	4.00	3.32		ug/L		83	48 - 115
Ethoprop	4.00	3.23		ug/L		81	50 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*74*		*49 - 171*
Triphenylphosphate	*85*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-363575/1-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		02/27/17 15:30	03/02/17 10:02	1
2,4-D	ND		4.0	0.21	ug/L		02/27/17 15:30	03/02/17 10:02	1
2,4-DB	ND		4.0	0.36	ug/L		02/27/17 15:30	03/02/17 10:02	1
Dalapon	ND		2.0	0.91	ug/L		02/27/17 15:30	03/02/17 10:02	1
Dicamba	ND		2.0	0.15	ug/L		02/27/17 15:30	03/02/17 10:02	1
Dichlorprop	ND		4.0	0.65	ug/L		02/27/17 15:30	03/02/17 10:02	1
MCPA	ND		400	17	ug/L		02/27/17 15:30	03/02/17 10:02	1
MCPP	ND		400	33	ug/L		02/27/17 15:30	03/02/17 10:02	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		02/27/17 15:30	03/02/17 10:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*83*		*39 - 135*	*02/27/17 15:30*	*03/02/17 10:02*	*1*

Lab Sample ID: LCS 280-363575/2-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363575

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.70		ug/L		74	45 - 135
2,4-D	5.00	3.55	J	ug/L		71	46 - 126
2,4-DB	5.00	4.31		ug/L		86	18 - 135

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-363575/2-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363575

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dalapon			5.00	3.73		ug/L		75	52 - 119		
Dicamba			5.00	3.42		ug/L		68	50 - 128		
Dichlorprop			5.00	3.52	J	ug/L		70	44 - 121		
MCPA			500	310	J	ug/L		62	43 - 118		
MCPP			500	390	J	ug/L		78	45 - 121		
Silvex (2,4,5-TP)			5.00	3.29		ug/L		66	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*40*		*39 - 135*

Lab Sample ID: LCSD 280-363575/3-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363575

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	3.58		ug/L		72	45 - 135	3	30
2,4-D			5.00	3.41	J	ug/L		68	46 - 126	4	30
2,4-DB			5.00	4.36		ug/L		87	18 - 135	1	30
Dalapon			5.00	4.32		ug/L		86	52 - 119	15	30
Dicamba			5.00	3.40		ug/L		68	50 - 128	1	30
Dichlorprop			5.00	3.45	J	ug/L		69	44 - 121	2	30
MCPA			500	285	J	ug/L		57	43 - 118	8	30
MCPP			500	401		ug/L		80	45 - 121	3	30
Silvex (2,4,5-TP)			5.00	3.25		ug/L		65	48 - 127	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*89*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-10887/1-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		02/28/17 09:16	02/28/17 11:37	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		02/28/17 09:16	02/28/17 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-10887/2-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.35		mg/L		84	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.36		mg/L		85	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*104*		*50 - 150*
n-Triacontane-d62	*106*		*50 - 150*

Lab Sample ID: LCSD 590-10887/3-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.60	1.25		mg/L		78	50 - 150	7	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.32		mg/L		82	50 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*101*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-10814/1013
Matrix: Water
Analysis Batch: 10814

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			02/21/17 13:29	1
Sulfate	ND		0.50	0.13	mg/L			02/21/17 13:29	1

Lab Sample ID: LCS 590-10814/1012
Matrix: Water
Analysis Batch: 10814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	13.1		mg/L		105	90 - 110
Sulfate	12.5	13.1		mg/L		105	90 - 110

Lab Sample ID: 590-5548-1 MS
Matrix: Water
Analysis Batch: 10814

Client Sample ID: MW-8A:022017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.1		12.5	20.3		mg/L		98	80 - 120
Sulfate	10		12.5	22.2		mg/L		96	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5548-1 MSD — **Client Sample ID: MW-8A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10814

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.1		12.5	20.1		mg/L		96	80 - 120	1	10
Sulfate	10		12.5	22.3		mg/L		97	80 - 120	0	10

Lab Sample ID: 590-5548-1 DU — **Client Sample ID: MW-8A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10814

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	8.1		8.04		mg/L		0.3	18.8
Sulfate	10		10.1		mg/L		0.3	15.7

Lab Sample ID: MB 590-10815/1013 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10815

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			02/21/17 13:29	1
Nitrite as N	ND		0.20	0.069	mg/L			02/21/17 13:29	1

Lab Sample ID: LCS 590-10815/1012 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.20		mg/L		104	90 - 110
Nitrite as N	5.00	4.90		mg/L		98	90 - 110

Lab Sample ID: 590-5548-1 MS — **Client Sample ID: MW-8A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10815

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.3		5.00	6.49		mg/L		105	80 - 120
Nitrite as N	ND		5.00	4.93		mg/L		99	80 - 120

Lab Sample ID: 590-5548-1 MSD — **Client Sample ID: MW-8A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10815

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.3		5.00	6.20		mg/L		99	80 - 120	4	12.1
Nitrite as N	ND		5.00	4.73		mg/L		95	80 - 120	4	10

Lab Sample ID: 590-5548-1 DU — **Client Sample ID: MW-8A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10815

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.3		1.26		mg/L		0.4	13.1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5548-1 DU
Matrix: Water
Analysis Batch: 10815

Client Sample ID: MW-8A:022017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	ND			ND		mg/L				NC	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-153791/1-A
Matrix: Water
Analysis Batch: 155124

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 153791

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.476	J q	10	0.22	pg/L		03/08/17 06:51	03/13/17 17:21	1
2,3,7,8-TCDF	0.657	J q	10	0.26	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,7,8-PeCDD	2.23	J	50	0.42	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,7,8-PeCDF	1.42	J q	50	0.40	pg/L		03/08/17 06:51	03/13/17 17:21	1
2,3,4,7,8-PeCDF	1.75	J q	50	0.41	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,4,7,8-HxCDD	1.60	J q	50	0.37	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,6,7,8-HxCDD	2.19	J q	50	0.33	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,7,8,9-HxCDD	1.97	J q	50	0.30	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,4,7,8-HxCDF	2.13	J q	50	0.34	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,6,7,8-HxCDF	1.98	J q	50	0.31	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,7,8,9-HxCDF	3.02	J q	50	0.37	pg/L		03/08/17 06:51	03/13/17 17:21	1
2,3,4,6,7,8-HxCDF	2.18	J	50	0.33	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,4,6,7,8-HpCDD	4.17	J	50	0.39	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,4,6,7,8-HpCDF	3.29	J	50	0.54	pg/L		03/08/17 06:51	03/13/17 17:21	1
1,2,3,4,7,8,9-HpCDF	2.36	J q	50	0.68	pg/L		03/08/17 06:51	03/13/17 17:21	1
OCDD	15.5	J	100	0.65	pg/L		03/08/17 06:51	03/13/17 17:21	1
OCDF	6.42	J q	100	0.58	pg/L		03/08/17 06:51	03/13/17 17:21	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-2,3,7,8-TCDF	*85*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-1,2,3,7,8-PeCDD	*84*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-1,2,3,6,7,8-HxCDD	*84*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-1,2,3,4,7,8-HxCDF	*87*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*
13C-OCDD	*81*		*40 - 135*	*03/08/17 06:51*	*03/13/17 17:21*	*1*

Lab Sample ID: LCS 320-153791/2-A
Matrix: Water
Analysis Batch: 155124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153791

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD			200	207		pg/L		104	64 - 142		
2,3,7,8-TCDF			200	224		pg/L		112	71 - 142		
1,2,3,7,8-PeCDD			1000	1020		pg/L		102	71 - 140		
1,2,3,7,8-PeCDF			1000	1050		pg/L		105	76 - 135		
2,3,4,7,8-PeCDF			1000	1050		pg/L		105	74 - 137		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-153791/2-A
Matrix: Water
Analysis Batch: 155124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153791

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	1050		pg/L		105	56 - 146		
1,2,3,6,7,8-HxCDD			1000	1040		pg/L		104	73 - 144		
1,2,3,7,8,9-HxCDD			1000	1050		pg/L		105	71 - 151		
1,2,3,4,7,8-HxCDF			1000	1000		pg/L		100	75 - 131		
1,2,3,6,7,8-HxCDF			1000	1030		pg/L		103	76 - 133		
1,2,3,7,8,9-HxCDF			1000	1060		pg/L		106	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1060		pg/L		106	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	935		pg/L		94	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	966		pg/L		97	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	978		pg/L		98	83 - 130		
OCDD			2000	1860		pg/L		93	80 - 132		
OCDF			2000	1910		pg/L		96	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*85*		*40 - 135*
13C-2,3,7,8-TCDF	*85*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*82*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*81*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*88*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*
13C-OCDD	*88*		*40 - 135*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-239192/13-A
Matrix: Water
Analysis Batch: 239260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239192

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			0.100	0.105		mg/L		105	85 - 115		
Antimony			0.100	0.106		mg/L		106	85 - 115		
Barium			0.100	0.106		mg/L		106	85 - 115		
Beryllium			0.100	0.104		mg/L		104	85 - 115		
Cadmium			0.100	0.107		mg/L		107	85 - 115		
Chromium			0.100	0.100		mg/L		100	85 - 115		
Copper			0.100	0.104		mg/L		104	85 - 115		
Iron			10.0	9.85		mg/L		99	85 - 115		
Lead			0.100	0.106		mg/L		106	85 - 115		
Manganese			0.100	0.100		mg/L		100	85 - 115		
Nickel			0.100	0.104		mg/L		104	85 - 115		
Selenium			0.100	0.105		mg/L		105	85 - 115		
Silver			0.100	0.106		mg/L		106	85 - 115		
Thallium			0.100	0.105		mg/L		105	85 - 115		
Vanadium			0.100	0.100		mg/L		100	85 - 115		
Zinc			0.100	0.103		mg/L		103	85 - 115		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-239192/14-A
Matrix: Water
Analysis Batch: 239260

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239192

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.102		mg/L		102	85 - 115	2	20
Antimony	0.100	0.103		mg/L		103	85 - 115	3	20
Barium	0.100	0.103		mg/L		103	85 - 115	3	20
Beryllium	0.100	0.103		mg/L		103	85 - 115	1	20
Cadmium	0.100	0.104		mg/L		104	85 - 115	2	20
Chromium	0.100	0.0997		mg/L		100	85 - 115	0	20
Copper	0.100	0.102		mg/L		102	85 - 115	2	20
Iron	10.0	9.82		mg/L		98	85 - 115	0	20
Lead	0.100	0.103		mg/L		103	85 - 115	2	20
Manganese	0.100	0.100		mg/L		100	85 - 115	0	20
Nickel	0.100	0.101		mg/L		101	85 - 115	2	20
Selenium	0.100	0.102		mg/L		102	85 - 115	3	20
Silver	0.100	0.104		mg/L		104	85 - 115	1	20
Thallium	0.100	0.103		mg/L		103	85 - 115	2	20
Vanadium	0.100	0.0992		mg/L		99	85 - 115	1	20
Zinc	0.100	0.101		mg/L		101	85 - 115	2	20

Lab Sample ID: MB 580-239965/22-A
Matrix: Water
Analysis Batch: 240053

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/08/17 09:18	03/08/17 17:13	1
Antimony	ND		0.00040	0.000080	mg/L		03/08/17 09:18	03/08/17 17:13	1
Barium	ND		0.0012	0.000054	mg/L		03/08/17 09:18	03/08/17 17:13	1
Beryllium	ND		0.00040	0.00010	mg/L		03/08/17 09:18	03/08/17 17:13	1
Cadmium	ND		0.00040	0.000028	mg/L		03/08/17 09:18	03/08/17 17:13	1
Chromium	ND		0.00040	0.00014	mg/L		03/08/17 09:18	03/08/17 17:13	1
Copper	ND		0.0020	0.00060	mg/L		03/08/17 09:18	03/08/17 17:13	1
Iron	ND		0.040	0.0058	mg/L		03/08/17 09:18	03/08/17 17:13	1
Lead	ND		0.00040	0.000034	mg/L		03/08/17 09:18	03/08/17 17:13	1
Manganese	ND		0.0020	0.00035	mg/L		03/08/17 09:18	03/08/17 17:13	1
Nickel	ND		0.0030	0.00040	mg/L		03/08/17 09:18	03/08/17 17:13	1
Selenium	0.000388	J	0.0010	0.00030	mg/L		03/08/17 09:18	03/08/17 17:13	1
Silver	ND		0.00040	0.000030	mg/L		03/08/17 09:18	03/08/17 17:13	1
Thallium	ND		0.0010	0.00014	mg/L		03/08/17 09:18	03/08/17 17:13	1
Vanadium	ND		0.0040	0.00098	mg/L		03/08/17 09:18	03/08/17 17:13	1
Zinc	ND		0.0070	0.0019	mg/L		03/08/17 09:18	03/08/17 17:13	1

Lab Sample ID: LCS 580-239965/23-A
Matrix: Water
Analysis Batch: 240053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0992		mg/L		99	85 - 115
Antimony	0.100	0.0958		mg/L		96	85 - 115
Barium	0.100	0.0980		mg/L		98	85 - 115
Beryllium	0.100	0.0952		mg/L		95	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-239965/23-A
Matrix: Water
Analysis Batch: 240053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.0992		mg/L		99	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.0983		mg/L		98	85 - 115
Iron	10.0	9.97		mg/L		100	85 - 115
Lead	0.100	0.0988		mg/L		99	85 - 115
Manganese	0.100	0.101		mg/L		101	85 - 115
Nickel	0.100	0.0979		mg/L		98	85 - 115
Selenium	0.100	0.0981		mg/L		98	85 - 115
Silver	0.100	0.0981		mg/L		98	85 - 115
Thallium	0.100	0.0943		mg/L		94	85 - 115
Vanadium	0.100	0.0990		mg/L		99	85 - 115
Zinc	0.100	0.0965		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-239965/24-A
Matrix: Water
Analysis Batch: 240053

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239965

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.101		mg/L		101	85 - 115	2	20
Antimony	0.100	0.0987		mg/L		99	85 - 115	3	20
Barium	0.100	0.0995		mg/L		100	85 - 115	2	20
Beryllium	0.100	0.0977		mg/L		98	85 - 115	3	20
Cadmium	0.100	0.101		mg/L		101	85 - 115	2	20
Chromium	0.100	0.103		mg/L		103	85 - 115	1	20
Copper	0.100	0.0999		mg/L		100	85 - 115	2	20
Iron	10.0	10.1		mg/L		101	85 - 115	2	20
Lead	0.100	0.101		mg/L		101	85 - 115	2	20
Manganese	0.100	0.102		mg/L		102	85 - 115	1	20
Nickel	0.100	0.0997		mg/L		100	85 - 115	2	20
Selenium	0.100	0.100		mg/L		100	85 - 115	2	20
Silver	0.100	0.101		mg/L		101	85 - 115	3	20
Thallium	0.100	0.0972		mg/L		97	85 - 115	3	20
Vanadium	0.100	0.100		mg/L		100	85 - 115	1	20
Zinc	0.100	0.100		mg/L		100	85 - 115	4	20

Lab Sample ID: MB 580-238995/6-B
Matrix: Water
Analysis Batch: 239260

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239192

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		02/23/17 16:53	02/24/17 13:34	1
Antimony	ND		0.00040	0.000080	mg/L		02/23/17 16:53	02/24/17 13:34	1
Barium	ND		0.0012	0.000054	mg/L		02/23/17 16:53	02/24/17 13:34	1
Beryllium	ND		0.00040	0.00010	mg/L		02/23/17 16:53	02/24/17 13:34	1
Cadmium	ND		0.00040	0.000028	mg/L		02/23/17 16:53	02/24/17 13:34	1
Chromium	0.000210	J	0.00040	0.00014	mg/L		02/23/17 16:53	02/24/17 13:34	1
Copper	ND		0.0020	0.00060	mg/L		02/23/17 16:53	02/24/17 13:34	1
Iron	ND		0.040	0.0058	mg/L		02/23/17 16:53	02/24/17 13:34	1
Lead	ND		0.00040	0.000034	mg/L		02/23/17 16:53	02/24/17 13:34	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-238995/6-B
Matrix: Water
Analysis Batch: 239260

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239192

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0020	0.00035	mg/L		02/23/17 16:53	02/24/17 13:34	1
Nickel	ND		0.0030	0.00040	mg/L		02/23/17 16:53	02/24/17 13:34	1
Selenium	ND		0.0010	0.00030	mg/L		02/23/17 16:53	02/24/17 13:34	1
Silver	ND		0.00040	0.000030	mg/L		02/23/17 16:53	02/24/17 13:34	1
Thallium	ND		0.0010	0.00014	mg/L		02/23/17 16:53	02/24/17 13:34	1
Vanadium	ND		0.0040	0.00098	mg/L		02/23/17 16:53	02/24/17 13:34	1
Zinc	ND		0.0070	0.0019	mg/L		02/23/17 16:53	02/24/17 13:34	1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: LCS 580-239534/8-A
Matrix: Water
Analysis Batch: 239654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239534

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00184		mg/L		92	85 - 115		

Lab Sample ID: LCSD 580-239534/9-A
Matrix: Water
Analysis Batch: 239654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239534

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00184		mg/L		92	85 - 115	0	20

Lab Sample ID: MB 580-240011/20-A
Matrix: Water
Analysis Batch: 240083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:02	1

Lab Sample ID: LCS 580-240011/21-A
Matrix: Water
Analysis Batch: 240083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240011

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00180		mg/L		90	85 - 115		

Lab Sample ID: LCSD 580-240011/22-A
Matrix: Water
Analysis Batch: 240083

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240011

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00178		mg/L		89	85 - 115	1	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: MB 580-238995/6-C
Matrix: Water
Analysis Batch: 239654

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239534

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:38	03/02/17 10:18	1

Lab Sample ID: 590-5548-1 MS
Matrix: Water
Analysis Batch: 239654

Client Sample ID: MW-8A:022017
Prep Type: Dissolved
Prep Batch: 239534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00188		mg/L		94	70 - 130

Lab Sample ID: 590-5548-1 MSD
Matrix: Water
Analysis Batch: 239654

Client Sample ID: MW-8A:022017
Prep Type: Dissolved
Prep Batch: 239534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00186		mg/L		93	70 - 130	1	20

Lab Sample ID: 590-5548-1 DU
Matrix: Water
Analysis Batch: 239654

Client Sample ID: MW-8A:022017
Prep Type: Dissolved
Prep Batch: 239534

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-410666/1-A
Matrix: Water
Analysis Batch: 411080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410666

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/27/17 10:14	02/28/17 15:51	1

Lab Sample ID: LCS 490-410666/2-A
Matrix: Water
Analysis Batch: 411080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410666

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.105		mg/L		105	90 - 110

Lab Sample ID: LCSD 490-410666/3-A
Matrix: Water
Analysis Batch: 411080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 410666

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.104		mg/L		104	90 - 110	1	20

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: 590-5548-3 MS — **Client Sample ID: MW-16A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411080 — **Prep Batch: 410666**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	0.114	F1	mg/L		114	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-409904/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 410055 — **Prep Batch: 409904**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		02/23/17 09:55	02/23/17 14:31	1

Lab Sample ID: LCS 490-409904/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 410055 — **Prep Batch: 409904**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.19		mg/L		104	90 - 110

Lab Sample ID: 590-5548-2 MS — **Client Sample ID: MW-8B:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 410055 — **Prep Batch: 409904**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.28		5.00	5.06		mg/L		96	90 - 110

Lab Sample ID: 590-5548-3 MS — **Client Sample ID: MW-16A:022017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 410055 — **Prep Batch: 409904**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.083	J	5.00	5.10		mg/L		100	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-410362/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 410362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/24/17 14:42	1

Lab Sample ID: LCS 490-410362/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 410362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	50.3		mg/L		101	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-410362/5
Matrix: Water
Analysis Batch: 410362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	48.3		mg/L		97	90 - 110	4	20

Lab Sample ID: 590-5548-3 DU
Matrix: Water
Analysis Batch: 410362

Client Sample ID: MW-16A:022017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chemical Oxygen Demand	10	J		10.6	J	mg/L				3	20

Method: SM 5310C - TOC

Lab Sample ID: MB 490-411242/2
Matrix: Water
Analysis Batch: 411242

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			02/28/17 11:56	1

Lab Sample ID: LCS 490-411242/6
Matrix: Water
Analysis Batch: 411242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.2		mg/L		102	90 - 110		
TOC Result 1			10.0	10.2		mg/L		102	90 - 110		
TOC Result 2			10.0	10.3		mg/L		103	90 - 110		

Lab Sample ID: LCSD 490-411242/7
Matrix: Water
Analysis Batch: 411242

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon			10.0	9.89		mg/L		99	90 - 110	4	20
TOC Result 1			10.0	10.0		mg/L		100	90 - 110	2	20
TOC Result 2			10.0	9.78		mg/L		98	90 - 110	5	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8A:022017

Date Collected: 02/20/17 10:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 11:40	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 11:40	MRS	TAL SPK
Total/NA	Prep	3520C			1027 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 17:26	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 11:19	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 14:50	NMI	TAL SPK
Total/NA	Prep	3510C			247.9 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 15:26	DCV	TAL SEA
Total/NA	Prep	3510C			242.5 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 17:10	NMI	TAL SPK
Total/NA	Prep	3510C			1006.5 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/16/17 01:32	AMB1	TAL DEN
Total/NA	Prep	8151A			1036.8 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 11:34	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			243.9 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 12:31	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10814	02/21/17 12:16	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10815	02/21/17 12:16	CBW	TAL SPK
Total/NA	Prep	8290			1004.3 mL	20 uL	153791	03/08/17 06:51	GLB	TAL SAC
Total/NA	Analysis	8290A		1			155124	03/13/17 18:47	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	238995	02/22/17 11:45	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239192	02/23/17 16:53	ADB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239260	02/24/17 12:31	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	239965	03/08/17 09:18	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240053	03/08/17 19:28	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	238995	02/22/17 11:45	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239534	03/01/17 14:38	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 10:25	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:39	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410666	02/27/17 10:14	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411080	02/28/17 15:57	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	409904	02/23/17 09:55	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	410055	02/23/17 14:43	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	410362	02/24/17 14:42	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 18:00	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10825	02/21/17 11:12	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-8B:022017

Date Collected: 02/20/17 12:14
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 12:24	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 12:24	MRS	TAL SPK
Total/NA	Prep	3520C			1054.6 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 17:50	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 11:19	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 15:14	NMI	TAL SPK
Total/NA	Prep	3510C			258 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 15:45	DCV	TAL SEA
Total/NA	Prep	3510C			257.8 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 17:31	NMI	TAL SPK
Total/NA	Prep	3510C			1051.2 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/16/17 02:04	AMB1	TAL DEN
Total/NA	Prep	8151A			1036.4 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 11:57	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			241.8 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 12:49	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10814	02/21/17 13:05	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10815	02/21/17 13:05	CBW	TAL SPK
Total/NA	Prep	8290			1024.3 mL	20 uL	153791	03/08/17 06:51	GLB	TAL SAC
Total/NA	Analysis	8290A		1			155124	03/13/17 19:29	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	238995	02/22/17 11:45	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239192	02/23/17 16:53	ADB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239260	02/24/17 12:36	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	239965	03/08/17 09:18	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240053	03/08/17 19:32	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	238995	02/22/17 11:45	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239534	03/01/17 14:38	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 10:34	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:41	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410666	02/27/17 10:14	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411080	02/28/17 15:58	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	409904	02/23/17 09:55	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	410055	02/23/17 14:46	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	410362	02/24/17 14:42	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 18:16	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10825	02/21/17 11:12	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Client Sample ID: MW-16A:022017

Date Collected: 02/20/17 15:21
Date Received: 02/21/17 10:35

Lab Sample ID: 590-5548-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 12:46	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 12:46	MRS	TAL SPK
Total/NA	Prep	3520C			1034.2 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 18:15	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 11:19	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 15:39	NMI	TAL SPK
Total/NA	Prep	3510C			255.1 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 16:05	DCV	TAL SEA
Total/NA	Prep	3510C			253.8 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 17:51	NMI	TAL SPK
Total/NA	Prep	3510C			1053.8 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/16/17 02:35	AMB1	TAL DEN
Total/NA	Prep	8151A			1028 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 12:20	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			241.1 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 13:07	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10814	02/21/17 13:41	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10815	02/21/17 13:41	CBW	TAL SPK
Total/NA	Prep	8290			1026.4 mL	20 uL	153791	03/08/17 06:51	GLB	TAL SAC
Total/NA	Analysis	8290A		1			155124	03/13/17 20:12	KSS	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	238995	02/22/17 11:45	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239192	02/23/17 16:53	ADB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239260	02/24/17 12:40	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	239965	03/08/17 09:18	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240053	03/08/17 19:37	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	238995	02/22/17 11:45	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239534	03/01/17 14:38	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 10:36	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:43	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410666	02/27/17 10:14	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411080	02/28/17 15:59	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	409904	02/23/17 09:55	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	410055	02/23/17 14:48	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	410362	02/24/17 14:42	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 18:32	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10825	02/21/17 11:12	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: MSP/JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: STD			
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	5310C - Total Organic Carbon (TOC)	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-8A:022017	2-20-17	1014	G	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	23	
MW-8B:022017	↓	1214	↓	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	23	
MW-16A:022017	↓	1521	↓	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	23	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

590-5548 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Josh Rice	2/21/17 1035	GEI	Sheila Kraft	2/21/17 1035	TA Spok

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.3°C IR004, 0.3°C, 2.9°C

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: MSP/SHL	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: STD			
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
MW-8A:022017	2-20-17	1014	G	Water			X	X	X	23	
MW-8B:022017	"	1214	"	Water			X	X	X	23	
MW-16A:022017	"	1521	"	Water			X	X	X	23	
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company
Josh Lee	2/21/17 1035	GEI	Sheila Frady		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		3.3, 0.4, 2.9 °C IR/CC4

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2485.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5548-1
Address: 4955 Yarrow Street,	Due Date Requested: 3/3/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-8A:022017 (590-5548-1)	2/20/17	10:14 Pacific		Water			X	X	4	
MW-8B:022017 (590-5548-2)	2/20/17	12:14 Pacific		Water			X	X	4	
MW-16A:022017 (590-5548-3)	2/20/17	15:21 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Krach	2/21/17 1150	TAS		2-22-17 1005	TAS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		1-1, 2.6 IR7 (+0.6 transferred SPL) 2-22-17

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2486.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5548-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/9/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8A:022017 (590-5548-1)	2/20/17	10:14 Pacific		Water			X	2	
MW-8B:022017 (590-5548-2)	2/20/17	12:14 Pacific		Water			X	2	
MW-16A:022017 (590-5548-3)	2/20/17	15:21 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Kraby	2/21/17 1205	TAS	Tom Nelson	2/22/17 1000	TAS
2						
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.8c

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-5548 Chain of Custody

Cooler Received/Opened On 2/22/2017 @ 0945

Time Samples Removed From Cooler 1555 Time Samples Placed In Storage 1556 (2 Hour Window)

1. Tracking # 4933 (last 4 digits, FedEx) Courier: _FedEx_

IR Gun ID 160656838 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)..NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) PM

7. Were custody seals on containers: YES (NO) and Intact YES...NO..(NA)

Were these signed and dated correctly? YES...NO..(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA

13a. Were VOA vials received? YES..(NO)..NA

b. Was there any observable headspace present in any VOA vial? YES...NO..(NA)

14. Was there a Trip Blank in this cooler? YES...NO..(NA) If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) HKG

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO.(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)..NO...NA

16. Was residual chlorine present? YES...NO..(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) HKG

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) HKG

I certify that I attached a label with the unique LIMS number to each container (intial) HKG

21. Were there Non-Conformance issues at login? YES..(NO) Was a NCM generated? YES..(NO)..#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Loc: 590
5548

stAmerica
ADER IN ENVIRONMENTAL TESTING

3/17/2017

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		9.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Washington	Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-5548-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 3/3/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-8A:022017 (590-5548-1)	2/20/17	10:14 Pacific		Water			X	X	X	X	2	
MW-8B:022017 (590-5548-2)	2/20/17	12:14 Pacific		Water			X	X	X	X	3	
MW-16A:022017 (590-5548-3)	2/20/17	15:21 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Sheila Kratz	Date/Time: 2/21/17 1515	Company TA Spok	Received by: Hof 2/21/17 1.2	Date/Time: 2/22/17 0945	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2487.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5548-1
Address: 5755 8th Street East, ,	Due Date Requested: 3/3/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-8A:022017 (590-5548-1)	2/20/17	10:14 Pacific		Water			X	X	X	X	X	X	6	
MW-8B:022017 (590-5548-2)	2/20/17	12:14 Pacific		Water			X	X	X	X	X	X	6	
MW-16A:022017 (590-5548-3)	2/20/17	15:21 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Knach	2/21/17 1215	TA-Spok	[illegible]	2/22/17 1035	TA-Spok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		Δ2 m.4/1.3 w/cs

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5548-1

Login Number: 5548
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5548-1

Login Number: 5548
List Number: 2
Creator: Woodworth, Sean P

List Source: TestAmerica Denver
List Creation: 02/22/17 12:15 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5548-1

Login Number: 5548
List Number: 4
Creator: Gundi, Hozar K

List Source: TestAmerica Nashville
List Creation: 02/22/17 03:54 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5548-1

Login Number: 5548
List Number: 5
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 02/23/17 05:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5548-1

Login Number: 5548
List Number: 3
Creator: Ponce-McDermott, Monica

List Source: TestAmerica Seattle
List Creation: 02/22/17 11:31 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	A2 0.4/1.3 w/cs
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5548-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5548-1	MW-8A:022017	77	76	71	74	70	79	66	69
590-5548-2	MW-8B:022017	76	75	71	73	73	79	69	71
590-5548-3	MW-16A:022017	81	78	81	80	85	88	85	84
LCS 320-153791/2-A	Lab Control Sample	85	85	83	82	81	86	88	84
MB 320-153791/1-A	Method Blank	89	85	84	84	84	87	83	81

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5548-1	MW-8A:022017	63
590-5548-2	MW-8B:022017	64
590-5548-3	MW-16A:022017	84
LCS 320-153791/2-A	Lab Control Sample	88
MB 320-153791/1-A	Method Blank	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5551-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
3/17/2017 10:12:08 AM

Randee Arrington, Project Manager II
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LINKS

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5551-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 2/22/2017 11:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 2.1º C, 3.0º C, 3.9º C, 4.3º C, 4.5º C and 5.2º C.

Receipt Exceptions
A 250ml unpreserved poly container and 100ml coliform bacteria bottle were received not labeled. Using the process of elimination it was determined that the 250ml unpreserved container was MW-11A:022117 (590-5551-5) and the 100ml coliform bacteria bottle was MW-14:022117 (590-5551-3).

GC/MS VOA
Method 8260C: The method blank for analytical batch 590-10912 contained Dichlorofluoromethane above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-239702 recovered outside acceptance criteria, low biased, for 2,4-Dinitrophenol and Benzoic acid. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-239702 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-239396 recovered outside control limits for the following analytes: 4,6-Dinitro-2-methylphenol, Bis(2-ethylhexyl) phthalate and 4-Chloroaniline.

Method 8270D: The following analytes recovered outside control limits for the LCSD associated with preparation batch 580-239396 and analytical batch 580-239702: 4-Chloroaniline and Bis(2-ethylhexyl) phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The 2,4-Dichlorophenylacetic acid surrogate recovery for the following sample in preparation batch 280-363575 and analytical batch 280-363954 was outside acceptance limits (high biased) on the back/confirmation column due to matrix interference: MW-3:022117 (590-5551-6). The recovery is within acceptance limits on the other column. There is a non-target peak at the RT for the surrogate on the back/confirmation column.

Method 8141B: The surrogate recovery for the method blank associated with preparation batch 280-363590 and analytical batch 280-365610 was outside control limits (low). Surrogate recoveries for the associated samples were within control limits and the samples were ND for all target analytes; therefore, the data is reported.

Method 8141B: The Chlormefos surrogate recovery for the following sample was outside acceptance limits (low biased) on the front column: MW-2A:022117 (590-5551-4). The recovery was within acceptance limits on the back column; therefore, the surrogate is reported from the back column.

Method 8141B: The initial calibration verification (ICV) result for batch 280-365610 was below the lower control limit for Malathion on the front column and for Mevinphos on the back column. The back column was in control for Malathion and the front column was in control for Mevinphos. Sample results were non-detects for the affected analytes; therefore, the data have been reported from the column that was in control in the ICV.

Method 8081B: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside the upper control limit: (CCB

Job ID: 590-5551-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

580-239335/15) and (CCB 580-239335/32). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside the upper control limit: (CCB 580-239470/16) and (CCB 580-239470/37). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The following CCV fell outside the control limits for surrogate Tetrachloro-m-xylene on the primary column only. Since all associated samples had surrogate recoveries within the control limits on both columns, the data has been reported.

Method 8081B: The continuing calibration verification (CCV) associated with batch 580-239335 recovered outside acceptance criteria, low biased, for delta-BHC on the confirmation column only. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8081B: The continuing calibration verification (CCV) associated with batch 580-239470 recovered outside acceptance criteria, low biased, for delta-BHC on the confirmation column only. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect above the RL for this analyte, the data have been reported.

Method 8081B: The following CCV fell outside the control limits high for %D for surrogate Tetrachloro-m-xylene on the primary column only. All associated samples had surrogate recoveries within the control limits on both columns; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.8: The method blank for prep batch 580-239541 contained Selenium above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-363575.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5551-1	MW-16:022117	Water	02/21/17 10:22	02/22/17 11:32
590-5551-2	MW-4A:022117	Water	02/21/17 10:30	02/22/17 11:32
590-5551-3	MW-14:022117	Water	02/21/17 11:30	02/22/17 11:32
590-5551-4	MW-2A:022117	Water	02/21/17 12:13	02/22/17 11:32
590-5551-5	MW-11A:022117	Water	02/21/17 14:50	02/22/17 11:32
590-5551-6	MW-3:022117	Water	02/21/17 14:43	02/22/17 11:32

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
B	Compound was found in the blank and sample.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 13:09	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 13:09	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 13:09	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 13:09	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 13:09	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 13:09	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:09	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 13:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 13:09	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 13:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 13:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 13:09	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 13:09	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 13:09	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 13:09	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 13:09	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 13:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 13:09	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 13:09	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 13:09	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 13:09	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 13:09	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 13:09	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 13:09	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 13:09	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 13:09	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 13:09	1
Acetone	ND		30	14	ug/L			03/01/17 13:09	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 13:09	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 13:09	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 13:09	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 13:09	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 13:09	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 13:09	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 13:09	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 13:09	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 13:09	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 13:09	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 13:09	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 13:09	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 13:09	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 13:09	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 13:09	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 13:09	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 13:09	1
Dichlorofluoromethane	**0.32**	**J B**	1.0	0.30	ug/L			03/01/17 13:09	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 13:09	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 13:09	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 13:09	1

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 13:09	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 13:09	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 13:09	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 13:09	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 13:09	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 13:09	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 13:09	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 13:09	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 13:09	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 13:09	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 13:09	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 13:09	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 13:09	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 13:09	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:09	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 13:09	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:09	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 13:09	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 13:09	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*03/01/17 13:09*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*03/01/17 13:09*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*03/01/17 13:09*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*03/01/17 13:09*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*		*03/01/17 13:09*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
2-Chlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
2-Methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2-Nitroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
2-Nitrophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
3-Nitroaniline	ND		0.40	0.12	ug/L		02/27/17 16:44	03/03/17 18:39	1
4,6-Dinitro-2-methylphenol	ND	*	4.0	1.0	ug/L		02/27/17 16:44	03/03/17 18:39	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
4-Chloroaniline	ND	*	0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
4-Nitroaniline	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
4-Nitrophenol	ND		3.0	1.0	ug/L		02/27/17 16:44	03/03/17 18:39	1
Acenaphthene	ND		0.10	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Acenaphthylene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Anthracene	ND		0.040	0.010	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzoic acid	ND		3.0	0.60	ug/L		02/27/17 16:44	03/03/17 18:39	1
Benzyl alcohol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Bis(2-ethylhexyl) phthalate	ND	*	3.0	1.2	ug/L		02/27/17 16:44	03/03/17 18:39	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		02/27/17 16:44	03/03/17 18:39	1
Carbazole	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Chrysene	ND		0.040	0.013	ug/L		02/27/17 16:44	03/03/17 18:39	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Dibenzofuran	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Diethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Di-n-butyl phthalate	**0.15**	**J**	0.40	0.13	ug/L		02/27/17 16:44	03/03/17 18:39	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		02/27/17 16:44	03/03/17 18:39	1
Fluoranthene	ND		0.050	0.013	ug/L		02/27/17 16:44	03/03/17 18:39	1
Fluorene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Hexachloroethane	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Isophorone	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Naphthalene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Nitrobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.70	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Phenanthrene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 18:39	1
Phenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 18:39	1
Pyrene	ND		0.060	0.013	ug/L		02/27/17 16:44	03/03/17 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*76*		*57 - 132*	*02/27/17 16:44*	*03/03/17 18:39*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*	*02/27/17 16:44*	*03/03/17 18:39*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 18:39*	*1*
Nitrobenzene-d5	*78*		*59 - 120*	*02/27/17 16:44*	*03/03/17 18:39*	*1*
Phenol-d5	*84*		*52 - 120*	*02/27/17 16:44*	*03/03/17 18:39*	*1*
Terphenyl-d14	*104*		*72 - 140*	*02/27/17 16:44*	*03/03/17 18:39*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 13:00	02/22/17 16:04	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0059	ug/L		02/24/17 10:35	02/27/17 16:24	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:24	1
4,4'-DDT	ND		0.030	0.0049	ug/L		02/24/17 10:35	02/27/17 16:24	1
Aldrin	ND		0.030	0.0069	ug/L		02/24/17 10:35	02/27/17 16:24	1
alpha-BHC	ND		0.030	0.0069	ug/L		02/24/17 10:35	02/27/17 16:24	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:24	1
beta-BHC	ND		0.049	0.012	ug/L		02/24/17 10:35	02/27/17 16:24	1
delta-BHC	ND		0.049	0.0099	ug/L		02/24/17 10:35	02/27/17 16:24	1
Dieldrin	ND		0.030	0.0049	ug/L		02/24/17 10:35	02/27/17 16:24	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:24	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:24	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:24	1
Endrin	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:24	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/24/17 10:35	02/27/17 16:24	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:24	1
gamma-BHC (Lindane)	ND		0.030	0.0049	ug/L		02/24/17 10:35	02/27/17 16:24	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:24	1
Heptachlor	ND		0.020	0.0039	ug/L		02/24/17 10:35	02/27/17 16:24	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:24	1
Methoxychlor	ND		0.099	0.0020	ug/L		02/24/17 10:35	02/27/17 16:24	1
Toxaphene	ND		0.99	0.22	ug/L		02/24/17 10:35	02/27/17 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*22 - 150*	*02/24/17 10:35*	*02/27/17 16:24*	*1*
Tetrachloro-m-xylene	*112*		*40 - 113*	*02/24/17 10:35*	*02/27/17 16:24*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:12	1
PCB-1221	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:12	1
PCB-1232	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:12	1
PCB-1242	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:12	1

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:12	1
PCB-1254	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:12	1
PCB-1260	ND		0.10	0.044	ug/L		02/23/17 12:49	02/23/17 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*44*		*20 - 120*	*02/23/17 12:49*	*02/23/17 18:12*	*1*
DCB Decachlorobiphenyl (Surr)	*79*		*36 - 138*	*02/23/17 12:49*	*02/23/17 18:12*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.9	0.29	ug/L		02/27/17 19:29	03/15/17 19:46	1
Azinphos-methyl	ND		2.5	0.17	ug/L		02/27/17 19:29	03/15/17 19:46	1
Bolstar	ND		0.99	0.31	ug/L		02/27/17 19:29	03/15/17 19:46	1
Chlorpyrifos	ND		1.5	0.36	ug/L		02/27/17 19:29	03/15/17 19:46	1
Coumaphos	ND		0.99	0.13	ug/L		02/27/17 19:29	03/15/17 19:46	1
Demeton, Total	ND		3.0	0.21	ug/L		02/27/17 19:29	03/15/17 19:46	1
Diazinon	ND		0.49	0.15	ug/L		02/27/17 19:29	03/15/17 19:46	1
Dichlorvos	ND		0.49	0.16	ug/L		02/27/17 19:29	03/15/17 19:46	1
Dimethoate	ND		1.5	0.44	ug/L		02/27/17 19:29	03/15/17 19:46	1
Disulfoton	ND		0.99	0.32	ug/L		02/27/17 19:29	03/15/17 19:46	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 19:46	1
Famphur	ND		0.99	0.18	ug/L		02/27/17 19:29	03/15/17 19:46	1
Fensulfothion	ND		2.5	0.54	ug/L		02/27/17 19:29	03/15/17 19:46	1
Fenthion	ND		2.5	0.15	ug/L		02/27/17 19:29	03/15/17 19:46	1
Malathion	ND		2.0	0.13	ug/L		02/27/17 19:29	03/15/17 19:46	1
Merphos	ND		4.9	0.17	ug/L		02/27/17 19:29	03/15/17 19:46	1
Methyl parathion	ND		4.0	0.14	ug/L		02/27/17 19:29	03/15/17 19:46	1
Mevinphos	ND		6.1	0.45	ug/L		02/27/17 19:29	03/15/17 19:46	1
Ethyl Parathion	ND		0.99	0.14	ug/L		02/27/17 19:29	03/15/17 19:46	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 19:46	1
Ronnel	ND		9.9	0.11	ug/L		02/27/17 19:29	03/15/17 19:46	1
Simazine	ND		9.9	0.22	ug/L		02/27/17 19:29	03/15/17 19:46	1
Sulfotepp	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 19:46	1
Thionazin	ND		0.99	0.31	ug/L		02/27/17 19:29	03/15/17 19:46	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 19:46	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 19:46	1
Ethoprop	ND		1.5	0.18	ug/L		02/27/17 19:29	03/15/17 19:46	1
Propazine	ND		9.9	0.29	ug/L		02/27/17 19:29	03/15/17 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*55*		*49 - 171*	*02/27/17 19:29*	*03/15/17 19:46*	*1*
Triphenylphosphate	*75*		*60 - 154*	*02/27/17 19:29*	*03/15/17 19:46*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.99	0.19	ug/L		02/27/17 15:30	03/02/17 12:43	1
2,4-D	ND		4.0	0.21	ug/L		02/27/17 15:30	03/02/17 12:43	1
2,4-DB	ND		4.0	0.36	ug/L		02/27/17 15:30	03/02/17 12:43	1
Dalapon	ND		2.0	0.90	ug/L		02/27/17 15:30	03/02/17 12:43	1
Dicamba	ND		2.0	0.15	ug/L		02/27/17 15:30	03/02/17 12:43	1

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		4.0	0.64	ug/L		02/27/17 15:30	03/02/17 12:43	1
MCPA	ND		400	17	ug/L		02/27/17 15:30	03/02/17 12:43	1
MCPP	**39**	**J p**	400	33	ug/L		02/27/17 15:30	03/02/17 12:43	1
Silvex (2,4,5-TP)	ND		0.99	0.17	ug/L		02/27/17 15:30	03/02/17 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*82*		*39 - 135*	*02/27/17 15:30*	*03/02/17 12:43*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 13:44	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*50 - 150*	*02/28/17 09:16*	*02/28/17 13:44*	*1*
n-Triacontane-d62	*103*		*50 - 150*	*02/28/17 09:16*	*02/28/17 13:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46**		0.80	0.42	mg/L			02/22/17 12:34	1
Nitrate as N	**1.6**		0.20	0.039	mg/L			02/22/17 12:34	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 12:34	1
Sulfate	**18**		0.50	0.13	mg/L			02/22/17 12:34	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.21	pg/L		03/09/17 08:35	03/11/17 20:53	1
2,3,7,8-TCDF	**0.50**	**J**	10	0.14	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,7,8-PeCDD	ND		50	0.28	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,7,8-PeCDF	**0.62**	**J**	50	0.16	pg/L		03/09/17 08:35	03/11/17 20:53	1
2,3,4,7,8-PeCDF	**0.55**	**J q**	50	0.16	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,4,7,8-HxCDD	**0.77**	**J q**	50	0.28	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,6,7,8-HxCDD	**0.74**	**J q**	50	0.22	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,7,8,9-HxCDD	**0.75**	**J q**	50	0.20	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,4,7,8-HxCDF	**1.0**	**J**	50	0.23	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,6,7,8-HxCDF	**0.67**	**J q**	50	0.19	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,7,8,9-HxCDF	**0.89**	**J B**	50	0.21	pg/L		03/09/17 08:35	03/11/17 20:53	1
2,3,4,6,7,8-HxCDF	**0.92**	**J**	50	0.21	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.70	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,4,6,7,8-HpCDF	**1.7**	**J q**	50	0.16	pg/L		03/09/17 08:35	03/11/17 20:53	1
1,2,3,4,7,8,9-HpCDF	**0.76**	**J B q**	50	0.18	pg/L		03/09/17 08:35	03/11/17 20:53	1
OCDD	**2.5**	**J B q**	100	0.16	pg/L		03/09/17 08:35	03/11/17 20:53	1
OCDF	**1.4**	**J B q**	100	0.26	pg/L		03/09/17 08:35	03/11/17 20:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-1,2,3,6,7,8-HxCDD	*101*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*

Client Sample ID: MW-16:022117
Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*88*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*
13C-OCDD	*90*		*40 - 135*	*03/09/17 08:35*	*03/11/17 20:53*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		03/09/17 12:55	03/10/17 10:28	1
Antimony	**0.00019**	**J**	0.00040	0.000080	mg/L		03/09/17 12:55	03/10/17 10:28	1
Barium	**0.053**		0.0012	0.000054	mg/L		03/09/17 12:55	03/10/17 10:28	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 12:55	03/10/17 10:28	1
Cadmium	**0.000037**	**J**	0.00040	0.000028	mg/L		03/09/17 12:55	03/10/17 10:28	1
Chromium	**0.0014**		0.00040	0.00014	mg/L		03/09/17 12:55	03/10/17 10:28	1
Copper	**0.0034**		0.0020	0.00060	mg/L		03/09/17 12:55	03/10/17 10:28	1
Iron	**0.22**		0.040	0.0058	mg/L		03/09/17 12:55	03/10/17 10:28	1
Lead	**0.00034**	**J**	0.00040	0.000034	mg/L		03/09/17 12:55	03/10/17 10:28	1
Manganese	**0.0051**		0.0020	0.00035	mg/L		03/09/17 12:55	03/10/17 10:28	1
Nickel	**0.0019**	**J**	0.0030	0.00040	mg/L		03/09/17 12:55	03/10/17 10:28	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 12:55	03/10/17 10:28	1
Silver	ND		0.00040	0.000030	mg/L		03/09/17 12:55	03/10/17 10:28	1
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 12:55	03/10/17 10:28	1
Vanadium	**0.0049**		0.0040	0.00098	mg/L		03/09/17 12:55	03/10/17 10:28	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 12:55	03/10/17 10:28	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 17:07	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 17:07	1
Barium	**0.052**		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 17:07	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 17:07	1
Cadmium	**0.000029**	**J**	0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 17:07	1
Chromium	**0.00014**	**J**	0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 17:07	1
Copper	**0.0031**		0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 17:07	1
Iron	ND		0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 17:07	1
Lead	**0.00011**	**J**	0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 17:07	1
Manganese	**0.00098**	**J**	0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 17:07	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 17:07	1
Selenium	**0.00036**	**J B**	0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 17:07	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 17:07	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 17:07	1
Vanadium	**0.0042**		0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 17:07	1
Zinc	ND		0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 17:07	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:23	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 09:57	1

Client Sample ID: MW-16:022117

Lab Sample ID: 590-5551-1

Date Collected: 02/21/17 10:22

Matrix: Water

Date Received: 02/22/17 11:32

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:07	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:02	1
Chemical Oxygen Demand	**7.7**	**J**	20	4.0	mg/L			02/28/17 16:32	1
Total Organic Carbon	**2.8**		1.0	0.50	mg/L			02/28/17 18:49	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1

Client Sample ID: MW-4A:022117

Lab Sample ID: 590-5551-2

Date Collected: 02/21/17 10:30

Matrix: Water

Date Received: 02/22/17 11:32

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 13:31	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 13:31	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 13:31	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 13:31	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 13:31	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 13:31	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:31	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 13:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 13:31	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 13:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 13:31	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 13:31	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 13:31	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 13:31	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 13:31	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 13:31	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 13:31	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 13:31	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 13:31	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 13:31	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 13:31	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 13:31	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 13:31	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 13:31	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 13:31	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 13:31	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 13:31	1
Acetone	ND		30	14	ug/L			03/01/17 13:31	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 13:31	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 13:31	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 13:31	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 13:31	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 13:31	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 13:31	1

Client Sample ID: MW-4A:022117
Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 13:31	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 13:31	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 13:31	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 13:31	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 13:31	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 13:31	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 13:31	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 13:31	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 13:31	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 13:31	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 13:31	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 13:31	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 13:31	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 13:31	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 13:31	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 13:31	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 13:31	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 13:31	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 13:31	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 13:31	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 13:31	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 13:31	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 13:31	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 13:31	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 13:31	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 13:31	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 13:31	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 13:31	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 13:31	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:31	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 13:31	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:31	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 13:31	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 13:31	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*03/01/17 13:31*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*03/01/17 13:31*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*03/01/17 13:31*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/01/17 13:31*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*03/01/17 13:31*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-4A:022117
Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
1,2-Dichlorobenzene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
1,3-Dichlorobenzene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
1,4-Dichlorobenzene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
1-Methylnaphthalene	ND		0.059	0.030	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,4,5-Trichlorophenol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,4,6-Trichlorophenol	ND		0.59	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,4-Dichlorophenol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,4-Dinitrophenol	ND		5.0	0.99	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,4-Dinitrotoluene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2,6-Dinitrotoluene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2-Chloronaphthalene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
2-Chlorophenol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
2-Methylphenol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2-Nitroaniline	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
2-Nitrophenol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
3 & 4 Methylphenol	ND		0.79	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
3,3'-Dichlorobenzidine	ND		2.0	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
3-Nitroaniline	ND		0.40	0.12	ug/L		02/27/17 16:44	03/03/17 19:04	1
4,6-Dinitro-2-methylphenol	ND	*	4.0	0.99	ug/L		02/27/17 16:44	03/03/17 19:04	1
4-Bromophenyl phenyl ether	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
4-Chloro-3-methylphenol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
4-Chloroaniline	ND	*	0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
4-Chlorophenyl phenyl ether	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
4-Nitroaniline	ND		0.59	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
4-Nitrophenol	ND		3.0	0.99	ug/L		02/27/17 16:44	03/03/17 19:04	1
Acenaphthene	ND		0.099	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Acenaphthylene	ND		0.079	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Anthracene	ND		0.040	0.0099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzo[a]anthracene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzo[b]fluoranthene	ND		0.079	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzo[g,h,i]perylene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzo[k]fluoranthene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzoic acid	ND		3.0	0.59	ug/L		02/27/17 16:44	03/03/17 19:04	1
Benzyl alcohol	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
bis (2-chloroisopropyl) ether	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Bis(2-chloroethoxy)methane	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Bis(2-chloroethyl)ether	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Bis(2-ethylhexyl) phthalate	ND	*	3.0	1.2	ug/L		02/27/17 16:44	03/03/17 19:04	1
Butyl benzyl phthalate	ND		0.59	0.20	ug/L		02/27/17 16:44	03/03/17 19:04	1
Carbazole	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Chrysene	ND		0.040	0.013	ug/L		02/27/17 16:44	03/03/17 19:04	1
Dibenz(a,h)anthracene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Dibenzofuran	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Diethyl phthalate	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Dimethyl phthalate	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-4A:022117
Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		02/27/17 16:44	03/03/17 19:04	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		02/27/17 16:44	03/03/17 19:04	1
Fluoranthene	ND		0.050	0.013	ug/L		02/27/17 16:44	03/03/17 19:04	1
Fluorene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Hexachlorobenzene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Hexachlorobutadiene	ND		0.59	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Hexachlorocyclopentadiene	ND		2.0	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Hexachloroethane	ND		0.59	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Indeno[1,2,3-cd]pyrene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Isophorone	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Naphthalene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Nitrobenzene	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
N-Nitrosodi-n-propylamine	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
N-Nitrosodiphenylamine	ND		0.40	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Pentachlorophenol	ND		0.69	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Phenanthrene	ND		0.079	0.020	ug/L		02/27/17 16:44	03/03/17 19:04	1
Phenol	ND		0.59	0.099	ug/L		02/27/17 16:44	03/03/17 19:04	1
Pyrene	ND		0.059	0.013	ug/L		02/27/17 16:44	03/03/17 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*57 - 132*	*02/27/17 16:44*	*03/03/17 19:04*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*02/27/17 16:44*	*03/03/17 19:04*	*1*
2-Fluorophenol	*78*		*50 - 113*	*02/27/17 16:44*	*03/03/17 19:04*	*1*
Nitrobenzene-d5	*78*		*59 - 120*	*02/27/17 16:44*	*03/03/17 19:04*	*1*
Phenol-d5	*81*		*52 - 120*	*02/27/17 16:44*	*03/03/17 19:04*	*1*
Terphenyl-d14	*105*		*72 - 140*	*02/27/17 16:44*	*03/03/17 19:04*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 13:00	02/22/17 16:28	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0059	ug/L		02/24/17 10:35	02/27/17 16:43	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:43	1
4,4'-DDT	ND		0.030	0.0049	ug/L		02/24/17 10:35	02/27/17 16:43	1
Aldrin	ND		0.030	0.0069	ug/L		02/24/17 10:35	02/27/17 16:43	1
alpha-BHC	ND		0.030	0.0069	ug/L		02/24/17 10:35	02/27/17 16:43	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:43	1
beta-BHC	ND		0.049	0.012	ug/L		02/24/17 10:35	02/27/17 16:43	1
delta-BHC	ND		0.049	0.0098	ug/L		02/24/17 10:35	02/27/17 16:43	1
Dieldrin	ND		0.030	0.0049	ug/L		02/24/17 10:35	02/27/17 16:43	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:43	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:43	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:43	1
Endrin	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:43	1
Endrin aldehyde	ND		0.20	0.033	ug/L		02/24/17 10:35	02/27/17 16:43	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 16:43	1
gamma-BHC (Lindane)	ND		0.030	0.0049	ug/L		02/24/17 10:35	02/27/17 16:43	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:43	1

Client Sample ID: MW-4A:022117

Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.020	0.0039	ug/L		02/24/17 10:35	02/27/17 16:43	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 16:43	1
Methoxychlor	ND		0.098	0.0020	ug/L		02/24/17 10:35	02/27/17 16:43	1
Toxaphene	ND		0.98	0.22	ug/L		02/24/17 10:35	02/27/17 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*96*		*22 - 150*	*02/24/17 10:35*	*02/27/17 16:43*	*1*
Tetrachloro-m-xylene	*109*		*40 - 113*	*02/24/17 10:35*	*02/27/17 16:43*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 18:33	1
PCB-1221	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 18:33	1
PCB-1232	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 18:33	1
PCB-1242	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 18:33	1
PCB-1248	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 18:33	1
PCB-1254	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 18:33	1
PCB-1260	ND		0.098	0.043	ug/L		02/23/17 12:49	02/23/17 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*40*		*20 - 120*	*02/23/17 12:49*	*02/23/17 18:33*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*36 - 138*	*02/23/17 12:49*	*02/23/17 18:33*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 20:18	1
Azinphos-methyl	ND		2.5	0.17	ug/L		02/27/17 19:29	03/15/17 20:18	1
Bolstar	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 20:18	1
Chlorpyrifos	ND		1.5	0.36	ug/L		02/27/17 19:29	03/15/17 20:18	1
Coumaphos	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 20:18	1
Demeton, Total	ND		3.0	0.21	ug/L		02/27/17 19:29	03/15/17 20:18	1
Diazinon	ND		0.50	0.15	ug/L		02/27/17 19:29	03/15/17 20:18	1
Dichlorvos	ND		0.50	0.16	ug/L		02/27/17 19:29	03/15/17 20:18	1
Dimethoate	ND		1.5	0.45	ug/L		02/27/17 19:29	03/15/17 20:18	1
Disulfoton	ND		1.0	0.32	ug/L		02/27/17 19:29	03/15/17 20:18	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 20:18	1
Famphur	ND		1.0	0.18	ug/L		02/27/17 19:29	03/15/17 20:18	1
Fensulfothion	ND		2.5	0.55	ug/L		02/27/17 19:29	03/15/17 20:18	1
Fenthion	ND		2.5	0.15	ug/L		02/27/17 19:29	03/15/17 20:18	1
Malathion	ND		2.0	0.13	ug/L		02/27/17 19:29	03/15/17 20:18	1
Merphos	ND		5.0	0.17	ug/L		02/27/17 19:29	03/15/17 20:18	1
Methyl parathion	ND		4.0	0.14	ug/L		02/27/17 19:29	03/15/17 20:18	1
Mevinphos	ND		6.2	0.46	ug/L		02/27/17 19:29	03/15/17 20:18	1
Ethyl Parathion	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 20:18	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 20:18	1
Ronnel	ND		10	0.12	ug/L		02/27/17 19:29	03/15/17 20:18	1
Simazine	ND		10	0.22	ug/L		02/27/17 19:29	03/15/17 20:18	1
Sulfotepp	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 20:18	1
Thionazin	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 20:18	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 20:18	1

Client Sample ID: MW-4A:022117

Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2

Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 20:18	1
Ethoprop	ND		1.5	0.18	ug/L		02/27/17 19:29	03/15/17 20:18	1
Propazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*65*		*49 - 171*	*02/27/17 19:29*	*03/15/17 20:18*	*1*
Triphenylphosphate	*80*		*60 - 154*	*02/27/17 19:29*	*03/15/17 20:18*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		02/27/17 15:30	03/02/17 13:06	1
2,4-D	ND		4.0	0.21	ug/L		02/27/17 15:30	03/02/17 13:06	1
2,4-DB	ND		4.0	0.36	ug/L		02/27/17 15:30	03/02/17 13:06	1
Dalapon	ND		2.0	0.91	ug/L		02/27/17 15:30	03/02/17 13:06	1
Dicamba	ND		2.0	0.15	ug/L		02/27/17 15:30	03/02/17 13:06	1
Dichlorprop	ND		4.0	0.65	ug/L		02/27/17 15:30	03/02/17 13:06	1
MCPA	ND		400	17	ug/L		02/27/17 15:30	03/02/17 13:06	1
MCPP	ND		400	33	ug/L		02/27/17 15:30	03/02/17 13:06	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		02/27/17 15:30	03/02/17 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*81*		*39 - 135*	*02/27/17 15:30*	*03/02/17 13:06*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 14:02	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:02*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:02*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38**		0.80	0.42	mg/L			02/22/17 12:46	1
Nitrate as N	**1.9**		0.20	0.039	mg/L			02/22/17 12:46	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 12:46	1
Sulfate	**23**		0.50	0.13	mg/L			02/22/17 12:46	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8	0.23	pg/L		03/09/17 08:35	03/11/17 21:39	1
2,3,7,8-TCDF	ND		9.8	0.11	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,7,8-PeCDD	ND		49	0.27	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,7,8-PeCDF	ND		49	0.12	pg/L		03/09/17 08:35	03/11/17 21:39	1
2,3,4,7,8-PeCDF	ND		49	0.12	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,4,7,8-HxCDD	ND		49	0.36	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,6,7,8-HxCDD	ND		49	0.30	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,7,8,9-HxCDD	ND		49	0.27	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,4,7,8-HxCDF	**0.28**	**J**	49	0.14	pg/L		03/09/17 08:35	03/11/17 21:39	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-4A:022117
Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	**0.21**	**J q**	49	0.11	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,7,8,9-HxCDF	**0.25**	**J B q**	49	0.13	pg/L		03/09/17 08:35	03/11/17 21:39	1
2,3,4,6,7,8-HxCDF	**0.22**	**J**	49	0.13	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,4,6,7,8-HpCDD	ND		49	0.67	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,4,6,7,8-HpCDF	**0.34**	**J q**	49	0.13	pg/L		03/09/17 08:35	03/11/17 21:39	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.15	pg/L		03/09/17 08:35	03/11/17 21:39	1
OCDD	**1.7**	**J B q**	98	0.19	pg/L		03/09/17 08:35	03/11/17 21:39	1
OCDF	**0.74**	**J B q**	98	0.26	pg/L		03/09/17 08:35	03/11/17 21:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*87*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*
13C-OCDD	*86*		*40 - 135*	*03/09/17 08:35*	*03/11/17 21:39*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		03/09/17 12:55	03/10/17 10:33	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		03/09/17 12:55	03/10/17 10:33	1
Barium	**0.036**		0.0012	0.000054	mg/L		03/09/17 12:55	03/10/17 10:33	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 12:55	03/10/17 10:33	1
Cadmium	ND		0.00040	0.000028	mg/L		03/09/17 12:55	03/10/17 10:33	1
Chromium	**0.00032**	**J**	0.00040	0.00014	mg/L		03/09/17 12:55	03/10/17 10:33	1
Copper	**0.0034**		0.0020	0.00060	mg/L		03/09/17 12:55	03/10/17 10:33	1
Iron	**0.10**		0.040	0.0058	mg/L		03/09/17 12:55	03/10/17 10:33	1
Lead	**0.00037**	**J**	0.00040	0.000034	mg/L		03/09/17 12:55	03/10/17 10:33	1
Manganese	**0.0015**	**J**	0.0020	0.00035	mg/L		03/09/17 12:55	03/10/17 10:33	1
Nickel	**0.0010**	**J**	0.0030	0.00040	mg/L		03/09/17 12:55	03/10/17 10:33	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 12:55	03/10/17 10:33	1
Silver	**0.000053**	**J**	0.00040	0.000030	mg/L		03/09/17 12:55	03/10/17 10:33	1
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 12:55	03/10/17 10:33	1
Vanadium	**0.0077**		0.0040	0.00098	mg/L		03/09/17 12:55	03/10/17 10:33	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 12:55	03/10/17 10:33	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 16:22	1
Antimony	**0.00011**	**J**	0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 16:22	1
Barium	**0.037**		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 16:22	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 16:22	1
Cadmium	**0.000032**	**J**	0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 16:22	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 16:22	1
Copper	**0.0035**		0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 16:22	1
Iron	**0.0082**	**J**	0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 16:22	1
Lead	**0.000078**	**J**	0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 16:22	1
Manganese	ND		0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 16:22	1

Client Sample ID: MW-4A:022117

Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.00093**	**J**	0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 16:22	1
Selenium	**0.00035**	**J B**	0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 16:22	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 16:22	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 16:22	1
Vanadium	**0.0068**		0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 16:22	1
Zinc	ND		0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 16:22	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:25	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 09:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:08	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:03	1
Chemical Oxygen Demand	**5.9**	**J**	20	4.0	mg/L			02/28/17 16:32	1
Total Organic Carbon	**1.9**		1.0	0.50	mg/L			02/28/17 19:06	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1

Client Sample ID: MW-14:022117

Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 13:53	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 13:53	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 13:53	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 13:53	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 13:53	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 13:53	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:53	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 13:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 13:53	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 13:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 13:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 13:53	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 13:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 13:53	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 13:53	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 13:53	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 13:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 13:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-14:022117
Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 13:53	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 13:53	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 13:53	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 13:53	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 13:53	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 13:53	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 13:53	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 13:53	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 13:53	1
Acetone	ND		30	14	ug/L			03/01/17 13:53	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 13:53	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 13:53	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 13:53	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 13:53	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 13:53	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 13:53	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 13:53	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 13:53	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 13:53	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 13:53	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 13:53	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 13:53	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 13:53	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 13:53	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 13:53	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 13:53	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 13:53	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 13:53	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 13:53	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 13:53	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 13:53	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 13:53	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 13:53	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 13:53	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 13:53	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 13:53	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 13:53	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 13:53	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 13:53	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 13:53	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 13:53	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 13:53	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 13:53	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 13:53	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 13:53	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:53	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 13:53	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 13:53	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 13:53	1

Client Sample ID: MW-14:022117
Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 13:53	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 125*		*03/01/17 13:53*	*1*
4-Bromofluorobenzene (Surr)	*107*		*69 - 120*		*03/01/17 13:53*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 120*		*03/01/17 13:53*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*03/01/17 13:53*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*03/01/17 13:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
1,2-Dichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
1,3-Dichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
1,4-Dichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
1-Methylnaphthalene	ND		0.059	0.030	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,4-Dichlorophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,4-Dinitrotoluene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2,6-Dinitrotoluene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2-Chloronaphthalene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
2-Chlorophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
2-Methylphenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2-Nitroaniline	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
2-Nitrophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
3 & 4 Methylphenol	ND		0.79	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
3,3'-Dichlorobenzidine	ND		2.0	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 19:28	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.98	ug/L		02/27/17 16:44	03/03/17 19:28	1
4-Bromophenyl phenyl ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
4-Chloro-3-methylphenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
4-Chloroaniline	ND	*	0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
4-Chlorophenyl phenyl ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
4-Nitroaniline	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
4-Nitrophenol	ND		3.0	0.98	ug/L		02/27/17 16:44	03/03/17 19:28	1
Acenaphthene	ND		0.098	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Acenaphthylene	ND		0.079	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Anthracene	ND		0.039	0.0098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Benzo[a]anthracene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-14:022117
Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.039	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Benzo[b]fluoranthene	ND		0.079	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Benzo[g,h,i]perylene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Benzo[k]fluoranthene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Benzoic acid	ND		3.0	0.59	ug/L		02/27/17 16:44	03/03/17 19:28	1
Benzyl alcohol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
bis (2-chloroisopropyl) ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Bis(2-chloroethoxy)methane	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Bis(2-chloroethyl)ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Bis(2-ethylhexyl) phthalate	ND	*	3.0	1.2	ug/L		02/27/17 16:44	03/03/17 19:28	1
Butyl benzyl phthalate	ND		0.59	0.20	ug/L		02/27/17 16:44	03/03/17 19:28	1
Carbazole	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 19:28	1
Dibenz(a,h)anthracene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Dibenzofuran	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Diethyl phthalate	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Dimethyl phthalate	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		02/27/17 16:44	03/03/17 19:28	1
Di-n-octyl phthalate	ND		0.39	0.18	ug/L		02/27/17 16:44	03/03/17 19:28	1
Fluoranthene	ND		0.049	0.013	ug/L		02/27/17 16:44	03/03/17 19:28	1
Fluorene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Hexachlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Hexachlorobutadiene	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Hexachlorocyclopentadiene	ND		2.0	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Hexachloroethane	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Indeno[1,2,3-cd]pyrene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Isophorone	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Naphthalene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Nitrobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
N-Nitrosodi-n-propylamine	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
N-Nitrosodiphenylamine	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Pentachlorophenol	ND		0.69	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Phenanthrene	ND		0.079	0.020	ug/L		02/27/17 16:44	03/03/17 19:28	1
Phenol	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 19:28	1
Pyrene	ND		0.059	0.013	ug/L		02/27/17 16:44	03/03/17 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*80*		*57 - 132*	*02/27/17 16:44*	*03/03/17 19:28*	*1*
2-Fluorobiphenyl	*87*		*50 - 120*	*02/27/17 16:44*	*03/03/17 19:28*	*1*
2-Fluorophenol	*81*		*50 - 113*	*02/27/17 16:44*	*03/03/17 19:28*	*1*
Nitrobenzene-d5	*82*		*59 - 120*	*02/27/17 16:44*	*03/03/17 19:28*	*1*
Phenol-d5	*86*		*52 - 120*	*02/27/17 16:44*	*03/03/17 19:28*	*1*
Terphenyl-d14	*108*		*72 - 140*	*02/27/17 16:44*	*03/03/17 19:28*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 13:00	02/22/17 16:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-14:022117
Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		02/24/17 10:35	02/27/17 17:02	1
4,4'-DDE	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 17:02	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/24/17 10:35	02/27/17 17:02	1
Aldrin	ND		0.029	0.0068	ug/L		02/24/17 10:35	02/27/17 17:02	1
alpha-BHC	ND		0.029	0.0068	ug/L		02/24/17 10:35	02/27/17 17:02	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 17:02	1
beta-BHC	ND		0.049	0.012	ug/L		02/24/17 10:35	02/27/17 17:02	1
delta-BHC	ND		0.049	0.0097	ug/L		02/24/17 10:35	02/27/17 17:02	1
Dieldrin	ND		0.029	0.0049	ug/L		02/24/17 10:35	02/27/17 17:02	1
Endosulfan I	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 17:02	1
Endosulfan II	ND		0.019	0.0019	ug/L		02/24/17 10:35	02/27/17 17:02	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		02/24/17 10:35	02/27/17 17:02	1
Endrin	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 17:02	1
Endrin aldehyde	ND		0.19	0.033	ug/L		02/24/17 10:35	02/27/17 17:02	1
Endrin ketone	ND		0.019	0.0019	ug/L		02/24/17 10:35	02/27/17 17:02	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/24/17 10:35	02/27/17 17:02	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 17:02	1
Heptachlor	ND		0.019	0.0039	ug/L		02/24/17 10:35	02/27/17 17:02	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		02/24/17 10:35	02/27/17 17:02	1
Methoxychlor	ND		0.097	0.0019	ug/L		02/24/17 10:35	02/27/17 17:02	1
Toxaphene	ND		0.97	0.21	ug/L		02/24/17 10:35	02/27/17 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*96*		*22 - 150*	*02/24/17 10:35*	*02/27/17 17:02*	*1*
Tetrachloro-m-xylene	*104*		*40 - 113*	*02/24/17 10:35*	*02/27/17 17:02*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:53	1
PCB-1221	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:53	1
PCB-1232	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:53	1
PCB-1242	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:53	1
PCB-1248	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:53	1
PCB-1254	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 18:53	1
PCB-1260	ND		0.10	0.044	ug/L		02/23/17 12:49	02/23/17 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*20 - 120*	*02/23/17 12:49*	*02/23/17 18:53*	*1*
DCB Decachlorobiphenyl (Surr)	*96*		*36 - 138*	*02/23/17 12:49*	*02/23/17 18:53*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.29	ug/L		02/27/17 19:29	03/15/17 20:49	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/15/17 20:49	1
Bolstar	ND		0.97	0.31	ug/L		02/27/17 19:29	03/15/17 20:49	1
Chlorpyrifos	ND		1.5	0.35	ug/L		02/27/17 19:29	03/15/17 20:49	1
Coumaphos	ND		0.97	0.13	ug/L		02/27/17 19:29	03/15/17 20:49	1
Demeton, Total	ND		2.9	0.20	ug/L		02/27/17 19:29	03/15/17 20:49	1
Diazinon	ND		0.49	0.14	ug/L		02/27/17 19:29	03/15/17 20:49	1
Dichlorvos	ND		0.49	0.16	ug/L		02/27/17 19:29	03/15/17 20:49	1

Client Sample ID: MW-14:022117
Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.44	ug/L		02/27/17 19:29	03/15/17 20:49	1
Disulfoton	ND		0.97	0.31	ug/L		02/27/17 19:29	03/15/17 20:49	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 20:49	1
Famphur	ND		0.97	0.17	ug/L		02/27/17 19:29	03/15/17 20:49	1
Fensulfothion	ND		2.4	0.53	ug/L		02/27/17 19:29	03/15/17 20:49	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/15/17 20:49	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/15/17 20:49	1
Merphos	ND		4.9	0.17	ug/L		02/27/17 19:29	03/15/17 20:49	1
Methyl parathion	ND		3.9	0.14	ug/L		02/27/17 19:29	03/15/17 20:49	1
Mevinphos	ND		6.0	0.45	ug/L		02/27/17 19:29	03/15/17 20:49	1
Ethyl Parathion	ND		0.97	0.14	ug/L		02/27/17 19:29	03/15/17 20:49	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 20:49	1
Ronnel	ND		9.7	0.11	ug/L		02/27/17 19:29	03/15/17 20:49	1
Simazine	ND		9.7	0.22	ug/L		02/27/17 19:29	03/15/17 20:49	1
Sulfotepp	ND		1.5	0.16	ug/L		02/27/17 19:29	03/15/17 20:49	1
Thionazin	ND		0.97	0.30	ug/L		02/27/17 19:29	03/15/17 20:49	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 20:49	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 20:49	1
Ethoprop	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 20:49	1
Propazine	ND		9.7	0.29	ug/L		02/27/17 19:29	03/15/17 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*54*		*49 - 171*	*02/27/17 19:29*	*03/15/17 20:49*	*1*
Triphenylphosphate	*75*		*60 - 154*	*02/27/17 19:29*	*03/15/17 20:49*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		02/27/17 15:30	03/02/17 13:29	1
2,4-D	ND		3.8	0.20	ug/L		02/27/17 15:30	03/02/17 13:29	1
2,4-DB	ND		3.8	0.34	ug/L		02/27/17 15:30	03/02/17 13:29	1
Dalapon	ND		1.9	0.86	ug/L		02/27/17 15:30	03/02/17 13:29	1
Dicamba	ND		1.9	0.14	ug/L		02/27/17 15:30	03/02/17 13:29	1
Dichlorprop	ND		3.8	0.62	ug/L		02/27/17 15:30	03/02/17 13:29	1
MCPA	ND		380	16	ug/L		02/27/17 15:30	03/02/17 13:29	1
MCPP	**36**	**J**	380	31	ug/L		02/27/17 15:30	03/02/17 13:29	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		02/27/17 15:30	03/02/17 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*88*		*39 - 135*	*02/27/17 15:30*	*03/02/17 13:29*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 14:20	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:20*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:20*	*1*

Client Sample ID: MW-14:022117

Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.9**		0.80	0.42	mg/L			02/22/17 12:58	1
Nitrate as N	**4.7**		0.20	0.039	mg/L			02/22/17 12:58	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 12:58	1
Sulfate	**11**		0.50	0.13	mg/L			02/22/17 12:58	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.21	pg/L		03/09/17 12:14	03/11/17 22:25	1
2,3,7,8-TCDF	ND		9.7	0.10	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,7,8-PeCDD	ND		49	0.22	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,7,8-PeCDF	ND		49	0.11	pg/L		03/09/17 12:14	03/11/17 22:25	1
2,3,4,7,8-PeCDF	ND		49	0.12	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,4,7,8-HxCDD	ND		49	0.26	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,6,7,8-HxCDD	ND		49	0.21	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,7,8,9-HxCDD	ND		49	0.19	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,4,7,8-HxCDF	ND		49	0.13	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,6,7,8-HxCDF	ND		49	0.11	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,7,8,9-HxCDF	**0.31**	**J B**	49	0.12	pg/L		03/09/17 12:14	03/11/17 22:25	1
2,3,4,6,7,8-HxCDF	ND		49	0.12	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,4,6,7,8-HpCDD	ND		49	0.66	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,4,6,7,8-HpCDF	**0.28**	**J q**	49	0.13	pg/L		03/09/17 12:14	03/11/17 22:25	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.14	pg/L		03/09/17 12:14	03/11/17 22:25	1
OCDD	**1.6**	**J B**	97	0.22	pg/L		03/09/17 12:14	03/11/17 22:25	1
OCDF	**0.35**	**J B q**	97	0.24	pg/L		03/09/17 12:14	03/11/17 22:25	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-2,3,7,8-TCDF	*82*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-1,2,3,7,8-PeCDD	*86*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-1,2,3,7,8-PeCDF	*80*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-1,2,3,6,7,8-HxCDD	*91*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-1,2,3,4,7,8-HxCDF	*76*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*80*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*
13C-OCDD	*84*		*40 - 135*	*03/09/17 12:14*	*03/11/17 22:25*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		03/09/17 12:55	03/10/17 10:37	1
Antimony	**0.00011**	**J**	0.00040	0.000080	mg/L		03/09/17 12:55	03/10/17 10:37	1
Barium	**0.055**		0.0012	0.000054	mg/L		03/09/17 12:55	03/10/17 10:37	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 12:55	03/10/17 10:37	1
Cadmium	ND		0.00040	0.000028	mg/L		03/09/17 12:55	03/10/17 10:37	1
Chromium	**0.00036**	**J**	0.00040	0.00014	mg/L		03/09/17 12:55	03/10/17 10:37	1
Copper	ND		0.0020	0.00060	mg/L		03/09/17 12:55	03/10/17 10:37	1
Iron	ND		0.040	0.0058	mg/L		03/09/17 12:55	03/10/17 10:37	1
Lead	**0.00013**	**J**	0.00040	0.000034	mg/L		03/09/17 12:55	03/10/17 10:37	1
Manganese	ND		0.0020	0.00035	mg/L		03/09/17 12:55	03/10/17 10:37	1
Nickel	ND		0.0030	0.00040	mg/L		03/09/17 12:55	03/10/17 10:37	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 12:55	03/10/17 10:37	1
Silver	ND		0.00040	0.000030	mg/L		03/09/17 12:55	03/10/17 10:37	1

Client Sample ID: MW-14:022117

Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 12:55	03/10/17 10:37	1
Vanadium	**0.0039**	**J**	0.0040	0.00098	mg/L		03/09/17 12:55	03/10/17 10:37	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 12:55	03/10/17 10:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 16:26	1
Antimony	**0.000095**	**J**	0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 16:26	1
Barium	**0.055**		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 16:26	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 16:26	1
Cadmium	ND		0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 16:26	1
Chromium	**0.00032**	**J**	0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 16:26	1
Copper	**0.00088**	**J**	0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 16:26	1
Iron	ND		0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 16:26	1
Lead	**0.000042**	**J**	0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 16:26	1
Manganese	**0.0016**	**J**	0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 16:26	1
Nickel	ND		0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 16:26	1
Selenium	ND		0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 16:26	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 16:26	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 16:26	1
Vanadium	**0.0033**	**J**	0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 16:26	1
Zinc	ND		0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 16:26	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:27	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:08	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:04	1
Chemical Oxygen Demand	**5.1**	**J**	20	4.0	mg/L			02/28/17 16:32	1
Total Organic Carbon	**0.93**	**J**	1.0	0.50	mg/L			02/28/17 19:22	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1

Client Sample ID: MW-2A:022117

Date Collected: 02/21/17 12:13
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 14:15	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 14:15	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-2A:022117
Date Collected: 02/21/17 12:13
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 14:15	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 14:15	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 14:15	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 14:15	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 14:15	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 14:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 14:15	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 14:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 14:15	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 14:15	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 14:15	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 14:15	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 14:15	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 14:15	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 14:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 14:15	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 14:15	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 14:15	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 14:15	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 14:15	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 14:15	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 14:15	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 14:15	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 14:15	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 14:15	1
Acetone	ND		30	14	ug/L			03/01/17 14:15	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 14:15	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 14:15	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 14:15	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 14:15	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 14:15	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 14:15	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 14:15	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 14:15	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 14:15	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 14:15	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 14:15	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 14:15	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 14:15	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 14:15	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 14:15	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 14:15	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 14:15	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 14:15	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 14:15	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 14:15	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 14:15	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 14:15	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 14:15	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-2A:022117
Date Collected: 02/21/17 12:13
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 14:15	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 14:15	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 14:15	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 14:15	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 14:15	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 14:15	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 14:15	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 14:15	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 14:15	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 14:15	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 14:15	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 14:15	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 14:15	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 14:15	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 14:15	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 14:15	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 14:15	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*		*03/01/17 14:15*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*03/01/17 14:15*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*03/01/17 14:15*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*03/01/17 14:15*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*		*03/01/17 14:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
2-Chlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
2-Methylphenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-2A:022117
Date Collected: 02/21/17 12:13
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
2-Nitrophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
3-Nitroaniline	ND		0.38	0.12	ug/L		02/27/17 16:44	03/03/17 19:53	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.96	ug/L		02/27/17 16:44	03/03/17 19:53	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
4-Nitroaniline	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
4-Nitrophenol	ND		2.9	0.96	ug/L		02/27/17 16:44	03/03/17 19:53	1
Acenaphthene	ND		0.096	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Anthracene	ND		0.038	0.0096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 19:53	1
Benzyl alcohol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 19:53	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 19:53	1
Carbazole	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Chrysene	ND		0.038	0.013	ug/L		02/27/17 16:44	03/03/17 19:53	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Dibenzofuran	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Diethyl phthalate	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Di-n-butyl phthalate	ND		0.38	0.13	ug/L		02/27/17 16:44	03/03/17 19:53	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		02/27/17 16:44	03/03/17 19:53	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 19:53	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Hexachloroethane	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1
Isophorone	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Naphthalene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Nitrobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Pentachlorophenol	ND		0.67	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 19:53	1

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Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 19:53	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*70*		*57 - 132*	*02/27/17 16:44*	*03/03/17 19:53*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*02/27/17 16:44*	*03/03/17 19:53*	*1*
2-Fluorophenol	*68*		*50 - 113*	*02/27/17 16:44*	*03/03/17 19:53*	*1*
Nitrobenzene-d5	*71*		*59 - 120*	*02/27/17 16:44*	*03/03/17 19:53*	*1*
Phenol-d5	*71*		*52 - 120*	*02/27/17 16:44*	*03/03/17 19:53*	*1*
Terphenyl-d14	*97*		*72 - 140*	*02/27/17 16:44*	*03/03/17 19:53*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 13:00	02/22/17 17:17	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/24/17 10:35	02/27/17 17:22	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 17:22	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 17:22	1
Aldrin	ND		0.030	0.0070	ug/L		02/24/17 10:35	02/27/17 17:22	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/24/17 10:35	02/27/17 17:22	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 17:22	1
beta-BHC	ND		0.050	0.012	ug/L		02/24/17 10:35	02/27/17 17:22	1
delta-BHC	ND		0.050	0.010	ug/L		02/24/17 10:35	02/27/17 17:22	1
Dieldrin	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 17:22	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 17:22	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 17:22	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 17:22	1
Endrin	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 17:22	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/24/17 10:35	02/27/17 17:22	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 17:22	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 17:22	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 17:22	1
Heptachlor	ND		0.020	0.0040	ug/L		02/24/17 10:35	02/27/17 17:22	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 17:22	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/24/17 10:35	02/27/17 17:22	1
Toxaphene	ND		1.0	0.22	ug/L		02/24/17 10:35	02/27/17 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*85*		*22 - 150*	*02/24/17 10:35*	*02/27/17 17:22*	*1*
Tetrachloro-m-xylene	*95*		*40 - 113*	*02/24/17 10:35*	*02/27/17 17:22*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 19:14	1
PCB-1221	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 19:14	1
PCB-1232	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 19:14	1
PCB-1242	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 19:14	1
PCB-1248	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 19:14	1
PCB-1254	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 19:14	1

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Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.10	0.044	ug/L		02/23/17 12:49	02/23/17 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*20 - 120*	*02/23/17 12:49*	*02/23/17 19:14*	*1*
DCB Decachlorobiphenyl (Surr)	*89*		*36 - 138*	*02/23/17 12:49*	*02/23/17 19:14*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		02/27/17 19:29	03/15/17 21:21	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/15/17 21:21	1
Bolstar	ND		0.97	0.31	ug/L		02/27/17 19:29	03/15/17 21:21	1
Chlorpyrifos	ND		1.5	0.35	ug/L		02/27/17 19:29	03/15/17 21:21	1
Coumaphos	ND		0.97	0.13	ug/L		02/27/17 19:29	03/15/17 21:21	1
Demeton, Total	ND		2.9	0.20	ug/L		02/27/17 19:29	03/15/17 21:21	1
Diazinon	ND		0.49	0.14	ug/L		02/27/17 19:29	03/15/17 21:21	1
Dichlorvos	ND		0.49	0.16	ug/L		02/27/17 19:29	03/15/17 21:21	1
Dimethoate	ND		1.5	0.44	ug/L		02/27/17 19:29	03/15/17 21:21	1
Disulfoton	ND		0.97	0.31	ug/L		02/27/17 19:29	03/15/17 21:21	1
EPN	ND		1.2	0.14	ug/L		02/27/17 19:29	03/15/17 21:21	1
Famphur	ND		0.97	0.17	ug/L		02/27/17 19:29	03/15/17 21:21	1
Fensulfothion	ND		2.4	0.53	ug/L		02/27/17 19:29	03/15/17 21:21	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/15/17 21:21	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/15/17 21:21	1
Merphos	ND		4.9	0.17	ug/L		02/27/17 19:29	03/15/17 21:21	1
Methyl parathion	ND		3.9	0.14	ug/L		02/27/17 19:29	03/15/17 21:21	1
Mevinphos	ND		6.0	0.45	ug/L		02/27/17 19:29	03/15/17 21:21	1
Ethyl Parathion	ND		0.97	0.14	ug/L		02/27/17 19:29	03/15/17 21:21	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 21:21	1
Ronnel	ND		9.7	0.11	ug/L		02/27/17 19:29	03/15/17 21:21	1
Simazine	ND		9.7	0.22	ug/L		02/27/17 19:29	03/15/17 21:21	1
Sulfotepp	ND		1.5	0.16	ug/L		02/27/17 19:29	03/15/17 21:21	1
Thionazin	ND		0.97	0.30	ug/L		02/27/17 19:29	03/15/17 21:21	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 21:21	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 21:21	1
Ethoprop	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 21:21	1
Propazine	ND		9.7	0.28	ug/L		02/27/17 19:29	03/15/17 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*56*		*49 - 171*	*02/27/17 19:29*	*03/15/17 21:21*	*1*
Triphenylphosphate	*76*		*60 - 154*	*02/27/17 19:29*	*03/15/17 21:21*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		02/27/17 15:30	03/02/17 13:52	1
2,4-D	ND		3.9	0.20	ug/L		02/27/17 15:30	03/02/17 13:52	1
2,4-DB	ND		3.9	0.35	ug/L		02/27/17 15:30	03/02/17 13:52	1
Dalapon	ND		1.9	0.88	ug/L		02/27/17 15:30	03/02/17 13:52	1
Dicamba	ND		1.9	0.14	ug/L		02/27/17 15:30	03/02/17 13:52	1
Dichlorprop	ND		3.9	0.63	ug/L		02/27/17 15:30	03/02/17 13:52	1
MCPA	ND		390	16	ug/L		02/27/17 15:30	03/02/17 13:52	1

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Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		390	32	ug/L		02/27/17 15:30	03/02/17 13:52	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		02/27/17 15:30	03/02/17 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*70*		*39 - 135*	*02/27/17 15:30*	*03/02/17 13:52*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 14:37	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:37*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:37*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46**		0.80	0.42	mg/L			02/22/17 13:10	1
Nitrate as N	**2.4**		0.20	0.039	mg/L			02/22/17 13:10	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 13:10	1
Sulfate	**25**		0.50	0.13	mg/L			02/22/17 13:10	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8	0.21	pg/L		03/09/17 12:14	03/11/17 23:12	1
2,3,7,8-TCDF	ND		9.8	0.11	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,7,8-PeCDD	ND		49	0.24	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,7,8-PeCDF	ND		49	0.097	pg/L		03/09/17 12:14	03/11/17 23:12	1
2,3,4,7,8-PeCDF	ND		49	0.10	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,4,7,8-HxCDD	ND		49	0.28	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,6,7,8-HxCDD	ND		49	0.23	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,7,8,9-HxCDD	ND		49	0.20	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,4,7,8-HxCDF	ND		49	0.11	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,6,7,8-HxCDF	**0.15**	**J q**	49	0.092	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,7,8,9-HxCDF	**0.15**	**J B q**	49	0.10	pg/L		03/09/17 12:14	03/11/17 23:12	1
2,3,4,6,7,8-HxCDF	ND		49	0.10	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,4,6,7,8-HpCDD	ND		49	0.79	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,4,6,7,8-HpCDF	ND		49	0.15	pg/L		03/09/17 12:14	03/11/17 23:12	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.17	pg/L		03/09/17 12:14	03/11/17 23:12	1
OCDD	**1.5**	**J B**	98	0.14	pg/L		03/09/17 12:14	03/11/17 23:12	1
OCDF	ND		98	0.23	pg/L		03/09/17 12:14	03/11/17 23:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-1,2,3,7,8-PeCDD	*82*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*98*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*87*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*

Client Sample ID: MW-2A:022117
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Lab Sample ID: 590-5551-4
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDF	*82*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*
13C-OCDD	*86*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:12*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0027**		0.0010	0.00027	mg/L		03/09/17 12:55	03/10/17 10:42	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		03/09/17 12:55	03/10/17 10:42	1
Barium	**0.044**		0.0012	0.000054	mg/L		03/09/17 12:55	03/10/17 10:42	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 12:55	03/10/17 10:42	1
Cadmium	ND		0.00040	0.000028	mg/L		03/09/17 12:55	03/10/17 10:42	1
Chromium	**0.00019**	**J**	0.00040	0.00014	mg/L		03/09/17 12:55	03/10/17 10:42	1
Copper	**0.0039**		0.0020	0.00060	mg/L		03/09/17 12:55	03/10/17 10:42	1
Iron	ND		0.040	0.0058	mg/L		03/09/17 12:55	03/10/17 10:42	1
Lead	**0.00011**	**J**	0.00040	0.000034	mg/L		03/09/17 12:55	03/10/17 10:42	1
Manganese	**0.00047**	**J**	0.0020	0.00035	mg/L		03/09/17 12:55	03/10/17 10:42	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		03/09/17 12:55	03/10/17 10:42	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 12:55	03/10/17 10:42	1
Silver	ND		0.00040	0.000030	mg/L		03/09/17 12:55	03/10/17 10:42	1
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 12:55	03/10/17 10:42	1
Vanadium	**0.0087**		0.0040	0.00098	mg/L		03/09/17 12:55	03/10/17 10:42	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 12:55	03/10/17 10:42	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0026**		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 16:31	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 16:31	1
Barium	**0.046**		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 16:31	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 16:31	1
Cadmium	ND		0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 16:31	1
Chromium	**0.00017**	**J**	0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 16:31	1
Copper	**0.0041**		0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 16:31	1
Iron	**0.013**	**J**	0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 16:31	1
Lead	**0.000040**	**J**	0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 16:31	1
Manganese	**0.00048**	**J**	0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 16:31	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 16:31	1
Selenium	ND		0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 16:31	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 16:31	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 16:31	1
Vanadium	**0.0078**		0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 16:31	1
Zinc	**0.0022**	**J**	0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 16:31	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:09	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 10:09	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-2A:022117

Lab Sample ID: 590-5551-4

Date Collected: 02/21/17 12:13

Matrix: Water

Date Received: 02/22/17 11:32

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:09	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:05	1
Chemical Oxygen Demand	**11**	**J**	20	4.0	mg/L			02/28/17 16:32	1
Total Organic Carbon	**3.1**		1.0	0.50	mg/L			02/28/17 19:41	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1

Client Sample ID: MW-11A:022117

Lab Sample ID: 590-5551-5

Date Collected: 02/21/17 14:50

Matrix: Water

Date Received: 02/22/17 11:32

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 15:00	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 15:00	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 15:00	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 15:00	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 15:00	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 15:00	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:00	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 15:00	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 15:00	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 15:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 15:00	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 15:00	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 15:00	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 15:00	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 15:00	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 15:00	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 15:00	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 15:00	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 15:00	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 15:00	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 15:00	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 15:00	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 15:00	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 15:00	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 15:00	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 15:00	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 15:00	1
Acetone	ND		30	14	ug/L			03/01/17 15:00	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 15:00	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 15:00	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 15:00	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 15:00	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 15:00	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 15:00	1

Client Sample ID: MW-11A:022117
Date Collected: 02/21/17 14:50
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 15:00	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 15:00	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 15:00	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 15:00	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 15:00	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 15:00	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 15:00	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 15:00	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 15:00	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 15:00	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 15:00	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 15:00	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 15:00	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 15:00	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 15:00	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 15:00	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 15:00	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 15:00	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 15:00	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 15:00	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 15:00	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 15:00	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 15:00	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 15:00	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 15:00	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 15:00	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 15:00	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 15:00	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 15:00	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:00	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 15:00	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:00	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 15:00	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 15:00	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 125*		*03/01/17 15:00*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*03/01/17 15:00*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*03/01/17 15:00*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*03/01/17 15:00*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*03/01/17 15:00*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-11A:022117
Date Collected: 02/21/17 14:50
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
2-Chlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
2-Methylphenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2-Nitroaniline	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
2-Nitrophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
3-Nitroaniline	ND		0.38	0.12	ug/L		02/27/17 16:44	03/03/17 20:17	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.96	ug/L		02/27/17 16:44	03/03/17 20:17	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
4-Nitroaniline	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
4-Nitrophenol	ND		2.9	0.96	ug/L		02/27/17 16:44	03/03/17 20:17	1
Acenaphthene	ND		0.096	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Anthracene	ND		0.038	0.0096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 20:17	1
Benzyl alcohol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Bis(2-ethylhexyl) phthalate	**2.3**	**J ***	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 20:17	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 20:17	1
Carbazole	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Chrysene	ND		0.038	0.012	ug/L		02/27/17 16:44	03/03/17 20:17	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Dibenzofuran	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Diethyl phthalate	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-11A:022117
Date Collected: 02/21/17 14:50
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.16**	**J**	0.38	0.12	ug/L		02/27/17 16:44	03/03/17 20:17	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		02/27/17 16:44	03/03/17 20:17	1
Fluoranthene	ND		0.048	0.012	ug/L		02/27/17 16:44	03/03/17 20:17	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Hexachloroethane	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Isophorone	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Naphthalene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Nitrobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Pentachlorophenol	ND		0.67	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 20:17	1
Phenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:17	1
Pyrene	ND		0.058	0.012	ug/L		02/27/17 16:44	03/03/17 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*68*		*57 - 132*	*02/27/17 16:44*	*03/03/17 20:17*	*1*
2-Fluorobiphenyl	*78*		*50 - 120*	*02/27/17 16:44*	*03/03/17 20:17*	*1*
2-Fluorophenol	*73*		*50 - 113*	*02/27/17 16:44*	*03/03/17 20:17*	*1*
Nitrobenzene-d5	*73*		*59 - 120*	*02/27/17 16:44*	*03/03/17 20:17*	*1*
Phenol-d5	*78*		*52 - 120*	*02/27/17 16:44*	*03/03/17 20:17*	*1*
Terphenyl-d14	*99*		*72 - 140*	*02/27/17 16:44*	*03/03/17 20:17*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 13:00	02/22/17 18:06	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0059	ug/L		02/28/17 10:48	02/28/17 22:03	1
4,4'-DDE	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 22:03	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 22:03	1
Aldrin	ND		0.029	0.0069	ug/L		02/28/17 10:48	02/28/17 22:03	1
alpha-BHC	ND		0.029	0.0069	ug/L		02/28/17 10:48	02/28/17 22:03	1
alpha-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 22:03	1
beta-BHC	ND		0.049	0.012	ug/L		02/28/17 10:48	02/28/17 22:03	1
delta-BHC	ND		0.049	0.0098	ug/L		02/28/17 10:48	02/28/17 22:03	1
Dieldrin	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 22:03	1
Endosulfan I	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 22:03	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 22:03	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 22:03	1
Endrin	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 22:03	1
Endrin aldehyde	ND		0.20	0.033	ug/L		02/28/17 10:48	02/28/17 22:03	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 22:03	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 22:03	1
gamma-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 22:03	1

Client Sample ID: MW-11A:022117

Date Collected: 02/21/17 14:50
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Lab Sample ID: 590-5551-5

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.020	0.0039	ug/L		02/28/17 10:48	02/28/17 22:03	1
Heptachlor epoxide	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 22:03	1
Methoxychlor	ND		0.098	0.0020	ug/L		02/28/17 10:48	02/28/17 22:03	1
Toxaphene	ND		0.98	0.22	ug/L		02/28/17 10:48	02/28/17 22:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*99*		*22 - 150*	*02/28/17 10:48*	*02/28/17 22:03*	*1*
Tetrachloro-m-xylene	*103*		*40 - 113*	*02/28/17 10:48*	*02/28/17 22:03*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 19:35	1
PCB-1221	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 19:35	1
PCB-1232	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 19:35	1
PCB-1242	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 19:35	1
PCB-1248	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 19:35	1
PCB-1254	ND		0.097	0.060	ug/L		02/23/17 12:49	02/23/17 19:35	1
PCB-1260	ND		0.097	0.042	ug/L		02/23/17 12:49	02/23/17 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*20 - 120*	*02/23/17 12:49*	*02/23/17 19:35*	*1*
DCB Decachlorobiphenyl (Surr)	*88*		*36 - 138*	*02/23/17 12:49*	*02/23/17 19:35*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		02/27/17 19:29	03/15/17 21:52	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/15/17 21:52	1
Bolstar	ND		0.96	0.30	ug/L		02/27/17 19:29	03/15/17 21:52	1
Chlorpyrifos	ND		1.4	0.35	ug/L		02/27/17 19:29	03/15/17 21:52	1
Coumaphos	ND		0.96	0.13	ug/L		02/27/17 19:29	03/15/17 21:52	1
Demeton, Total	ND		2.9	0.20	ug/L		02/27/17 19:29	03/15/17 21:52	1
Diazinon	ND		0.48	0.14	ug/L		02/27/17 19:29	03/15/17 21:52	1
Dichlorvos	ND		0.48	0.16	ug/L		02/27/17 19:29	03/15/17 21:52	1
Dimethoate	ND		1.4	0.43	ug/L		02/27/17 19:29	03/15/17 21:52	1
Disulfoton	ND		0.96	0.31	ug/L		02/27/17 19:29	03/15/17 21:52	1
EPN	ND		1.2	0.14	ug/L		02/27/17 19:29	03/15/17 21:52	1
Famphur	ND		0.96	0.17	ug/L		02/27/17 19:29	03/15/17 21:52	1
Fensulfothion	ND		2.4	0.52	ug/L		02/27/17 19:29	03/15/17 21:52	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/15/17 21:52	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/15/17 21:52	1
Merphos	ND		4.8	0.17	ug/L		02/27/17 19:29	03/15/17 21:52	1
Methyl parathion	ND		3.8	0.14	ug/L		02/27/17 19:29	03/15/17 21:52	1
Mevinphos	ND		5.9	0.44	ug/L		02/27/17 19:29	03/15/17 21:52	1
Ethyl Parathion	ND		0.96	0.14	ug/L		02/27/17 19:29	03/15/17 21:52	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 21:52	1
Ronnel	ND		9.6	0.11	ug/L		02/27/17 19:29	03/15/17 21:52	1
Simazine	ND		9.6	0.21	ug/L		02/27/17 19:29	03/15/17 21:52	1
Sulfotepp	ND		1.4	0.16	ug/L		02/27/17 19:29	03/15/17 21:52	1
Thionazin	ND		0.96	0.30	ug/L		02/27/17 19:29	03/15/17 21:52	1
Tokuthion	ND		1.5	0.12	ug/L		02/27/17 19:29	03/15/17 21:52	1

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Lab Sample ID: 590-5551-5
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.4	0.23	ug/L		02/27/17 19:29	03/15/17 21:52	1
Ethoprop	ND		1.4	0.17	ug/L		02/27/17 19:29	03/15/17 21:52	1
Propazine	ND		9.6	0.28	ug/L		02/27/17 19:29	03/15/17 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*57*		*49 - 171*	*02/27/17 19:29*	*03/15/17 21:52*	*1*
Triphenylphosphate	*79*		*60 - 154*	*02/27/17 19:29*	*03/15/17 21:52*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.18	ug/L		02/27/17 15:30	03/02/17 14:15	1
2,4-D	ND		3.8	0.20	ug/L		02/27/17 15:30	03/02/17 14:15	1
2,4-DB	ND		3.8	0.34	ug/L		02/27/17 15:30	03/02/17 14:15	1
Dalapon	ND		1.9	0.86	ug/L		02/27/17 15:30	03/02/17 14:15	1
Dicamba	ND		1.9	0.14	ug/L		02/27/17 15:30	03/02/17 14:15	1
Dichlorprop	ND		3.8	0.61	ug/L		02/27/17 15:30	03/02/17 14:15	1
MCPA	ND		380	16	ug/L		02/27/17 15:30	03/02/17 14:15	1
MCPP	ND		380	31	ug/L		02/27/17 15:30	03/02/17 14:15	1
Silvex (2,4,5-TP)	ND		0.95	0.16	ug/L		02/27/17 15:30	03/02/17 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*39 - 135*	*02/27/17 15:30*	*03/02/17 14:15*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.043	mg/L		02/28/17 09:16	02/28/17 14:55	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.064	mg/L		02/28/17 09:16	02/28/17 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:55*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*02/28/17 09:16*	*02/28/17 14:55*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11**		0.80	0.42	mg/L			02/22/17 13:22	1
Nitrate as N	**3.0**		0.20	0.039	mg/L			02/22/17 13:22	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 13:22	1
Sulfate	**9.7**		0.50	0.13	mg/L			02/22/17 13:22	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.24	pg/L		03/09/17 12:14	03/11/17 23:58	1
2,3,7,8-TCDF	ND		9.6	0.10	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,7,8-PeCDD	ND		48	0.30	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,7,8-PeCDF	ND		48	0.13	pg/L		03/09/17 12:14	03/11/17 23:58	1
2,3,4,7,8-PeCDF	ND		48	0.13	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,4,7,8-HxCDD	ND		48	0.26	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,6,7,8-HxCDD	ND		48	0.21	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,7,8,9-HxCDD	ND		48	0.19	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,4,7,8-HxCDF	ND		48	0.13	pg/L		03/09/17 12:14	03/11/17 23:58	1

Client Sample ID: MW-11A:022117
Date Collected: 02/21/17 14:50
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Lab Sample ID: 590-5551-5
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		48	0.11	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,7,8,9-HxCDF	ND		48	0.12	pg/L		03/09/17 12:14	03/11/17 23:58	1
2,3,4,6,7,8-HxCDF	ND		48	0.12	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,4,6,7,8-HpCDD	ND		48	0.83	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.16	pg/L		03/09/17 12:14	03/11/17 23:58	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.18	pg/L		03/09/17 12:14	03/11/17 23:58	1
OCDD	**1.6**	**J B q**	96	0.15	pg/L		03/09/17 12:14	03/11/17 23:58	1
OCDF	**0.39**	**J B q**	96	0.20	pg/L		03/09/17 12:14	03/11/17 23:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*88*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-2,3,7,8-TCDF	*86*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-1,2,3,7,8-PeCDD	*90*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-1,2,3,7,8-PeCDF	*87*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*90*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*
13C-OCDD	*98*		*40 - 135*	*03/09/17 12:14*	*03/11/17 23:58*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		03/09/17 16:54	03/10/17 14:45	1
Antimony	**0.00025**	**J**	0.00040	0.000080	mg/L		03/09/17 16:54	03/10/17 14:45	1
Barium	**0.075**		0.0012	0.000054	mg/L		03/09/17 16:54	03/10/17 14:45	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 16:54	03/10/17 14:45	1
Cadmium	ND		0.00040	0.000028	mg/L		03/09/17 16:54	03/10/17 14:45	1
Chromium	**0.00052**		0.00040	0.00014	mg/L		03/09/17 16:54	03/10/17 14:45	1
Copper	ND		0.0020	0.00060	mg/L		03/09/17 16:54	03/10/17 14:45	1
Iron	ND		0.040	0.0058	mg/L		03/09/17 16:54	03/10/17 14:45	1
Lead	ND		0.00040	0.000034	mg/L		03/09/17 16:54	03/10/17 14:45	1
Manganese	ND		0.0020	0.00035	mg/L		03/09/17 16:54	03/10/17 14:45	1
Nickel	ND		0.0030	0.00040	mg/L		03/09/17 16:54	03/10/17 14:45	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 16:54	03/10/17 14:45	1
Silver	ND		0.00040	0.000030	mg/L		03/09/17 16:54	03/10/17 14:45	1
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 16:54	03/10/17 14:45	1
Vanadium	**0.0036**	**J**	0.0040	0.00098	mg/L		03/09/17 16:54	03/10/17 14:45	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 16:54	03/10/17 14:45	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 16:35	1
Antimony	**0.00012**	**J**	0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 16:35	1
Barium	**0.082**		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 16:35	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 16:35	1
Cadmium	ND		0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 16:35	1
Chromium	**0.00043**		0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 16:35	1
Copper	ND		0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 16:35	1
Iron	ND		0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 16:35	1
Lead	**0.000037**	**J**	0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 16:35	1
Manganese	ND		0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 16:35	1

Client Sample ID: MW-11A:022117

Lab Sample ID: 590-5551-5
Matrix: Water
Date Collected: 02/21/17 14:50
Date Received: 02/22/17 11:32

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 16:35	1
Selenium	**0.00037**	**J B**	0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 16:35	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 16:35	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 16:35	1
Vanadium	**0.0032**	**J**	0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 16:35	1
Zinc	ND		0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 16:35	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:30	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:10	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:06	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/28/17 16:32	1
Total Organic Carbon	ND		1.0	0.50	mg/L			02/28/17 19:57	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1

Client Sample ID: MW-3:022117

Lab Sample ID: 590-5551-6
Matrix: Water
Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 15:22	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 15:22	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 15:22	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 15:22	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 15:22	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 15:22	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 15:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 15:22	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 15:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 15:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 15:22	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 15:22	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 15:22	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 15:22	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 15:22	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 15:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 15:22	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-3:022117
Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 15:22	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 15:22	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 15:22	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 15:22	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 15:22	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 15:22	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 15:22	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 15:22	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 15:22	1
Acetone	ND		30	14	ug/L			03/01/17 15:22	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 15:22	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 15:22	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 15:22	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 15:22	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 15:22	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 15:22	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 15:22	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 15:22	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 15:22	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 15:22	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 15:22	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 15:22	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 15:22	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 15:22	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 15:22	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 15:22	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 15:22	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 15:22	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 15:22	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 15:22	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 15:22	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 15:22	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 15:22	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 15:22	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 15:22	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 15:22	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 15:22	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 15:22	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 15:22	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 15:22	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 15:22	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 15:22	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 15:22	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 15:22	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 15:22	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:22	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 15:22	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:22	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 15:22	1

Client Sample ID: MW-3:022117
Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 15:22	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 125*		*03/01/17 15:22*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*03/01/17 15:22*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*03/01/17 15:22*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/01/17 15:22*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*03/01/17 15:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
1,2-Dichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
1,3-Dichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
1,4-Dichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,4,5-Trichlorophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,4-Dichlorophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,4-Dinitrotoluene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2,6-Dinitrotoluene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
2-Chlorophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
2-Methylphenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2-Nitroaniline	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
2-Nitrophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 20:42	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.96	ug/L		02/27/17 16:44	03/03/17 20:42	1
4-Bromophenyl phenyl ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
4-Chloro-3-methylphenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
4-Chloroaniline	ND	*	0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
4-Chlorophenyl phenyl ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
4-Nitroaniline	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
4-Nitrophenol	ND		2.9	0.96	ug/L		02/27/17 16:44	03/03/17 20:42	1
Acenaphthene	ND		0.096	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Anthracene	ND		0.039	0.0096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-3:022117
Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 20:42	1
Benzyl alcohol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
bis (2-chloroisopropyl) ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Bis(2-chloroethoxy)methane	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Bis(2-chloroethyl)ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Bis(2-ethylhexyl) phthalate	**6.0**	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 20:42	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 20:42	1
Carbazole	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 20:42	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Dibenzofuran	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Diethyl phthalate	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Dimethyl phthalate	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		02/27/17 16:44	03/03/17 20:42	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/03/17 20:42	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 20:42	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Hexachlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Hexachloroethane	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Isophorone	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Naphthalene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Nitrobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
N-Nitrosodi-n-propylamine	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
N-Nitrosodiphenylamine	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Pentachlorophenol	ND		0.67	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 20:42	1
Phenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 20:42	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*83*		*57 - 132*	*02/27/17 16:44*	*03/03/17 20:42*	*1*
2-Fluorobiphenyl	*90*		*50 - 120*	*02/27/17 16:44*	*03/03/17 20:42*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 20:42*	*1*
Nitrobenzene-d5	*83*		*59 - 120*	*02/27/17 16:44*	*03/03/17 20:42*	*1*
Phenol-d5	*84*		*52 - 120*	*02/27/17 16:44*	*03/03/17 20:42*	*1*
Terphenyl-d14	*112*		*72 - 140*	*02/27/17 16:44*	*03/03/17 20:42*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 13:00	02/22/17 18:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-3:022117
Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0059	ug/L		02/28/17 10:48	02/28/17 22:22	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 22:22	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 22:22	1
Aldrin	ND		0.030	0.0069	ug/L		02/28/17 10:48	02/28/17 22:22	1
alpha-BHC	ND		0.030	0.0069	ug/L		02/28/17 10:48	02/28/17 22:22	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 22:22	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	02/28/17 22:22	1
delta-BHC	ND		0.050	0.0099	ug/L		02/28/17 10:48	02/28/17 22:22	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 22:22	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 22:22	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 22:22	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 22:22	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 22:22	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	02/28/17 22:22	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 22:22	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 22:22	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 22:22	1
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	02/28/17 22:22	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 22:22	1
Methoxychlor	ND		0.099	0.0020	ug/L		02/28/17 10:48	02/28/17 22:22	1
Toxaphene	ND		0.99	0.22	ug/L		02/28/17 10:48	02/28/17 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*85*		*22 - 150*	*02/28/17 10:48*	*02/28/17 22:22*	*1*
Tetrachloro-m-xylene	*93*		*40 - 113*	*02/28/17 10:48*	*02/28/17 22:22*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.099	0.062	ug/L		02/23/17 12:49	02/23/17 19:55	1
PCB-1221	ND		0.099	0.062	ug/L		02/23/17 12:49	02/23/17 19:55	1
PCB-1232	ND		0.099	0.062	ug/L		02/23/17 12:49	02/23/17 19:55	1
PCB-1242	ND		0.099	0.062	ug/L		02/23/17 12:49	02/23/17 19:55	1
PCB-1248	ND		0.099	0.062	ug/L		02/23/17 12:49	02/23/17 19:55	1
PCB-1254	ND		0.099	0.062	ug/L		02/23/17 12:49	02/23/17 19:55	1
PCB-1260	ND		0.099	0.043	ug/L		02/23/17 12:49	02/23/17 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*20 - 120*	*02/23/17 12:49*	*02/23/17 19:55*	*1*
DCB Decachlorobiphenyl (Surr)	*83*		*36 - 138*	*02/23/17 12:49*	*02/23/17 19:55*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		02/27/17 19:29	03/15/17 22:24	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/15/17 22:24	1
Bolstar	ND		0.97	0.30	ug/L		02/27/17 19:29	03/15/17 22:24	1
Chlorpyrifos	ND		1.5	0.35	ug/L		02/27/17 19:29	03/15/17 22:24	1
Coumaphos	ND		0.97	0.13	ug/L		02/27/17 19:29	03/15/17 22:24	1
Demeton, Total	ND		2.9	0.20	ug/L		02/27/17 19:29	03/15/17 22:24	1
Diazinon	ND		0.49	0.14	ug/L		02/27/17 19:29	03/15/17 22:24	1
Dichlorvos	ND		0.49	0.16	ug/L		02/27/17 19:29	03/15/17 22:24	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-3:022117
Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.44	ug/L		02/27/17 19:29	03/15/17 22:24	1
Disulfoton	ND		0.97	0.31	ug/L		02/27/17 19:29	03/15/17 22:24	1
EPN	ND		1.2	0.14	ug/L		02/27/17 19:29	03/15/17 22:24	1
Famphur	ND		0.97	0.17	ug/L		02/27/17 19:29	03/15/17 22:24	1
Fensulfothion	ND		2.4	0.53	ug/L		02/27/17 19:29	03/15/17 22:24	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/15/17 22:24	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/15/17 22:24	1
Merphos	ND		4.9	0.17	ug/L		02/27/17 19:29	03/15/17 22:24	1
Methyl parathion	ND		3.9	0.14	ug/L		02/27/17 19:29	03/15/17 22:24	1
Mevinphos	ND		6.0	0.45	ug/L		02/27/17 19:29	03/15/17 22:24	1
Ethyl Parathion	ND		0.97	0.14	ug/L		02/27/17 19:29	03/15/17 22:24	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 22:24	1
Ronnel	ND		9.7	0.11	ug/L		02/27/17 19:29	03/15/17 22:24	1
Simazine	ND		9.7	0.22	ug/L		02/27/17 19:29	03/15/17 22:24	1
Sulfotepp	ND		1.5	0.16	ug/L		02/27/17 19:29	03/15/17 22:24	1
Thionazin	ND		0.97	0.30	ug/L		02/27/17 19:29	03/15/17 22:24	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 22:24	1
Trichloronate	ND		1.5	0.23	ug/L		02/27/17 19:29	03/15/17 22:24	1
Ethoprop	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 22:24	1
Propazine	ND		9.7	0.28	ug/L		02/27/17 19:29	03/15/17 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*59*		*49 - 171*	*02/27/17 19:29*	*03/15/17 22:24*	*1*
Triphenylphosphate	*77*		*60 - 154*	*02/27/17 19:29*	*03/15/17 22:24*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/27/17 15:30	03/02/17 14:38	1
2,4-D	ND		3.9	0.20	ug/L		02/27/17 15:30	03/02/17 14:38	1
2,4-DB	ND		3.9	0.35	ug/L		02/27/17 15:30	03/02/17 14:38	1
Dalapon	ND		1.9	0.89	ug/L		02/27/17 15:30	03/02/17 14:38	1
Dicamba	ND		1.9	0.15	ug/L		02/27/17 15:30	03/02/17 14:38	1
Dichlorprop	ND		3.9	0.63	ug/L		02/27/17 15:30	03/02/17 14:38	1
MCPA	ND		390	17	ug/L		02/27/17 15:30	03/02/17 14:38	1
MCPP	ND		390	32	ug/L		02/27/17 15:30	03/02/17 14:38	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		02/27/17 15:30	03/02/17 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*68*		*39 - 135*	*02/27/17 15:30*	*03/02/17 14:38*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		02/28/17 09:16	02/28/17 15:12	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		02/28/17 09:16	02/28/17 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*02/28/17 09:16*	*02/28/17 15:12*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*02/28/17 09:16*	*02/28/17 15:12*	*1*

Client Sample ID: MW-3:022117

Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47**	**F1**	0.80	0.42	mg/L			02/22/17 13:34	1
Nitrate as N	**1.9**		0.20	0.039	mg/L			02/22/17 13:34	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 13:34	1
Sulfate	**26**	**F1**	0.50	0.13	mg/L			02/22/17 13:34	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8	0.21	pg/L		03/09/17 12:14	03/12/17 00:44	1
2,3,7,8-TCDF	ND		9.8	0.090	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,7,8-PeCDD	ND		49	0.28	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,7,8-PeCDF	ND		49	0.11	pg/L		03/09/17 12:14	03/12/17 00:44	1
2,3,4,7,8-PeCDF	ND		49	0.11	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,4,7,8-HxCDD	ND		49	0.27	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,6,7,8-HxCDD	ND		49	0.22	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,7,8,9-HxCDD	ND		49	0.20	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,4,7,8-HxCDF	ND		49	0.18	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,6,7,8-HxCDF	ND		49	0.16	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,7,8,9-HxCDF	ND		49	0.17	pg/L		03/09/17 12:14	03/12/17 00:44	1
2,3,4,6,7,8-HxCDF	ND		49	0.17	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,4,6,7,8-HpCDD	ND		49	0.73	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,4,6,7,8-HpCDF	**0.56**	**J**	49	0.14	pg/L		03/09/17 12:14	03/12/17 00:44	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.16	pg/L		03/09/17 12:14	03/12/17 00:44	1
OCDD	**4.9**	**J B**	98	0.22	pg/L		03/09/17 12:14	03/12/17 00:44	1
OCDF	**1.6**	**J B q**	98	0.24	pg/L		03/09/17 12:14	03/12/17 00:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*88*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-1,2,3,6,7,8-HxCDD	*102*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-1,2,3,4,7,8-HxCDF	*82*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*92*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*88*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*
13C-OCDD	*94*		*40 - 135*	*03/09/17 12:14*	*03/12/17 00:44*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0028**		0.0010	0.00027	mg/L		03/09/17 16:54	03/10/17 14:50	1
Antimony	**0.00027**	**J**	0.00040	0.000080	mg/L		03/09/17 16:54	03/10/17 14:50	1
Barium	**0.048**		0.0012	0.000054	mg/L		03/09/17 16:54	03/10/17 14:50	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 16:54	03/10/17 14:50	1
Cadmium	**0.000033**	**J**	0.00040	0.000028	mg/L		03/09/17 16:54	03/10/17 14:50	1
Chromium	**0.00032**	**J**	0.00040	0.00014	mg/L		03/09/17 16:54	03/10/17 14:50	1
Copper	**0.0048**		0.0020	0.00060	mg/L		03/09/17 16:54	03/10/17 14:50	1
Iron	**0.32**		0.040	0.0058	mg/L		03/09/17 16:54	03/10/17 14:50	1
Lead	**0.00038**	**J**	0.00040	0.000034	mg/L		03/09/17 16:54	03/10/17 14:50	1
Manganese	**0.0053**		0.0020	0.00035	mg/L		03/09/17 16:54	03/10/17 14:50	1
Nickel	**0.0016**	**J**	0.0030	0.00040	mg/L		03/09/17 16:54	03/10/17 14:50	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 16:54	03/10/17 14:50	1
Silver	**0.000096**	**J**	0.00040	0.000030	mg/L		03/09/17 16:54	03/10/17 14:50	1

Client Sample ID: MW-3:022117

Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6

Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 16:54	03/10/17 14:50	1
Vanadium	**0.0078**		0.0040	0.00098	mg/L		03/09/17 16:54	03/10/17 14:50	1
Zinc	**0.0028**	**J**	0.0070	0.0019	mg/L		03/09/17 16:54	03/10/17 14:50	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 17:02	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 17:02	1
Barium	**0.047**		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 17:02	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 17:02	1
Cadmium	ND		0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 17:02	1
Chromium	**0.00015**	**J**	0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 17:02	1
Copper	**0.0045**		0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 17:02	1
Iron	**0.0089**	**J**	0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 17:02	1
Lead	**0.000035**	**J**	0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 17:02	1
Manganese	ND		0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 17:02	1
Nickel	**0.0012**	**J**	0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 17:02	1
Selenium	ND		0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 17:02	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 17:02	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 17:02	1
Vanadium	**0.0067**		0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 17:02	1
Zinc	ND		0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 17:02	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:32	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 09:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:11	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:08	1
Chemical Oxygen Demand	**7.8**	**J**	20	4.0	mg/L			02/28/17 16:32	1
Total Organic Carbon	**2.9**		1.0	0.50	mg/L			02/28/17 20:14	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**730**		1.0	1.0	MPN/100mL			02/22/17 14:58	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/22/17 14:58	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 10:56	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 10:56	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 10:56	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 10:56	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 10:56	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 10:56	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 10:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 10:56	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 10:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 10:56	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 10:56	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 10:56	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 10:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 10:56	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 10:56	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 10:56	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 10:56	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 10:56	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 10:56	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 10:56	1
Acetone	ND		30	14	ug/L			03/01/17 10:56	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 10:56	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 10:56	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 10:56	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 10:56	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 10:56	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 10:56	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 10:56	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 10:56	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 10:56	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 10:56	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 10:56	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 10:56	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 10:56	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 10:56	1
Dichlorofluoromethane	0.341	J	1.0	0.30	ug/L			03/01/17 10:56	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 10:56	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			03/01/17 10:56	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 10:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 10:56	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 10:56	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 10:56	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 10:56	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 10:56	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 10:56	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 10:56	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 10:56	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 10:56	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 10:56	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 10:56	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*03/01/17 10:56*	*1*
4-Bromofluorobenzene (Surr)	*108*		*69 - 120*		*03/01/17 10:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/01/17 10:56*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.77		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	71 - 130
1,1,2,2-Tetrachloroethane	10.0	9.74		ug/L		97	66 - 122
1,1,2-Trichloroethane	10.0	9.86		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	10.1		ug/L		101	70 - 127
1,1-Dichloroethane	10.0	9.77		ug/L		98	79 - 121
1,1-Dichloroethene	10.0	9.57		ug/L		96	69 - 127
1,1-Dichloropropene	10.0	9.83		ug/L		98	76 - 125
1,2,3-Trichlorobenzene	10.0	9.57		ug/L		96	60 - 125
1,2,3-Trichloropropane	10.0	9.70		ug/L		97	60 - 124
1,2,4-Trichlorobenzene	10.0	9.75		ug/L		98	66 - 124
1,2,4-Trimethylbenzene	10.0	10.2		ug/L		102	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.91	J	ug/L		89	36 - 140
1,2-Dichlorobenzene	10.0	9.95		ug/L		99	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	9.74		ug/L		97	76 - 121
1,3,5-Trimethylbenzene	10.0	10.2		ug/L		102	75 - 122
1,3-Dichlorobenzene	10.0	10.0		ug/L		100	77 - 120
1,3-Dichloropropane	10.0	10.1		ug/L		101	75 - 120
1,4-Dichlorobenzene	10.0	9.38		ug/L		94	77 - 121
2,2-Dichloropropane	10.0	11.1		ug/L		111	49 - 147
2-Butanone (MEK)	50.0	51.5		ug/L		103	40 - 150
2-Chlorotoluene	10.0	9.80		ug/L		98	75 - 121
2-Hexanone	50.0	45.7		ug/L		91	46 - 146
4-Chlorotoluene	10.0	10.4		ug/L		104	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	47.0		ug/L		94	60 - 127
Acetone	50.0	46.9		ug/L		94	20 - 150
Benzene	10.0	9.81		ug/L		98	80 - 120
Bromobenzene	10.0	9.65		ug/L		97	74 - 121
Bromochloromethane	10.0	9.93		ug/L		99	70 - 126
Bromodichloromethane	10.0	9.74		ug/L		97	67 - 125
Bromoform	10.0	9.76		ug/L		98	60 - 122
Bromomethane	10.0	10.2		ug/L		102	45 - 150
Carbon disulfide	10.0	9.59		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.95		ug/L		99	68 - 134
Chlorobenzene	10.0	9.97		ug/L		100	79 - 125
Chloroethane	10.0	10.3		ug/L		103	48 - 150
Chloroform	10.0	10.0		ug/L		100	73 - 126
Chloromethane	10.0	9.03		ug/L		90	51 - 150
cis-1,2-Dichloroethene	10.0	9.74		ug/L		97	76 - 121
cis-1,3-Dichloropropene	10.0	9.04		ug/L		90	72 - 120
Dibromochloromethane	10.0	10.3		ug/L		103	72 - 120
Dibromomethane	10.0	10.3		ug/L		103	71 - 120
Dichlorodifluoromethane	10.0	8.24		ug/L		82	32 - 150
Dichlorofluoromethane	10.0	9.98		ug/L		100	60 - 140
Ethylbenzene	10.0	9.95		ug/L		99	80 - 120
Hexachlorobutadiene	10.0	9.76		ug/L		98	62 - 132
Hexane	10.0	9.50		ug/L		95	68 - 125
Isopropylbenzene	10.0	9.58		ug/L		96	77 - 123
m,p-Xylene	10.0	9.48		ug/L		95	80 - 120
Methyl tert-butyl ether	10.0	9.43		ug/L		94	71 - 128
Methylene Chloride	10.0	9.67		ug/L		97	20 - 150
Naphthalene	10.0	8.71		ug/L		87	63 - 124
n-Butylbenzene	10.0	9.50		ug/L		95	71 - 120
N-Propylbenzene	10.0	9.61		ug/L		96	76 - 120
o-Xylene	10.0	9.48		ug/L		95	80 - 120
p-Isopropyltoluene	10.0	9.47		ug/L		95	77 - 120
sec-Butylbenzene	10.0	9.96		ug/L		100	74 - 121
Styrene	10.0	9.61		ug/L		96	73 - 120
tert-Butylbenzene	10.0	9.42		ug/L		94	79 - 120
Tetrachloroethene	10.0	10.2		ug/L		102	71 - 132
Toluene	10.0	10.0		ug/L		100	80 - 123
trans-1,2-Dichloroethene	10.0	9.53		ug/L		95	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	70 - 121
Trichloroethene	10.0	10.2		ug/L		102	75 - 129
Trichlorofluoromethane	10.0	9.70		ug/L		97	60 - 140
Vinyl chloride	10.0	9.31		ug/L		93	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-10911/5
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10911/1004
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	919		ug/L		92	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		02/27/17 16:44	03/03/17 16:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthene	ND		0.10	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Anthracene	ND		0.040	0.010	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzoic acid	ND		3.0	0.60	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		02/27/17 16:44	03/03/17 16:12	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		02/27/17 16:44	03/03/17 16:12	1
Carbazole	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Chrysene	ND		0.040	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluoranthene	ND		0.050	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluorene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Isophorone	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Naphthalene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pentachlorophenol	ND		0.70	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenanthrene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pyrene	ND		0.060	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*57 - 132*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Nitrobenzene-d5	*81*		*59 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Phenol-d5	*85*		*52 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Terphenyl-d14	*101*		*72 - 140*	*02/27/17 16:44*	*03/03/17 16:12*	*1*

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.91		ug/L		95	40 - 115
1,2-Dichlorobenzene	2.00	1.79		ug/L		89	44 - 119
1,3-Dichlorobenzene	2.00	1.71		ug/L		86	34 - 116
1,4-Dichlorobenzene	2.00	1.70		ug/L		85	40 - 118
1-Methylnaphthalene	2.00	1.95		ug/L		97	54 - 119
2,4,5-Trichlorophenol	2.00	1.75		ug/L		88	56 - 122
2,4,6-Trichlorophenol	2.00	1.96		ug/L		98	55 - 134
2,4-Dichlorophenol	2.00	2.06		ug/L		103	50 - 125
2,4-Dimethylphenol	2.00	1.66	J	ug/L		83	20 - 106
2,4-Dinitrophenol	4.00	1.72	J	ug/L		43	24 - 139
2,4-Dinitrotoluene	2.00	1.86		ug/L		93	40 - 143
2,6-Dinitrotoluene	2.00	1.86		ug/L		93	45 - 134
2-Chloronaphthalene	2.00	1.99		ug/L		100	55 - 125
2-Chlorophenol	2.00	1.97		ug/L		99	57 - 125
2-Methylnaphthalene	2.00	2.01		ug/L		101	56 - 117
2-Methylphenol	2.00	1.81		ug/L		91	53 - 118
2-Nitroaniline	2.00	1.81		ug/L		90	58 - 124
2-Nitrophenol	2.00	1.56		ug/L		78	20 - 150
3 & 4 Methylphenol	2.00	1.92		ug/L		96	54 - 112
3,3'-Dichlorobenzidine	4.00	2.65		ug/L		66	20 - 121
3-Nitroaniline	2.00	1.43		ug/L		71	22 - 124
4,6-Dinitro-2-methylphenol	4.00	2.00	J	ug/L		50	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	2.07		ug/L		104	62 - 132
4-Chloro-3-methylphenol	2.00	1.91		ug/L		95	56 - 133
4-Chloroaniline	2.00	0.422		ug/L		21	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.99		ug/L		99	59 - 125
4-Nitroaniline	2.00	1.74		ug/L		87	40 - 118
4-Nitrophenol	4.00	3.75		ug/L		94	20 - 150
Acenaphthene	2.00	1.84		ug/L		92	55 - 113
Acenaphthylene	2.00	1.80		ug/L		90	24 - 135
Anthracene	2.00	1.83		ug/L		91	20 - 125
Benzo[a]anthracene	2.00	2.03		ug/L		101	49 - 115
Benzo[a]pyrene	2.00	1.54		ug/L		77	20 - 115
Benzo[b]fluoranthene	2.00	2.07		ug/L		103	63 - 129
Benzo[g,h,i]perylene	2.00	1.83		ug/L		91	58 - 127
Benzo[k]fluoranthene	2.00	1.91		ug/L		96	60 - 134
Benzoic acid	4.00	1.95	J	ug/L		49	20 - 150
Benzyl alcohol	2.00	2.01		ug/L		100	52 - 124
bis (2-chloroisopropyl) ether	2.00	2.01		ug/L		100	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.98		ug/L		99	59 - 125
Bis(2-chloroethyl)ether	2.00	1.91		ug/L		95	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.26	J	ug/L		113	22 - 150
Butyl benzyl phthalate	2.00	2.38		ug/L		119	46 - 150
Carbazole	2.00	2.34		ug/L		117	68 - 142
Chrysene	2.00	2.03		ug/L		101	57 - 131
Dibenz(a,h)anthracene	2.00	1.51		ug/L		76	56 - 124
Dibenzofuran	2.00	1.97		ug/L		98	60 - 125
Diethyl phthalate	2.00	2.05		ug/L		102	60 - 134
Dimethyl phthalate	2.00	2.14		ug/L		107	65 - 134
Di-n-butyl phthalate	2.00	2.47		ug/L		123	67 - 140
Di-n-octyl phthalate	2.00	2.03		ug/L		102	55 - 150
Fluoranthene	2.00	2.25		ug/L		113	70 - 135
Fluorene	2.00	1.95		ug/L		98	57 - 125
Hexachlorobenzene	2.00	1.84		ug/L		92	55 - 135
Hexachlorobutadiene	2.00	1.83		ug/L		91	25 - 125
Hexachlorocyclopentadiene	2.00	0.793	J	ug/L		40	20 - 110
Hexachloroethane	2.00	1.65		ug/L		82	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.81		ug/L		91	54 - 124
Isophorone	2.00	1.91		ug/L		95	64 - 125
Naphthalene	2.00	1.88		ug/L		94	56 - 119
Nitrobenzene	2.00	1.85		ug/L		92	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.77		ug/L		89	54 - 120
N-Nitrosodiphenylamine	2.00	1.68		ug/L		84	40 - 124
Pentachlorophenol	4.00	2.30		ug/L		58	30 - 122
Phenanthrene	2.00	2.00		ug/L		100	57 - 125
Phenol	2.00	1.85		ug/L		93	53 - 113
Pyrene	2.00	2.24		ug/L		112	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*85*		*59 - 120*
Phenol-d5	*88*		*52 - 120*
Terphenyl-d14	*102*		*72 - 140*

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.91		ug/L		95	40 - 115	0	20
1,2-Dichlorobenzene			2.00	1.85		ug/L		92	44 - 119	3	20
1,3-Dichlorobenzene			2.00	1.82		ug/L		91	34 - 116	6	29
1,4-Dichlorobenzene			2.00	1.78		ug/L		89	40 - 118	5	20
1-Methylnaphthalene			2.00	1.92		ug/L		96	54 - 119	1	20
2,4,5-Trichlorophenol			2.00	1.76		ug/L		88	56 - 122	1	20
2,4,6-Trichlorophenol			2.00	1.91		ug/L		96	55 - 134	2	20
2,4-Dichlorophenol			2.00	2.06		ug/L		103	50 - 125	0	26
2,4-Dimethylphenol			2.00	1.57	J	ug/L		79	20 - 106	5	35
2,4-Dinitrophenol			4.00	2.34	J	ug/L		59	24 - 139	31	35
2,4-Dinitrotoluene			2.00	1.95		ug/L		98	40 - 143	5	29
2,6-Dinitrotoluene			2.00	1.92		ug/L		96	45 - 134	3	31
2-Chloronaphthalene			2.00	2.03		ug/L		102	55 - 125	2	20
2-Chlorophenol			2.00	2.02		ug/L		101	57 - 125	3	20
2-Methylnaphthalene			2.00	2.00		ug/L		100	56 - 117	1	20
2-Methylphenol			2.00	1.83		ug/L		92	53 - 118	1	33
2-Nitroaniline			2.00	1.92		ug/L		96	58 - 124	6	20
2-Nitrophenol			2.00	1.69		ug/L		85	20 - 150	8	35
3 & 4 Methylphenol			2.00	1.93		ug/L		96	54 - 112	0	20
3,3'-Dichlorobenzidine			4.00	2.70		ug/L		67	20 - 121	2	35
3-Nitroaniline			2.00	1.47		ug/L		74	22 - 124	3	35
4,6-Dinitro-2-methylphenol			4.00	2.85	J *	ug/L		71	20 - 150	35	30
4-Bromophenyl phenyl ether			2.00	2.08		ug/L		104	62 - 132	0	20
4-Chloro-3-methylphenol			2.00	1.91		ug/L		95	56 - 133	0	20
4-Chloroaniline			2.00	ND	*	ug/L		5	20 - 110	128	35
4-Chlorophenyl phenyl ether			2.00	2.02		ug/L		101	59 - 125	2	20
4-Nitroaniline			2.00	1.98		ug/L		99	40 - 118	13	20
4-Nitrophenol			4.00	3.95		ug/L		99	20 - 150	5	29
Acenaphthene			2.00	1.91		ug/L		95	55 - 113	4	20
Acenaphthylene			2.00	1.86		ug/L		93	24 - 135	3	20
Anthracene			2.00	1.71		ug/L		85	20 - 125	7	26
Benzo[a]anthracene			2.00	2.01		ug/L		101	49 - 115	1	20
Benzo[a]pyrene			2.00	1.45		ug/L		73	20 - 115	6	35
Benzo[b]fluoranthene			2.00	2.16		ug/L		108	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	1.84		ug/L		92	58 - 127	1	20
Benzo[k]fluoranthene			2.00	1.96		ug/L		98	60 - 134	3	20
Benzoic acid			4.00	1.96	J	ug/L		49	20 - 150	0	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	2.07		ug/L		104	52 - 124	3	20
bis (2-chloroisopropyl) ether	2.00	2.05		ug/L		102	44 - 123	2	20
Bis(2-chloroethoxy)methane	2.00	2.03		ug/L		101	59 - 125	2	20
Bis(2-chloroethyl)ether	2.00	1.97		ug/L		98	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	3.09	*	ug/L		154	22 - 150	31	20
Butyl benzyl phthalate	2.00	2.39		ug/L		119	46 - 150	0	20
Carbazole	2.00	2.33		ug/L		117	68 - 142	0	20
Chrysene	2.00	2.04		ug/L		102	57 - 131	1	20
Dibenz(a,h)anthracene	2.00	1.57		ug/L		78	56 - 124	3	20
Dibenzofuran	2.00	2.00		ug/L		100	60 - 125	2	20
Diethyl phthalate	2.00	2.10		ug/L		105	60 - 134	3	20
Dimethyl phthalate	2.00	2.21		ug/L		110	65 - 134	3	20
Di-n-butyl phthalate	2.00	2.51		ug/L		126	67 - 140	2	20
Di-n-octyl phthalate	2.00	2.07		ug/L		103	55 - 150	2	20
Fluoranthene	2.00	2.27		ug/L		113	70 - 135	1	20
Fluorene	2.00	2.00		ug/L		100	57 - 125	3	20
Hexachlorobenzene	2.00	1.80		ug/L		90	55 - 135	2	20
Hexachlorobutadiene	2.00	1.90		ug/L		95	25 - 125	4	31
Hexachlorocyclopentadiene	2.00	1.01	J	ug/L		51	20 - 110	24	35
Hexachloroethane	2.00	1.81		ug/L		91	24 - 125	9	35
Indeno[1,2,3-cd]pyrene	2.00	1.87		ug/L		93	54 - 124	3	20
Isophorone	2.00	1.99		ug/L		99	64 - 125	4	20
Naphthalene	2.00	1.87		ug/L		93	56 - 119	0	20
Nitrobenzene	2.00	1.97		ug/L		98	62 - 125	6	20
N-Nitrosodi-n-propylamine	2.00	1.84		ug/L		92	54 - 120	4	20
N-Nitrosodiphenylamine	2.00	1.71		ug/L		86	40 - 124	2	20
Pentachlorophenol	4.00	2.47		ug/L		62	30 - 122	7	35
Phenanthrene	2.00	1.99		ug/L		99	57 - 125	1	20
Phenol	2.00	1.85		ug/L		92	53 - 113	0	20
Pyrene	2.00	2.23		ug/L		111	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*
2-Fluorobiphenyl	*82*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*84*		*59 - 120*
Phenol-d5	*86*		*52 - 120*
Terphenyl-d14	*104*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-10821/2-A
Matrix: Water
Analysis Batch: 10820

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10821

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		02/22/17 11:19	02/22/17 13:36	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-10821/3-A
Matrix: Water
Analysis Batch: 10820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10821

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.127		ug/L		102	60 - 140

Lab Sample ID: LCSD 590-10821/4-A
Matrix: Water
Analysis Batch: 10820

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10821

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.124		ug/L		99	60 - 140	3	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-239224/1-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239224

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/24/17 10:35	02/27/17 14:28	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 14:28	1
Aldrin	ND		0.030	0.0070	ug/L		02/24/17 10:35	02/27/17 14:28	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/24/17 10:35	02/27/17 14:28	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
beta-BHC	ND		0.050	0.012	ug/L		02/24/17 10:35	02/27/17 14:28	1
delta-BHC	ND		0.050	0.010	ug/L		02/24/17 10:35	02/27/17 14:28	1
Dieldrin	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endrin	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/24/17 10:35	02/27/17 14:28	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/24/17 10:35	02/27/17 14:28	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Heptachlor	ND		0.020	0.0040	ug/L		02/24/17 10:35	02/27/17 14:28	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/24/17 10:35	02/27/17 14:28	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/24/17 10:35	02/27/17 14:28	1
Toxaphene	ND		1.0	0.22	ug/L		02/24/17 10:35	02/27/17 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*98*		*22 - 150*	*02/24/17 10:35*	*02/27/17 14:28*	*1*
Tetrachloro-m-xylene	*104*		*40 - 113*	*02/24/17 10:35*	*02/27/17 14:28*	*1*

Lab Sample ID: LCS 580-239224/2-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239224

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.193		ug/L		96	32 - 133

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-239224/2-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239224

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDE			0.200	0.191		ug/L		96	30 - 138		
4,4'-DDT			0.200	0.185		ug/L		92	34 - 131		
Aldrin			0.200	0.172		ug/L		86	35 - 124		
alpha-BHC			0.200	0.192		ug/L		96	39 - 126		
alpha-Chlordane			0.200	0.168		ug/L		84	37 - 133		
beta-BHC			0.200	0.180		ug/L		90	38 - 114		
delta-BHC			0.200	0.199		ug/L		99	20 - 138		
Dieldrin			0.200	0.182		ug/L		91	39 - 140		
Endosulfan I			0.200	0.178		ug/L		89	23 - 142		
Endosulfan II			0.200	0.200		ug/L		100	20 - 150		
Endosulfan sulfate			0.200	0.179		ug/L		89	36 - 130		
Endrin			0.200	0.201		ug/L		101	32 - 130		
Endrin aldehyde			0.200	0.256		ug/L		128	37 - 139		
Endrin ketone			0.200	0.186		ug/L		93	32 - 136		
gamma-BHC (Lindane)			0.200	0.204		ug/L		102	40 - 121		
gamma-Chlordane			0.200	0.177		ug/L		88	38 - 136		
Heptachlor			0.200	0.177		ug/L		88	39 - 129		
Heptachlor epoxide			0.200	0.182		ug/L		91	34 - 135		
Methoxychlor			0.200	0.187		ug/L		93	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*22 - 150*
Tetrachloro-m-xylene	*107*		*40 - 113*

Lab Sample ID: LCSD 580-239224/3-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239224

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.196		ug/L		98	32 - 133	2	35
4,4'-DDE			0.200	0.203		ug/L		101	30 - 138	6	35
4,4'-DDT			0.200	0.174		ug/L		87	34 - 131	6	35
Aldrin			0.200	0.186		ug/L		93	35 - 124	8	35
alpha-BHC			0.200	0.197		ug/L		98	39 - 126	2	35
alpha-Chlordane			0.200	0.185		ug/L		92	37 - 133	10	35
beta-BHC			0.200	0.181		ug/L		91	38 - 114	1	35
delta-BHC			0.200	0.200		ug/L		100	20 - 138	1	35
Dieldrin			0.200	0.186		ug/L		93	39 - 140	2	35
Endosulfan I			0.200	0.187		ug/L		93	23 - 142	5	35
Endosulfan II			0.200	0.205		ug/L		102	20 - 150	2	35
Endosulfan sulfate			0.200	0.177		ug/L		89	36 - 130	1	35
Endrin			0.200	0.193		ug/L		96	32 - 130	4	35
Endrin aldehyde			0.200	0.261		ug/L		130	37 - 139	2	35
Endrin ketone			0.200	0.188		ug/L		94	32 - 136	1	35
gamma-BHC (Lindane)			0.200	0.209		ug/L		105	40 - 121	3	35
gamma-Chlordane			0.200	0.187		ug/L		93	38 - 136	5	35
Heptachlor			0.200	0.173		ug/L		86	39 - 129	2	35
Heptachlor epoxide			0.200	0.185		ug/L		93	34 - 135	2	35

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-239224/3-A
Matrix: Water
Analysis Batch: 239335

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239224

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methoxychlor			0.200	0.173		ug/L		87	33 - 139	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*98*		*22 - 150*
Tetrachloro-m-xylene	*107*		*40 - 113*

Lab Sample ID: MB 580-239427/1-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239427

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/28/17 10:48	02/28/17 21:06	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
Aldrin	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 21:06	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 21:06	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	02/28/17 21:06	1
delta-BHC	ND		0.050	0.010	ug/L		02/28/17 10:48	02/28/17 21:06	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	02/28/17 21:06	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Toxaphene	ND		1.0	0.22	ug/L		02/28/17 10:48	02/28/17 21:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*22 - 150*	*02/28/17 10:48*	*02/28/17 21:06*	*1*
Tetrachloro-m-xylene	*97*		*40 - 113*	*02/28/17 10:48*	*02/28/17 21:06*	*1*

Lab Sample ID: LCS 580-239427/2-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD			0.200	0.207		ug/L		104	32 - 133
4,4'-DDE			0.200	0.207		ug/L		103	30 - 138
4,4'-DDT			0.200	0.190		ug/L		95	34 - 131
Aldrin			0.200	0.183		ug/L		92	35 - 124
alpha-BHC			0.200	0.197		ug/L		99	39 - 126
alpha-Chlordane			0.200	0.188		ug/L		94	37 - 133

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-239427/2-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
beta-BHC			0.200	0.185		ug/L		93	38 - 114		
delta-BHC			0.200	0.208		ug/L		104	20 - 138		
Dieldrin			0.200	0.190		ug/L		95	39 - 140		
Endosulfan I			0.200	0.189		ug/L		95	23 - 142		
Endosulfan II			0.200	0.209		ug/L		105	20 - 150		
Endosulfan sulfate			0.200	0.184		ug/L		92	36 - 130		
Endrin			0.200	0.211		ug/L		105	32 - 130		
Endrin aldehyde			0.200	0.270		ug/L		135	37 - 139		
Endrin ketone			0.200	0.195		ug/L		98	32 - 136		
gamma-BHC (Lindane)			0.200	0.208		ug/L		104	40 - 121		
gamma-Chlordane			0.200	0.190		ug/L		95	38 - 136		
Heptachlor			0.200	0.180		ug/L		90	39 - 129		
Heptachlor epoxide			0.200	0.188		ug/L		94	34 - 135		
Methoxychlor			0.200	0.184		ug/L		92	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*22 - 150*
Tetrachloro-m-xylene	*105*		*40 - 113*

Lab Sample ID: LCSD 580-239427/3-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.207		ug/L		104	32 - 133	0	35
4,4'-DDE			0.200	0.200		ug/L		100	30 - 138	3	35
4,4'-DDT			0.200	0.194		ug/L		97	34 - 131	2	35
Aldrin			0.200	0.176		ug/L		88	35 - 124	4	35
alpha-BHC			0.200	0.200		ug/L		100	39 - 126	1	35
alpha-Chlordane			0.200	0.175		ug/L		88	37 - 133	7	35
beta-BHC			0.200	0.187		ug/L		93	38 - 114	1	35
delta-BHC			0.200	0.209		ug/L		105	20 - 138	1	35
Dieldrin			0.200	0.187		ug/L		94	39 - 140	1	35
Endosulfan I			0.200	0.184		ug/L		92	23 - 142	3	35
Endosulfan II			0.200	0.208		ug/L		104	20 - 150	1	35
Endosulfan sulfate			0.200	0.185		ug/L		92	36 - 130	0	35
Endrin			0.200	0.206		ug/L		103	32 - 130	2	35
Endrin aldehyde			0.200	0.270		ug/L		135	37 - 139	0	35
Endrin ketone			0.200	0.195		ug/L		97	32 - 136	0	35
gamma-BHC (Lindane)			0.200	0.208		ug/L		104	40 - 121	0	35
gamma-Chlordane			0.200	0.186		ug/L		93	38 - 136	2	35
Heptachlor			0.200	0.186		ug/L		93	39 - 129	4	35
Heptachlor epoxide			0.200	0.187		ug/L		94	34 - 135	1	35
Methoxychlor			0.200	0.187		ug/L		93	33 - 139	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*97*		*22 - 150*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-239427/3-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239427

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*106*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-10839/1-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10839

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1221	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1232	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1242	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1248	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1254	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1260	ND		0.10	0.043	ug/L		02/23/17 12:49	02/23/17 16:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*20 - 120*	*02/23/17 12:49*	*02/23/17 16:08*	*1*
DCB Decachlorobiphenyl (Surr)	*110*		*36 - 138*	*02/23/17 12:49*	*02/23/17 16:08*	*1*

Lab Sample ID: LCS 590-10839/2-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10839

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.60	1.33		ug/L		83	23 - 140		
PCB-1260			1.60	1.07		ug/L		67	22 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*94*		*36 - 138*

Lab Sample ID: LCSD 590-10839/3-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10839

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.35		ug/L		84	23 - 140	1	35
PCB-1260			1.60	1.13		ug/L		71	22 - 139	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*65*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*96*		*36 - 138*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-363590/1-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363590

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 18:43	1
Azinphos-methyl	ND		2.5	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Bolstar	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 18:43	1
Chlorpyrifos	ND		1.5	0.36	ug/L		02/27/17 19:29	03/15/17 18:43	1
Coumaphos	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Demeton, Total	ND		3.0	0.21	ug/L		02/27/17 19:29	03/15/17 18:43	1
Diazinon	ND		0.50	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Dichlorvos	ND		0.50	0.16	ug/L		02/27/17 19:29	03/15/17 18:43	1
Dimethoate	ND		1.5	0.45	ug/L		02/27/17 19:29	03/15/17 18:43	1
Disulfoton	ND		1.0	0.32	ug/L		02/27/17 19:29	03/15/17 18:43	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Famphur	ND		1.0	0.18	ug/L		02/27/17 19:29	03/15/17 18:43	1
Fensulfothion	ND		2.5	0.54	ug/L		02/27/17 19:29	03/15/17 18:43	1
Fenthion	ND		2.5	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Malathion	ND		2.0	0.13	ug/L		02/27/17 19:29	03/15/17 18:43	1
Merphos	ND		5.0	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Methyl parathion	ND		4.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Mevinphos	ND		6.2	0.46	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ethyl Parathion	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ronnel	ND		10	0.12	ug/L		02/27/17 19:29	03/15/17 18:43	1
Simazine	ND		10	0.22	ug/L		02/27/17 19:29	03/15/17 18:43	1
Sulfotepp	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Thionazin	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 18:43	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 18:43	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ethoprop	ND		1.5	0.18	ug/L		02/27/17 19:29	03/15/17 18:43	1
Propazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 18:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*25*	*X*	*49 - 171*	*02/27/17 19:29*	*03/15/17 18:43*	*1*
Triphenylphosphate	*81*		*60 - 154*	*02/27/17 19:29*	*03/15/17 18:43*	*1*

Lab Sample ID: LCS 280-363590/2-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.95	J	ug/L		74	52 - 115
Azinphos-methyl	4.00	3.67		ug/L		92	59 - 115
Chlorpyrifos	4.00	3.38		ug/L		84	54 - 115
Coumaphos	4.00	3.85		ug/L		96	63 - 118
Demeton, Total	4.00	2.34	J	ug/L		58	44 - 115
Diazinon	4.00	3.35		ug/L		84	47 - 115
Dichlorvos	4.00	3.02		ug/L		76	53 - 128
Dimethoate	4.00	2.32		ug/L		58	42 - 115

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-363590/2-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Disulfoton	4.00	2.86		ug/L		72	45 - 115
EPN	4.00	3.16		ug/L		79	56 - 115
Famphur	4.00	3.19		ug/L		80	62 - 115
Fensulfothion	4.00	2.86		ug/L		71	50 - 115
Fenthion	4.00	3.00		ug/L		75	55 - 115
Malathion	4.00	2.91		ug/L		73	52 - 115
Merphos	4.00	3.28	J	ug/L		82	31 - 115
Methyl parathion	4.00	3.15	J	ug/L		79	58 - 115
Mevinphos	4.00	2.60	J	ug/L		65	42 - 115
Ethyl Parathion	4.00	3.23		ug/L		81	55 - 115
Phorate	4.00	2.59		ug/L		65	40 - 115
Ronnel	4.00	3.36	J	ug/L		84	55 - 115
Simazine	4.00	2.52	J	ug/L		63	39 - 115
Sulfotepp	4.00	3.22		ug/L		81	53 - 115
Thionazin	4.00	3.06		ug/L		77	54 - 115
Trichloronate	4.00	3.32		ug/L		83	48 - 115
Ethoprop	4.00	3.23		ug/L		81	50 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*74*		*49 - 171*
Triphenylphosphate	*85*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-363575/1-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		02/27/17 15:30	03/02/17 10:02	1
2,4-D	ND		4.0	0.21	ug/L		02/27/17 15:30	03/02/17 10:02	1
2,4-DB	ND		4.0	0.36	ug/L		02/27/17 15:30	03/02/17 10:02	1
Dalapon	ND		2.0	0.91	ug/L		02/27/17 15:30	03/02/17 10:02	1
Dicamba	ND		2.0	0.15	ug/L		02/27/17 15:30	03/02/17 10:02	1
Dichlorprop	ND		4.0	0.65	ug/L		02/27/17 15:30	03/02/17 10:02	1
MCPA	ND		400	17	ug/L		02/27/17 15:30	03/02/17 10:02	1
MCPP	ND		400	33	ug/L		02/27/17 15:30	03/02/17 10:02	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		02/27/17 15:30	03/02/17 10:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*83*		*39 - 135*	*02/27/17 15:30*	*03/02/17 10:02*	*1*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-363575/2-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363575

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.70		ug/L		74	45 - 135
2,4-D	5.00	3.55	J	ug/L		71	46 - 126
2,4-DB	5.00	4.31		ug/L		86	18 - 135
Dalapon	5.00	3.73		ug/L		75	52 - 119
Dicamba	5.00	3.42		ug/L		68	50 - 128
Dichlorprop	5.00	3.52	J	ug/L		70	44 - 121
MCPA	500	310	J	ug/L		62	43 - 118
MCPP	500	390	J	ug/L		78	45 - 121
Silvex (2,4,5-TP)	5.00	3.29		ug/L		66	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*40*		*39 - 135*

Lab Sample ID: LCSD 280-363575/3-A
Matrix: Water
Analysis Batch: 363954

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363575

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.58		ug/L		72	45 - 135	3	30
2,4-D	5.00	3.41	J	ug/L		68	46 - 126	4	30
2,4-DB	5.00	4.36		ug/L		87	18 - 135	1	30
Dalapon	5.00	4.32		ug/L		86	52 - 119	15	30
Dicamba	5.00	3.40		ug/L		68	50 - 128	1	30
Dichlorprop	5.00	3.45	J	ug/L		69	44 - 121	2	30
MCPA	500	285	J	ug/L		57	43 - 118	8	30
MCPP	500	401		ug/L		80	45 - 121	3	30
Silvex (2,4,5-TP)	5.00	3.25		ug/L		65	48 - 127	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*89*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-10887/1-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		02/28/17 09:16	02/28/17 11:37	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		02/28/17 09:16	02/28/17 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-10887/2-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			1.60	1.35		mg/L		84	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.36		mg/L		85	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*104*		*50 - 150*
n-Triacontane-d62	*106*		*50 - 150*

Lab Sample ID: LCSD 590-10887/3-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.60	1.25		mg/L		78	50 - 150	7	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.32		mg/L		82	50 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*101*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-10822/1014
Matrix: Water
Analysis Batch: 10822

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			02/22/17 14:35	1
Sulfate	ND		0.50	0.13	mg/L			02/22/17 14:35	1

Lab Sample ID: LCS 590-10822/1013
Matrix: Water
Analysis Batch: 10822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			12.5	13.0		mg/L		104	90 - 110		
Sulfate			12.5	12.8		mg/L		103	90 - 110		

Lab Sample ID: 590-5551-6 MS
Matrix: Water
Analysis Batch: 10822

Client Sample ID: MW-3:022117
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	47	F1	12.5	52.1	F1	mg/L		40	80 - 120
Sulfate	26	F1	12.5	35.0	F1	mg/L		71	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5551-6 MSD — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10822

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	47	F1	12.5	52.1	F1	mg/L		40	80 - 120	0	10
Sulfate	26	F1	12.5	35.0	F1	mg/L		71	80 - 120	0	10

Lab Sample ID: 590-5551-6 DU — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10822

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	47	F1	47.0		mg/L		0.2	18.8
Sulfate	26	F1	26.1		mg/L		0.1	15.7

Lab Sample ID: MB 590-10823/1014 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			02/22/17 14:35	1
Nitrite as N	ND		0.20	0.069	mg/L			02/22/17 14:35	1

Lab Sample ID: LCS 590-10823/1013 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10823

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.08		mg/L		102	90 - 110
Nitrite as N	5.00	4.86		mg/L		97	90 - 110

Lab Sample ID: 590-5551-6 MS — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10823

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.9		5.00	6.61		mg/L		93	80 - 120
Nitrite as N	ND		5.00	5.13		mg/L		103	80 - 120

Lab Sample ID: 590-5551-6 MSD — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10823

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.9		5.00	6.62		mg/L		94	80 - 120	0	12.1
Nitrite as N	ND		5.00	5.17		mg/L		103	80 - 120	1	10

Lab Sample ID: 590-5551-6 DU — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10823

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.9		1.94		mg/L		0.2	13.1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5551-6 DU
Matrix: Water
Analysis Batch: 10823

Client Sample ID: MW-3:022117
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	ND			ND		mg/L				NC	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-154030/1-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154030

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.22	pg/L		03/09/17 08:35	03/11/17 11:56	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8-PeCDD	ND		50	0.30	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8-PeCDF	ND		50	0.16	pg/L		03/09/17 08:35	03/11/17 11:56	1
2,3,4,7,8-PeCDF	ND		50	0.17	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,7,8-HxCDD	ND		50	0.40	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,6,7,8-HxCDD	ND		50	0.33	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8,9-HxCDD	ND		50	0.29	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,7,8-HxCDF	ND		50	0.17	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,6,7,8-HxCDF	ND		50	0.14	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8,9-HxCDF	0.249	J q	50	0.16	pg/L		03/09/17 08:35	03/11/17 11:56	1
2,3,4,6,7,8-HxCDF	ND		50	0.16	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.66	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,6,7,8-HpCDF	ND		50	0.13	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,7,8,9-HpCDF	0.284	J q	50	0.15	pg/L		03/09/17 08:35	03/11/17 11:56	1
OCDD	1.02	J q	100	0.19	pg/L		03/09/17 08:35	03/11/17 11:56	1
OCDF	0.897	J	100	0.31	pg/L		03/09/17 08:35	03/11/17 11:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-2,3,7,8-TCDF	*79*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-OCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*

Lab Sample ID: LCS 320-154030/2-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154030

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD			200	195		pg/L		98	64 - 142		
2,3,7,8-TCDF			200	184		pg/L		92	71 - 142		
1,2,3,7,8-PeCDD			1000	964		pg/L		96	71 - 140		
1,2,3,7,8-PeCDF			1000	964		pg/L		96	76 - 135		
2,3,4,7,8-PeCDF			1000	1010		pg/L		101	74 - 137		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-154030/2-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154030

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	854		pg/L		85	56 - 146		
1,2,3,6,7,8-HxCDD			1000	929		pg/L		93	73 - 144		
1,2,3,7,8,9-HxCDD			1000	859		pg/L		86	71 - 151		
1,2,3,4,7,8-HxCDF			1000	942		pg/L		94	75 - 131		
1,2,3,6,7,8-HxCDF			1000	959		pg/L		96	76 - 133		
1,2,3,7,8,9-HxCDF			1000	936		pg/L		94	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1010		pg/L		101	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	914		pg/L		91	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	932		pg/L		93	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	890		pg/L		89	83 - 130		
OCDD			2000	1720		pg/L		86	80 - 132		
OCDF			2000	1680		pg/L		84	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*92*		*40 - 135*
13C-2,3,7,8-TCDF	*86*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*96*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*88*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*86*		*40 - 135*
13C-OCDD	*92*		*40 - 135*

Lab Sample ID: LCSD 320-154030/3-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154030

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	198		pg/L		99	64 - 142	1	20
2,3,7,8-TCDF			200	188		pg/L		94	71 - 142	2	20
1,2,3,7,8-PeCDD			1000	985		pg/L		99	71 - 140	2	20
1,2,3,7,8-PeCDF			1000	988		pg/L		99	76 - 135	2	20
2,3,4,7,8-PeCDF			1000	983		pg/L		98	74 - 137	3	20
1,2,3,4,7,8-HxCDD			1000	853		pg/L		85	56 - 146	0	20
1,2,3,6,7,8-HxCDD			1000	966		pg/L		97	73 - 144	4	20
1,2,3,7,8,9-HxCDD			1000	875		pg/L		87	71 - 151	2	20
1,2,3,4,7,8-HxCDF			1000	960		pg/L		96	75 - 131	2	20
1,2,3,6,7,8-HxCDF			1000	981		pg/L		98	76 - 133	2	20
1,2,3,7,8,9-HxCDF			1000	968		pg/L		97	77 - 142	3	20
2,3,4,6,7,8-HxCDF			1000	1020		pg/L		102	80 - 137	1	20
1,2,3,4,6,7,8-HpCDD			1000	951		pg/L		95	78 - 139	4	20
1,2,3,4,6,7,8-HpCDF			1000	966		pg/L		97	79 - 133	4	20
1,2,3,4,7,8,9-HpCDF			1000	935		pg/L		94	83 - 130	5	20
OCDD			2000	1780		pg/L		89	80 - 132	3	20
OCDF			2000	1740		pg/L		87	72 - 140	3	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	85		40 - 135
13C-2,3,7,8-TCDF	84		40 - 135
13C-1,2,3,7,8-PeCDD	91		40 - 135
13C-1,2,3,7,8-PeCDF	84		40 - 135
13C-1,2,3,6,7,8-HxCDD	99		40 - 135
13C-1,2,3,4,7,8-HxCDF	83		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135
13C-OCDD	93		40 - 135

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-239541/11-A
Matrix: Water
Analysis Batch: 239656

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239541

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0982		mg/L		98	85 - 115
Antimony	0.100	0.102		mg/L		102	85 - 115
Barium	0.100	0.100		mg/L		100	85 - 115
Beryllium	0.100	0.0973		mg/L		97	85 - 115
Cadmium	0.100	0.0952		mg/L		95	85 - 115
Chromium	0.100	0.0955		mg/L		96	85 - 115
Copper	0.100	0.0943		mg/L		94	85 - 115
Iron	10.0	9.52		mg/L		95	85 - 115
Lead	0.100	0.0937		mg/L		94	85 - 115
Manganese	0.100	0.0956		mg/L		96	85 - 115
Nickel	0.100	0.0937		mg/L		94	85 - 115
Selenium	0.100	0.100		mg/L		100	85 - 115
Silver	0.100	0.0936		mg/L		94	85 - 115
Thallium	0.100	0.0897		mg/L		90	85 - 115
Vanadium	0.100	0.0940		mg/L		94	85 - 115
Zinc	0.100	0.0940		mg/L		94	85 - 115

Lab Sample ID: LCSD 580-239541/12-A
Matrix: Water
Analysis Batch: 239656

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239541

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0978		mg/L		98	85 - 115	0	20
Antimony	0.100	0.103		mg/L		103	85 - 115	1	20
Barium	0.100	0.102		mg/L		102	85 - 115	1	20
Beryllium	0.100	0.0974		mg/L		97	85 - 115	0	20
Cadmium	0.100	0.0961		mg/L		96	85 - 115	1	20
Chromium	0.100	0.0952		mg/L		95	85 - 115	0	20
Copper	0.100	0.0931		mg/L		93	85 - 115	1	20
Iron	10.0	9.45		mg/L		94	85 - 115	1	20
Lead	0.100	0.0945		mg/L		94	85 - 115	1	20
Manganese	0.100	0.0952		mg/L		95	85 - 115	0	20
Nickel	0.100	0.0918		mg/L		92	85 - 115	2	20
Selenium	0.100	0.0997		mg/L		100	85 - 115	1	20
Silver	0.100	0.0947		mg/L		95	85 - 115	1	20
Thallium	0.100	0.0906		mg/L		91	85 - 115	1	20
Vanadium	0.100	0.0945		mg/L		94	85 - 115	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-239541/12-A
Matrix: Water
Analysis Batch: 239656

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239541

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc			0.100	0.0927		mg/L		93	85 - 115	1	20

Lab Sample ID: MB 580-240116/14-A
Matrix: Water
Analysis Batch: 240210

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240116

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/09/17 12:55	03/10/17 09:30	1
Antimony	ND		0.00040	0.000080	mg/L		03/09/17 12:55	03/10/17 09:30	1
Barium	ND		0.0012	0.000054	mg/L		03/09/17 12:55	03/10/17 09:30	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 12:55	03/10/17 09:30	1
Cadmium	ND		0.00040	0.000028	mg/L		03/09/17 12:55	03/10/17 09:30	1
Chromium	ND		0.00040	0.00014	mg/L		03/09/17 12:55	03/10/17 09:30	1
Copper	ND		0.0020	0.00060	mg/L		03/09/17 12:55	03/10/17 09:30	1
Iron	ND		0.040	0.0058	mg/L		03/09/17 12:55	03/10/17 09:30	1
Lead	ND		0.00040	0.000034	mg/L		03/09/17 12:55	03/10/17 09:30	1
Manganese	ND		0.0020	0.00035	mg/L		03/09/17 12:55	03/10/17 09:30	1
Nickel	ND		0.0030	0.00040	mg/L		03/09/17 12:55	03/10/17 09:30	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 12:55	03/10/17 09:30	1
Silver	ND		0.00040	0.000030	mg/L		03/09/17 12:55	03/10/17 09:30	1
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 12:55	03/10/17 09:30	1
Vanadium	ND		0.0040	0.00098	mg/L		03/09/17 12:55	03/10/17 09:30	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 12:55	03/10/17 09:30	1

Lab Sample ID: LCS 580-240116/15-A
Matrix: Water
Analysis Batch: 240210

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240116

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			0.100	0.100		mg/L		100	85 - 115
Antimony			0.100	0.0982		mg/L		98	85 - 115
Barium			0.100	0.0986		mg/L		99	85 - 115
Beryllium			0.100	0.101		mg/L		101	85 - 115
Cadmium			0.100	0.0962		mg/L		96	85 - 115
Chromium			0.100	0.0979		mg/L		98	85 - 115
Copper			0.100	0.101		mg/L		101	85 - 115
Iron			10.0	9.57		mg/L		96	85 - 115
Lead			0.100	0.0979		mg/L		98	85 - 115
Manganese			0.100	0.0947		mg/L		95	85 - 115
Nickel			0.100	0.101		mg/L		101	85 - 115
Selenium			0.100	0.0988		mg/L		99	85 - 115
Silver			0.100	0.0968		mg/L		97	85 - 115
Thallium			0.100	0.0956		mg/L		96	85 - 115
Vanadium			0.100	0.0952		mg/L		95	85 - 115
Zinc			0.100	0.0980		mg/L		98	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-240116/16-A
Matrix: Water
Analysis Batch: 240210

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240116

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.101		mg/L		101	85 - 115	1	20
Antimony	0.100	0.101		mg/L		101	85 - 115	3	20
Barium	0.100	0.100		mg/L		100	85 - 115	1	20
Beryllium	0.100	0.102		mg/L		102	85 - 115	1	20
Cadmium	0.100	0.0983		mg/L		98	85 - 115	2	20
Chromium	0.100	0.0999		mg/L		100	85 - 115	2	20
Copper	0.100	0.102		mg/L		102	85 - 115	1	20
Iron	10.0	9.75		mg/L		97	85 - 115	2	20
Lead	0.100	0.0990		mg/L		99	85 - 115	1	20
Manganese	0.100	0.0969		mg/L		97	85 - 115	2	20
Nickel	0.100	0.102		mg/L		102	85 - 115	1	20
Selenium	0.100	0.0997		mg/L		100	85 - 115	1	20
Silver	0.100	0.100		mg/L		100	85 - 115	3	20
Thallium	0.100	0.0976		mg/L		98	85 - 115	2	20
Vanadium	0.100	0.0980		mg/L		98	85 - 115	3	20
Zinc	0.100	0.0987		mg/L		99	85 - 115	1	20

Lab Sample ID: MB 580-240155/12-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240155

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/09/17 16:54	03/10/17 13:51	1
Antimony	ND		0.00040	0.000080	mg/L		03/09/17 16:54	03/10/17 13:51	1
Barium	ND		0.0012	0.000054	mg/L		03/09/17 16:54	03/10/17 13:51	1
Beryllium	ND		0.00040	0.00010	mg/L		03/09/17 16:54	03/10/17 13:51	1
Cadmium	ND		0.00040	0.000028	mg/L		03/09/17 16:54	03/10/17 13:51	1
Chromium	ND		0.00040	0.00014	mg/L		03/09/17 16:54	03/10/17 13:51	1
Copper	ND		0.0020	0.00060	mg/L		03/09/17 16:54	03/10/17 13:51	1
Iron	ND		0.040	0.0058	mg/L		03/09/17 16:54	03/10/17 13:51	1
Lead	ND		0.00040	0.000034	mg/L		03/09/17 16:54	03/10/17 13:51	1
Manganese	ND		0.0020	0.00035	mg/L		03/09/17 16:54	03/10/17 13:51	1
Nickel	ND		0.0030	0.00040	mg/L		03/09/17 16:54	03/10/17 13:51	1
Selenium	ND		0.0010	0.00030	mg/L		03/09/17 16:54	03/10/17 13:51	1
Silver	ND		0.00040	0.000030	mg/L		03/09/17 16:54	03/10/17 13:51	1
Thallium	ND		0.0010	0.00014	mg/L		03/09/17 16:54	03/10/17 13:51	1
Vanadium	ND		0.0040	0.00098	mg/L		03/09/17 16:54	03/10/17 13:51	1
Zinc	ND		0.0070	0.0019	mg/L		03/09/17 16:54	03/10/17 13:51	1

Lab Sample ID: LCS 580-240155/13-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240155

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	85 - 115
Antimony	0.100	0.0982		mg/L		98	85 - 115
Barium	0.100	0.0975		mg/L		98	85 - 115
Beryllium	0.100	0.101		mg/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-240155/13-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240155

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.0983		mg/L		98	85 - 115
Chromium	0.100	0.103		mg/L		103	85 - 115
Copper	0.100	0.0973		mg/L		97	85 - 115
Iron	10.0	10.1		mg/L		101	85 - 115
Lead	0.100	0.0999		mg/L		100	85 - 115
Manganese	0.100	0.0996		mg/L		100	85 - 115
Nickel	0.100	0.0991		mg/L		99	85 - 115
Selenium	0.100	0.0988		mg/L		99	85 - 115
Silver	0.100	0.0979		mg/L		98	85 - 115
Thallium	0.100	0.0981		mg/L		98	85 - 115
Vanadium	0.100	0.102		mg/L		102	85 - 115
Zinc	0.100	0.0972		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-240155/14-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240155

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.101		mg/L		101	85 - 115	1	20
Antimony	0.100	0.0998		mg/L		100	85 - 115	2	20
Barium	0.100	0.0985		mg/L		98	85 - 115	1	20
Beryllium	0.100	0.101		mg/L		101	85 - 115	1	20
Cadmium	0.100	0.0987		mg/L		99	85 - 115	0	20
Chromium	0.100	0.103		mg/L		103	85 - 115	0	20
Copper	0.100	0.0978		mg/L		98	85 - 115	0	20
Iron	10.0	10.1		mg/L		101	85 - 115	0	20
Lead	0.100	0.0994		mg/L		99	85 - 115	1	20
Manganese	0.100	0.100		mg/L		100	85 - 115	0	20
Nickel	0.100	0.0989		mg/L		99	85 - 115	0	20
Selenium	0.100	0.0989		mg/L		99	85 - 115	0	20
Silver	0.100	0.0994		mg/L		99	85 - 115	1	20
Thallium	0.100	0.0969		mg/L		97	85 - 115	1	20
Vanadium	0.100	0.102		mg/L		102	85 - 115	0	20
Zinc	0.100	0.0973		mg/L		97	85 - 115	0	20

Lab Sample ID: MB 580-239183/2-D
Matrix: Water
Analysis Batch: 239656

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239541

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/01/17 15:22	03/02/17 16:58	1
Antimony	ND		0.00040	0.000080	mg/L		03/01/17 15:22	03/02/17 16:58	1
Barium	ND		0.0012	0.000054	mg/L		03/01/17 15:22	03/02/17 16:58	1
Beryllium	ND		0.00040	0.00010	mg/L		03/01/17 15:22	03/02/17 16:58	1
Cadmium	ND		0.00040	0.000028	mg/L		03/01/17 15:22	03/02/17 16:58	1
Chromium	ND		0.00040	0.00014	mg/L		03/01/17 15:22	03/02/17 16:58	1
Copper	ND		0.0020	0.00060	mg/L		03/01/17 15:22	03/02/17 16:58	1
Iron	ND		0.040	0.0058	mg/L		03/01/17 15:22	03/02/17 16:58	1
Lead	ND		0.00040	0.000034	mg/L		03/01/17 15:22	03/02/17 16:58	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-239183/2-D
Matrix: Water
Analysis Batch: 239656

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239541

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.0020	0.00035	mg/L		03/01/17 15:22	03/02/17 16:58	1
Nickel	ND		0.0030	0.00040	mg/L		03/01/17 15:22	03/02/17 16:58	1
Selenium	0.000328	J	0.0010	0.00030	mg/L		03/01/17 15:22	03/02/17 16:58	1
Silver	ND		0.00040	0.000030	mg/L		03/01/17 15:22	03/02/17 16:58	1
Thallium	ND		0.0010	0.00014	mg/L		03/01/17 15:22	03/02/17 16:58	1
Vanadium	ND		0.0040	0.00098	mg/L		03/01/17 15:22	03/02/17 16:58	1
Zinc	ND		0.0070	0.0019	mg/L		03/01/17 15:22	03/02/17 16:58	1

Lab Sample ID: 590-5551-1 MS
Matrix: Water
Analysis Batch: 239656

Client Sample ID: MW-16:022117
Prep Type: Dissolved
Prep Batch: 239541

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0021		0.100	0.102		mg/L		100	70 - 130
Antimony	0.00013	J	0.100	0.104		mg/L		103	70 - 130
Barium	0.052		0.100	0.156		mg/L		104	70 - 130
Beryllium	ND		0.100	0.100		mg/L		100	70 - 130
Cadmium	0.000029	J	0.100	0.0975		mg/L		97	70 - 130
Chromium	0.00014	J	0.100	0.0949		mg/L		95	70 - 130
Copper	0.0031		0.100	0.0957		mg/L		93	70 - 130
Iron	ND		10.0	9.41		mg/L		94	70 - 130
Lead	0.00011	J	0.100	0.0952		mg/L		95	70 - 130
Manganese	0.00098	J	0.100	0.0949		mg/L		94	70 - 130
Nickel	0.0012	J	0.100	0.0938		mg/L		93	70 - 130
Selenium	0.00036	J B	0.100	0.0999		mg/L		100	70 - 130
Silver	ND		0.100	0.0937		mg/L		94	70 - 130
Thallium	ND		0.100	0.0924		mg/L		92	70 - 130
Vanadium	0.0042		0.100	0.0986		mg/L		94	70 - 130
Zinc	ND		0.100	0.0942		mg/L		94	70 - 130

Lab Sample ID: 590-5551-1 MSD
Matrix: Water
Analysis Batch: 239656

Client Sample ID: MW-16:022117
Prep Type: Dissolved
Prep Batch: 239541

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0021		0.100	0.101		mg/L		99	70 - 130	0	20
Antimony	0.00013	J	0.100	0.102		mg/L		102	70 - 130	1	20
Barium	0.052		0.100	0.155		mg/L		103	70 - 130	0	20
Beryllium	ND		0.100	0.0984		mg/L		98	70 - 130	2	20
Cadmium	0.000029	J	0.100	0.0973		mg/L		97	70 - 130	0	20
Chromium	0.00014	J	0.100	0.0941		mg/L		94	70 - 130	1	20
Copper	0.0031		0.100	0.0944		mg/L		91	70 - 130	1	20
Iron	ND		10.0	9.24		mg/L		92	70 - 130	2	20
Lead	0.00011	J	0.100	0.0954		mg/L		95	70 - 130	0	20
Manganese	0.00098	J	0.100	0.0932		mg/L		92	70 - 130	2	20
Nickel	0.0012	J	0.100	0.0926		mg/L		91	70 - 130	1	20
Selenium	0.00036	J B	0.100	0.100		mg/L		100	70 - 130	0	20
Silver	ND		0.100	0.0940		mg/L		94	70 - 130	0	20
Thallium	ND		0.100	0.0924		mg/L		92	70 - 130	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5551-1 MSD
Matrix: Water
Analysis Batch: 239656

Client Sample ID: MW-16:022117
Prep Type: Dissolved
Prep Batch: 239541

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vanadium	0.0042		0.100	0.0976		mg/L		93	70 - 130	1	20
Zinc	ND		0.100	0.0926		mg/L		93	70 - 130	2	20

Lab Sample ID: 590-5551-1 DU
Matrix: Water
Analysis Batch: 239656

Client Sample ID: MW-16:022117
Prep Type: Dissolved
Prep Batch: 239541

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0021		0.00220		mg/L		6	20
Antimony	0.00013	J	0.000143	J	mg/L		6	20
Barium	0.052		0.0554		mg/L		6	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	0.000029	J	ND		mg/L		NC	20
Chromium	0.00014	J	0.000192	J F5	mg/L		30	20
Copper	0.0031		0.00332		mg/L		7	20
Iron	ND		0.00781	J	mg/L		NC	20
Lead	0.00011	J	ND		mg/L		NC	20
Manganese	0.00098	J	0.000681	J F5	mg/L		36	20
Nickel	0.0012	J	0.00121	J	mg/L		3	20
Selenium	0.00036	J B	0.000387	J	mg/L		8	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0042		0.00447		mg/L		5	20
Zinc	ND		ND		mg/L		NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: LCS 580-239540/11-A
Matrix: Water
Analysis Batch: 239654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239540

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00181		mg/L		91	85 - 115

Lab Sample ID: LCSD 580-239540/12-A
Matrix: Water
Analysis Batch: 239654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239540

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00183		mg/L		91	85 - 115	1	20

Lab Sample ID: MB 580-240011/20-A
Matrix: Water
Analysis Batch: 240083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/08/17 14:11	03/09/17 08:02	1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-240011/21-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240083 — **Prep Batch: 240011**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00180		mg/L		90	85 - 115		

Lab Sample ID: LCSD 580-240011/22-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240083 — **Prep Batch: 240011**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00178		mg/L		89	85 - 115	1	20

Lab Sample ID: 590-5551-4 MS — **Client Sample ID: MW-2A:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240083 — **Prep Batch: 240011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00200	0.00169		mg/L		84	70 - 130		

Lab Sample ID: 590-5551-4 MSD — **Client Sample ID: MW-2A:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240083 — **Prep Batch: 240011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00168		mg/L		84	70 - 130	0	20

Lab Sample ID: 590-5551-4 DU — **Client Sample ID: MW-2A:022117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240083 — **Prep Batch: 240011**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Lab Sample ID: MB 580-239183/2-C — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 239654 — **Prep Batch: 239540**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/01/17 14:56	03/02/17 09:41	1

Lab Sample ID: 590-5551-6 MS — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 239654 — **Prep Batch: 239540**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00200	0.00183		mg/L		92	70 - 130		

Lab Sample ID: 590-5551-6 MSD — **Client Sample ID: MW-3:022117**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 239654 — **Prep Batch: 239540**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00179		mg/L		90	70 - 130	2	20

Lab Sample ID: 590-5551-6 DU
Matrix: Water
Analysis Batch: 239654

Client Sample ID: MW-3:022117
Prep Type: Dissolved
Prep Batch: 239540

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-410978/1-A
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:01	1

Lab Sample ID: LCS 490-410978/2-A
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.104		mg/L		104	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-410932/1-A
Matrix: Water
Analysis Batch: 411685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410932

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 14:46	1

Lab Sample ID: LCS 490-410932/2-A
Matrix: Water
Analysis Batch: 411685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410932

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.14		mg/L		103	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-411075/3
Matrix: Water
Analysis Batch: 411075

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/28/17 16:32	1

Lab Sample ID: LCS 490-411075/4
Matrix: Water
Analysis Batch: 411075

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.7		mg/L		97	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: LCSD 490-411075/5
Matrix: Water
Analysis Batch: 411075

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	50.7		mg/L		101	90 - 110	4	20

Lab Sample ID: 590-5551-1 MS
Matrix: Water
Analysis Batch: 411075

Client Sample ID: MW-16:022117
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	7.7	J	50.0	52.6		mg/L		90	90 - 110		

Method: SM 5310C - TOC

Lab Sample ID: MB 490-411242/2
Matrix: Water
Analysis Batch: 411242

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			02/28/17 11:56	1

Lab Sample ID: LCS 490-411242/6
Matrix: Water
Analysis Batch: 411242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	10.2		mg/L		102	90 - 110		
TOC Result 1			10.0	10.2		mg/L		102	90 - 110		
TOC Result 2			10.0	10.3		mg/L		103	90 - 110		

Lab Sample ID: LCSD 490-411242/7
Matrix: Water
Analysis Batch: 411242

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon			10.0	9.89		mg/L		99	90 - 110	4	20
TOC Result 1			10.0	10.0		mg/L		100	90 - 110	2	20
TOC Result 2			10.0	9.78		mg/L		98	90 - 110	5	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-16:022117

Date Collected: 02/21/17 10:22
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 13:09	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 13:09	MRS	TAL SPK
Total/NA	Prep	3520C			1004.8 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 18:39	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 13:00	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 16:04	NMI	TAL SPK
Total/NA	Prep	3510C			253.3 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 16:24	DCV	TAL SEA
Total/NA	Prep	3510C			248.3 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 18:12	NMI	TAL SPK
Total/NA	Prep	3510C			1011.2 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/15/17 19:46	AMB1	TAL DEN
Total/NA	Prep	8151A			1010.1 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 12:43	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			238.6 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 13:44	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10822	02/22/17 12:34	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10823	02/22/17 12:34	CBW	TAL SPK
Total/NA	Prep	8290			994.4 mL	20 uL	154030	03/09/17 08:35	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/11/17 20:53	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239541	03/01/17 15:22	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239656	03/02/17 17:07	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240116	03/09/17 12:55	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240210	03/10/17 10:28	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239540	03/01/17 14:56	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 09:57	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:23	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:07	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:02	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411075	02/28/17 16:32	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 18:49	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10826	02/22/17 14:58	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-4A:022117

Date Collected: 02/21/17 10:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 13:31	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 13:31	MRS	TAL SPK
Total/NA	Prep	3520C			1008.8 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 19:04	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 13:00	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 16:28	NMI	TAL SPK
Total/NA	Prep	3510C			254.2 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 16:43	DCV	TAL SEA
Total/NA	Prep	3510C			254.4 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 18:33	NMI	TAL SPK
Total/NA	Prep	3510C			997.6 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/15/17 20:18	AMB1	TAL DEN
Total/NA	Prep	8151A			1003.3 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 13:06	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			238.4 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 14:02	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10822	02/22/17 12:46	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10823	02/22/17 12:46	CBW	TAL SPK
Total/NA	Prep	8290			1015.3 mL	20 uL	154030	03/09/17 08:35	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/11/17 21:39	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239541	03/01/17 15:22	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239656	03/02/17 16:22	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240116	03/09/17 12:55	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240210	03/10/17 10:33	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239540	03/01/17 14:56	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 09:59	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:25	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:08	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:03	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411075	02/28/17 16:32	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 19:06	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10826	02/22/17 14:58	SJK	TAL SPK

Client Sample ID: MW-14:022117
Date Collected: 02/21/17 11:30
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 13:53	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 13:53	MRS	TAL SPK
Total/NA	Prep	3520C			1016.5 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 19:28	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 13:00	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 16:53	NMI	TAL SPK
Total/NA	Prep	3510C			257.5 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 17:02	DCV	TAL SEA
Total/NA	Prep	3510C			246.7 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 18:53	NMI	TAL SPK
Total/NA	Prep	3510C			1026.4 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/15/17 20:49	AMB1	TAL DEN
Total/NA	Prep	8151A			1054.3 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 13:29	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			237.6 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 14:20	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10822	02/22/17 12:58	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10823	02/22/17 12:58	CBW	TAL SPK
Total/NA	Prep	8290			1028 mL	20 uL	154030	03/09/17 12:14	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/11/17 22:25	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239541	03/01/17 15:22	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239656	03/02/17 16:26	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240116	03/09/17 12:55	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240210	03/10/17 10:37	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239540	03/01/17 14:56	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 10:02	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:27	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:08	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:04	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411075	02/28/17 16:32	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 19:22	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10826	02/22/17 14:58	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-2A:022117

Date Collected: 02/21/17 12:13
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 14:15	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 14:15	MRS	TAL SPK
Total/NA	Prep	3520C			1039 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 19:53	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 13:00	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 17:17	NMI	TAL SPK
Total/NA	Prep	3510C			248.9 mL	2.5 mL	239224	02/24/17 10:35	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239335	02/27/17 17:22	DCV	TAL SEA
Total/NA	Prep	3510C			247.9 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 19:14	NMI	TAL SPK
Total/NA	Prep	3510C			1029 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/15/17 21:21	AMB1	TAL DEN
Total/NA	Prep	8151A			1038.7 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 13:52	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			237.6 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 14:37	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10822	02/22/17 13:10	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10823	02/22/17 13:10	CBW	TAL SPK
Total/NA	Prep	8290			1015.6 mL	20 uL	154030	03/09/17 12:14	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/11/17 23:12	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239541	03/01/17 15:22	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239656	03/02/17 16:31	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240116	03/09/17 12:55	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240210	03/10/17 10:42	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239540	03/01/17 14:56	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 10:09	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:09	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:09	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:05	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411075	02/28/17 16:32	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 19:41	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10826	02/22/17 14:58	SJK	TAL SPK

Client Sample ID: MW-11A:022117
Date Collected: 02/21/17 14:50
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 15:00	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 15:00	MRS	TAL SPK
Total/NA	Prep	3520C			1041.2 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 20:17	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 13:00	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 18:06	NMI	TAL SPK
Total/NA	Prep	3510C			255.3 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 22:03	DCV	TAL SEA
Total/NA	Prep	3510C			256.8 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 19:35	NMI	TAL SPK
Total/NA	Prep	3510C			1042.2 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/15/17 21:52	AMB1	TAL DEN
Total/NA	Prep	8151A			1057.5 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 14:15	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			232.8 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 14:55	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10822	02/22/17 13:22	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10823	02/22/17 13:22	CBW	TAL SPK
Total/NA	Prep	8290			1046.8 mL	20 uL	154030	03/09/17 12:14	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/11/17 23:58	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239541	03/01/17 15:22	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239656	03/02/17 16:35	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240155	03/09/17 16:54	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 14:45	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239540	03/01/17 14:56	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 10:11	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:30	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:10	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:06	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411075	02/28/17 16:32	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 19:57	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10826	02/22/17 14:58	SJK	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Client Sample ID: MW-3:022117

Date Collected: 02/21/17 14:43
Date Received: 02/22/17 11:32

Lab Sample ID: 590-5551-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 15:22	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 15:22	MRS	TAL SPK
Total/NA	Prep	3520C			1038.1 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 20:42	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10821	02/22/17 13:00	NMI	TAL SPK
Total/NA	Analysis	8011		1			10820	02/22/17 18:30	NMI	TAL SPK
Total/NA	Prep	3510C			252.2 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 22:22	DCV	TAL SEA
Total/NA	Prep	3510C			252.1 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 19:55	NMI	TAL SPK
Total/NA	Prep	3510C			1030.7 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/15/17 22:24	AMB1	TAL DEN
Total/NA	Prep	8151A			1028 mL	10 mL	363575	02/27/17 15:30	RPC	TAL DEN
Total/NA	Analysis	8151A		1			363954	03/02/17 14:38	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			242.9 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 15:12	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10822	02/22/17 13:34	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10823	02/22/17 13:34	CBW	TAL SPK
Total/NA	Prep	8290			1019.6 mL	20 uL	154030	03/09/17 12:14	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/12/17 00:44	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239541	03/01/17 15:22	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239656	03/02/17 17:02	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240155	03/09/17 16:54	PAB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 14:50	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239183	02/23/17 17:21	R1K	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	239540	03/01/17 14:56	PAB	TAL SEA
Dissolved	Analysis	245.1		1			239654	03/02/17 09:48	FCW	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240011	03/08/17 14:11	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240083	03/09/17 08:32	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:11	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:08	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411075	02/28/17 16:32	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411242	02/28/17 20:14	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10826	02/22/17 14:58	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / MJP	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.3
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: 1 of 2
Company: GeoEngineers Inc				Page 2 of 2
Address: 523 East Second Ave	Due Date Requested: Std.			Job #:
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	5310C - Total Organic Carbon (TOC)	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-16 : 022117	2/21/2017	1022	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	
MW-4A : 022117		1030		Water																	
MW-14 : 022117		1130		Water																	
MW-2A : 022117		1213		Water																	
MW-11A : 022117		1450		Water																	
MW-3 : 022117		1443		Water																	
				Water																	
				Water																	

590-5551 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained long...
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Justin Dike	2/22/17 1100	GEI	Athena Ytag	2/22/17 1100	TA Spokane
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.5, 2.1, 3.9, 3.0, 5.2, 4.3 °C IR004

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / MJP	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.4
Client Contact: Josh Lee	Phone: 406-279-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:

Address: 523 East Second Ave	Due Date Requested: Std.
City: Spokane	TAT Requested (days): Std.
State, Zip: WA, 99202	
Phone: 509-363-3125	PO #: Purchase Order not required
Email: jmlee@geoengineers.com	WO #:
Project Name: Marshall 0504-104-00	Project #: 59000577
Site: Marshall Landfill	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
MW-16 : 022117	2/21/2017	1022	G	Water	N		X	X	X	23	
MW-4A : 022117		1030		Water							
MW-14 : 022117		1130		Water							
MW-2A : 022117		1213		Water							
MW-11A : 022117		1450		Water							
MW-3 : 022117		1443		Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Justin Zick	Date/Time: 2/22/17 1100	Company: CESI	Received by: Sheila Kraft	Date/Time: 2/22/17 1100	Company: TA Spokane
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.5, 2.1, 3.9, 3.0, 5.2, 4.3 c IR0C4

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2490.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5551-1
Address: 4955 Yarrow Street,	Due Date Requested: 3/6/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-16:022117 (590-5551-1)	2/21/17	10:22 Pacific		Water			X	X	4	
MW-4A:022117 (590-5551-2)	2/21/17	10:30 Pacific		Water			X	X	4	
MW-14:022117 (590-5551-3)	2/21/17	11:30 Pacific		Water			X	X	4	
MW-2A:022117 (590-5551-4)	2/21/17	12:13 Pacific		Water			X	X	4	
MW-11A:022117 (590-5551-5)	2/21/17	14:50 Pacific		Water			X	X	4	
MW-3:022117 (590-5551-6)	2/21/17	14:43 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Fitch	2/22/17 1230	TA Spok		2/23/17 1005	TAL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		0.3, 2.1, 0.3 +0.0 IR#7 Transfered by DW 2/23/17

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2491.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5551-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/10/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-16:022117 (590-5551-1)	2/21/17	10:22 Pacific		Water			X	2	
MW-4A:022117 (590-5551-2)	2/21/17	10:30 Pacific		Water			X	2	
MW-14:022117 (590-5551-3)	2/21/17	11:30 Pacific		Water			X	2	
MW-2A:022117 (590-5551-4)	2/21/17	12:13 Pacific		Water			X	2	
MW-11A:022117 (590-5551-5)	2/21/17	14:50 Pacific		Water			X	2	
MW-3:022117 (590-5551-6)	2/21/17	14:43 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Knott	2/22/17 1250	TA Spok		2-23-17 955	DHL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2-4 +2.0

3/17/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

W403, W417, TOC6

COOLER RECEIPT FORM

590-5551 Chain of Custody

Cooler Received/Opened On 2/24/2017 @ 0950

Time Samples Removed From Cooler 1341 Time Samples Placed In Storage 1518 (2 Hour Window)

1. Tracking # 5090 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960353 pH Strip Lot HC693124 Chlorine Strip Lot 081116K

2. Temperature of rep. sample or temp blank when opened: 0.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 front

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) HRG

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence #

I certify that I unloaded the cooler and answered questions 7-14 (intial) AT

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...(NO)...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) SLV

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) SLV

I certify that I attached a label with the unique LIMS number to each container (intial) SLV

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-5551

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	OC No: 590-2496.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington	Job #: 590-5551-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 3/6/2017		
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C/ Total Organic Carbon (TOC)	410.4/ Chemical Oxygen Demand (COD)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-16:022117 (590-5551-1)	2/21/17	10:22 Pacific		Water			X	X	X	X	3	
MW-4A:022117 (590-5551-2)	2/21/17	10:30 Pacific		Water			X	X	X	X	3	
MW-14:022117 (590-5551-3)	2/21/17	11:30 Pacific		Water			X	X	X	X	3	
MW-2A:022117 (590-5551-4)	2/21/17	12:13 Pacific		Water			X	X	X	X	3	
MW-11A:022117 (590-5551-5)	2/21/17	14:50 Pacific		Water			X	X	X	X	3	
MW-3:022117 (590-5551-6)	2/21/17	14:43 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Sheila Kraly	Date/Time: 2/23/17 1445	Company TAT SPOK	Received by:	Date/Time: 2/24/17 @ 0950	Company TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2492.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5551-1
Address: 5755 8th Street East,	Due Date Requested: 3/6/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-16:022117 (590-5551-1)	2/21/17	10:22 Pacific		Water			X	X	X	X	X	X	6	
MW-4A:022117 (590-5551-2)	2/21/17	10:30 Pacific		Water			X	X	X	X	X	X	6	
MW-14:022117 (590-5551-3)	2/21/17	11:30 Pacific		Water			X	X	X	X	X	X	6	
MW-2A:022117 (590-5551-4)	2/21/17	12:13 Pacific		Water			X	X	X	X	X	X	6	
MW-11A:022117 (590-5551-5)	2/21/17	14:50 Pacific		Water			X	X	X	X	X	X	6	
MW-3:022117 (590-5551-6)	2/21/17	14:43 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Kady	2/22/17 1300	TA-Sea	M. Powell/Courier	2/23/17 1055	TA-Sea
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

cooler2 A2 -0.4/0.5 w/cs cooler1 A2 -0.2/0.7 w/cs

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5551-1

Login Number: 5551
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5551-1

Login Number: 5551
List Number: 2
Creator: White, Denise E

List Source: TestAmerica Denver
List Creation: 02/23/17 02:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5551-1

Login Number: 5551
List Number: 4
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 02/24/17 03:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5551-1

Login Number: 5551
List Number: 5
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 02/24/17 01:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5551-1

Login Number: 5551
List Number: 3
Creator: Ponce-McDermott, Monica

List Source: TestAmerica Seattle
List Creation: 02/23/17 05:02 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	A2 -0.4/0.5 w/cs -0.2/0.7 w/cs
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5551-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5551-1	MW-16:022117	85	81	85	79	101	82	88	87
590-5551-2	MW-4A:022117	87	80	85	78	97	77	83	81
590-5551-3	MW-14:022117	84	82	86	80	91	76	84	80
590-5551-4	MW-2A:022117	85	75	82	77	98	79	87	82
590-5551-5	MW-11A:022117	88	86	90	87	97	82	90	89
590-5551-6	MW-3:022117	88	80	85	79	102	82	92	88
LCS 320-154030/2-A	Lab Control Sample	92	86	96	88	99	84	89	86
LCSD 320-154030/3-A	Lab Control Sample Dup	85	84	91	84	99	83	91	87
MB 320-154030/1-A	Method Blank	84	79	85	77	95	77	83	81

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5551-1	MW-16:022117	90
590-5551-2	MW-4A:022117	86
590-5551-3	MW-14:022117	84
590-5551-4	MW-2A:022117	86
590-5551-5	MW-11A:022117	98
590-5551-6	MW-3:022117	94
LCS 320-154030/2-A	Lab Control Sample	92
LCSD 320-154030/3-A	Lab Control Sample Dup	93
MB 320-154030/1-A	Method Blank	85

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



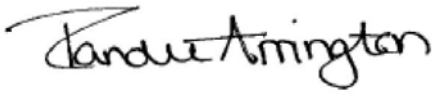
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5559-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders



Authorized for release by:
3/21/2017 3:54:58 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Job ID: 590-5559-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 2/23/2017 11:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.8º C, 2.2º C, 2.3º C, 2.4º C and 3.0º C.

Receipt Exceptions
The one liter unpreserved glass amber containers were not received for the following samples: MW-7D:022217 (590-5559-1), MW-7B:022217 (590-5559-2) and MW-15:022217 (590-5559-5). The client was aware of this at the time of sample submission. The containers were delivered and received by the lab 02/23/2017..

The client sample ID for sample MW-5:022217 (590-5559-4) was changed from MW-5B:022217 to MW-5:022217 per the client's request.

GC/MS VOA
Method 8260C: The method blank for analytical batch 590-10912 contained Dichlorofluoromethane above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-239702 recovered outside acceptance criteria, low biased, for 2,4-Dinitrophenol and Benzoic acid. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-239702 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-239396 recovered outside control limits for the following analytes: 4,6-Dinitro-2-methylphenol, Bis(2-ethylhexyl) phthalate and 4-Chloroaniline.

Method 8270D: The following analytes recovered outside control limits for the LCSD associated with preparation batch 580-239396 and analytical batch 580-239702: 4-Chloroaniline and Bis(2-ethylhexyl) phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The 2,4-Dichlorophenylacetic acid surrogate recovery for the following samples in preparation batch 280-363686 and analytical batch 280-364437 was outside acceptance limits (high biased) on the back/confirmation column: MW-7D:022217 (590-5559-1), MW-7B:022217 (590-5559-2), MW-5A:022217 (590-5559-3), MW-5:022217 (590-5559-4), MW-15:022217 (590-5559-5), MW-15A:022217 (590-5559-6), MW-9A:022217 (590-5559-7), MW-12A:022217 (590-5559-8), Dup:022217 (590-5559-9) and (LCSD 280-363686/3-A). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control.

Method 8151A: The continuing calibration verification (CCV) for MCPA associated with analytical batch 280-364437 recovered above the upper control limit on the front/primary column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the back/confirmation column which is in control.

Method 8141B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 280-363945 recovered outside control limits for the following analytes: Fenthion. The %R is within control limits for both samples.

Method 8141B: The Chlormefos surrogate recovery for the following sample in preparation batch 280-363945 and analytical batch 280-364803 was outside acceptance limits (low biased) on the front/primary column: MW-15A:022217 (590-5559-6). The recovery was within acceptance limits on the back column; therefore, the surrogate is reported from the back column.

Job ID: 590-5559-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 8141B: The initial calibration verification (ICV) result for batch 280-364803 was below the lower control limit for Malathion on the front column. The back column was in control for Malathion. Sample results were non-detects for the affected analytes; therefore, the data have been reported from the column that was in control in the ICV.

Method 8081B: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside the upper control limit: (CCB 580-239470/16) and (CCB 580-239470/37). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The continuing calibration verification (CCV) associated with batch 580-239470 recovered outside acceptance criteria, low biased, for delta-BHC on the confirmation column only. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect above the RL for this analyte, the data have been reported.

Method 8081B: The continuing calibration verification (CCV) associated with batch 580-239470 was outside the control limits high for %D for surrogate Tetrachloro-m-xylene on the primary column only. All associated samples had surrogate recoveries within the control limits on both columns; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
Method 8290A: The bracketing continuing calibration verification (CCV031317B) associated with batch 320-154960 has analyte (1,2,3,4,7,8-HxCDD) with percent difference value that is between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-363945.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5559-1	MW-7D:022217	Water	02/22/17 10:30	02/23/17 11:20
590-5559-2	MW-7B:022217	Water	02/22/17 11:55	02/23/17 11:20
590-5559-3	MW-5A:022217	Water	02/22/17 10:24	02/23/17 11:20
590-5559-4	MW-5:022217	Water	02/22/17 11:44	02/23/17 11:20
590-5559-5	MW-15:022217	Water	02/22/17 13:25	02/23/17 11:20
590-5559-6	MW-15A:022217	Water	02/22/17 14:40	02/23/17 11:20
590-5559-7	MW-9A:022217	Water	02/22/17 13:21	02/23/17 11:00
590-5559-8	MW-12A:022217	Water	02/22/17 16:19	02/23/17 11:00
590-5559-9	Dup:022217	Water	02/22/17 08:00	02/23/17 11:00

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 15:44	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 15:44	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 15:44	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 15:44	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 15:44	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 15:44	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 15:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 15:44	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 15:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 15:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 15:44	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 15:44	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 15:44	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 15:44	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 15:44	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 15:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 15:44	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 15:44	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 15:44	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 15:44	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 15:44	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 15:44	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 15:44	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 15:44	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 15:44	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 15:44	1
Acetone	ND		30	14	ug/L			03/01/17 15:44	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 15:44	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 15:44	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 15:44	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 15:44	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 15:44	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 15:44	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 15:44	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 15:44	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 15:44	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 15:44	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 15:44	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 15:44	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 15:44	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 15:44	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 15:44	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 15:44	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 15:44	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 15:44	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 15:44	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 15:44	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 15:44	1

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 15:44	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 15:44	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 15:44	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 15:44	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 15:44	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 15:44	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 15:44	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 15:44	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 15:44	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 15:44	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 15:44	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 15:44	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 15:44	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 15:44	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:44	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 15:44	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 15:44	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 15:44	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 15:44	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*		*03/01/17 15:44*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*03/01/17 15:44*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*03/01/17 15:44*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*03/01/17 15:44*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*03/01/17 15:44*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
1,2-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
1,3-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
1,4-Dichlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,4,5-Trichlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,4-Dichlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,4-Dinitrotoluene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2,6-Dinitrotoluene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
2-Chlorophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
2-Methylphenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2-Nitroaniline	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
2-Nitrophenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
3-Nitroaniline	ND		0.38	0.12	ug/L		02/27/17 16:44	03/03/17 21:07	1
4,6-Dinitro-2-methylphenol	ND	*	3.8	0.96	ug/L		02/27/17 16:44	03/03/17 21:07	1
4-Bromophenyl phenyl ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
4-Chloro-3-methylphenol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
4-Chloroaniline	ND	*	0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
4-Chlorophenyl phenyl ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
4-Nitroaniline	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
4-Nitrophenol	ND		2.9	0.96	ug/L		02/27/17 16:44	03/03/17 21:07	1
Acenaphthene	ND		0.096	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Anthracene	ND		0.038	0.0096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzo[a]pyrene	ND		0.038	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 21:07	1
Benzyl alcohol	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
bis (2-chloroisopropyl) ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Bis(2-chloroethoxy)methane	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Bis(2-chloroethyl)ether	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Bis(2-ethylhexyl) phthalate	**4.2**	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 21:07	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 21:07	1
Carbazole	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Chrysene	ND		0.038	0.013	ug/L		02/27/17 16:44	03/03/17 21:07	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Dibenzofuran	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Diethyl phthalate	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Dimethyl phthalate	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Di-n-butyl phthalate	ND		0.38	0.13	ug/L		02/27/17 16:44	03/03/17 21:07	1
Di-n-octyl phthalate	ND		0.38	0.17	ug/L		02/27/17 16:44	03/03/17 21:07	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 21:07	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Hexachlorobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Hexachloroethane	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Isophorone	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Naphthalene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Nitrobenzene	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
N-Nitrosodi-n-propylamine	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
N-Nitrosodiphenylamine	ND		0.38	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.67	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 21:07	1
Phenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 21:07	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*73*		*57 - 132*	*02/27/17 16:44*	*03/03/17 21:07*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*	*02/27/17 16:44*	*03/03/17 21:07*	*1*
2-Fluorophenol	*77*		*50 - 113*	*02/27/17 16:44*	*03/03/17 21:07*	*1*
Nitrobenzene-d5	*80*		*59 - 120*	*02/27/17 16:44*	*03/03/17 21:07*	*1*
Phenol-d5	*83*		*52 - 120*	*02/27/17 16:44*	*03/03/17 21:07*	*1*
Terphenyl-d14	*106*		*72 - 140*	*02/27/17 16:44*	*03/03/17 21:07*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 12:20	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0057	ug/L		02/28/17 10:48	02/28/17 22:41	1
4,4'-DDE	ND		0.019	0.0028	ug/L		02/28/17 10:48	02/28/17 22:41	1
4,4'-DDT	ND		0.028	0.0047	ug/L		02/28/17 10:48	02/28/17 22:41	1
Aldrin	ND		0.028	0.0066	ug/L		02/28/17 10:48	02/28/17 22:41	1
alpha-BHC	ND		0.028	0.0066	ug/L		02/28/17 10:48	02/28/17 22:41	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		02/28/17 10:48	02/28/17 22:41	1
beta-BHC	ND		0.047	0.011	ug/L		02/28/17 10:48	02/28/17 22:41	1
delta-BHC	ND		0.047	0.0095	ug/L		02/28/17 10:48	02/28/17 22:41	1
Dieldrin	ND		0.028	0.0047	ug/L		02/28/17 10:48	02/28/17 22:41	1
Endosulfan I	ND		0.019	0.0028	ug/L		02/28/17 10:48	02/28/17 22:41	1
Endosulfan II	ND		0.019	0.0019	ug/L		02/28/17 10:48	02/28/17 22:41	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		02/28/17 10:48	02/28/17 22:41	1
Endrin	ND		0.019	0.0028	ug/L		02/28/17 10:48	02/28/17 22:41	1
Endrin aldehyde	ND		0.19	0.032	ug/L		02/28/17 10:48	02/28/17 22:41	1
Endrin ketone	ND		0.019	0.0019	ug/L		02/28/17 10:48	02/28/17 22:41	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		02/28/17 10:48	02/28/17 22:41	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		02/28/17 10:48	02/28/17 22:41	1
Heptachlor	ND		0.019	0.0038	ug/L		02/28/17 10:48	02/28/17 22:41	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		02/28/17 10:48	02/28/17 22:41	1
Methoxychlor	ND		0.095	0.0019	ug/L		02/28/17 10:48	02/28/17 22:41	1
Toxaphene	ND		0.95	0.21	ug/L		02/28/17 10:48	02/28/17 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*94*		*22 - 150*	*02/28/17 10:48*	*02/28/17 22:41*	*1*
Tetrachloro-m-xylene	*104*		*40 - 113*	*02/28/17 10:48*	*02/28/17 22:41*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 20:16	1
PCB-1221	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 20:16	1
PCB-1232	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 20:16	1
PCB-1242	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 20:16	1

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 20:16	1
PCB-1254	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 20:16	1
PCB-1260	ND		0.098	0.042	ug/L		02/23/17 12:49	02/23/17 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*20 - 120*	*02/23/17 12:49*	*02/23/17 20:16*	*1*
DCB Decachlorobiphenyl (Surr)	*87*		*36 - 138*	*02/23/17 12:49*	*02/23/17 20:16*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		11	0.31	ug/L		03/01/17 17:19	03/09/17 04:08	1
Azinphos-methyl	ND		2.7	0.18	ug/L		03/01/17 17:19	03/09/17 04:08	1
Bolstar	ND		1.1	0.33	ug/L		03/01/17 17:19	03/09/17 04:08	1
Chlorpyrifos	ND		1.6	0.38	ug/L		03/01/17 17:19	03/09/17 04:08	1
Coumaphos	ND		1.1	0.14	ug/L		03/01/17 17:19	03/09/17 04:08	1
Demeton, Total	ND		3.2	0.22	ug/L		03/01/17 17:19	03/09/17 04:08	1
Diazinon	ND		0.53	0.16	ug/L		03/01/17 17:19	03/09/17 04:08	1
Dichlorvos	ND		0.53	0.17	ug/L		03/01/17 17:19	03/09/17 04:08	1
Dimethoate	ND		1.6	0.48	ug/L		03/01/17 17:19	03/09/17 04:08	1
Disulfoton	ND		1.1	0.34	ug/L		03/01/17 17:19	03/09/17 04:08	1
EPN	ND		1.3	0.16	ug/L		03/01/17 17:19	03/09/17 04:08	1
Famphur	ND		1.1	0.19	ug/L		03/01/17 17:19	03/09/17 04:08	1
Fensulfothion	ND		2.7	0.58	ug/L		03/01/17 17:19	03/09/17 04:08	1
Fenthion	ND		2.7	0.16	ug/L		03/01/17 17:19	03/09/17 04:08	1
Malathion	ND		2.1	0.14	ug/L		03/01/17 17:19	03/09/17 04:08	1
Merphos	ND		5.3	0.19	ug/L		03/01/17 17:19	03/09/17 04:08	1
Methyl parathion	ND		4.3	0.15	ug/L		03/01/17 17:19	03/09/17 04:08	1
Mevinphos	ND		6.6	0.49	ug/L		03/01/17 17:19	03/09/17 04:08	1
Ethyl Parathion	ND		1.1	0.15	ug/L		03/01/17 17:19	03/09/17 04:08	1
Phorate	ND		1.3	0.16	ug/L		03/01/17 17:19	03/09/17 04:08	1
Ronnel	ND		11	0.12	ug/L		03/01/17 17:19	03/09/17 04:08	1
Simazine	ND		11	0.24	ug/L		03/01/17 17:19	03/09/17 04:08	1
Sulfotepp	ND		1.6	0.18	ug/L		03/01/17 17:19	03/09/17 04:08	1
Thionazin	ND		1.1	0.33	ug/L		03/01/17 17:19	03/09/17 04:08	1
Tokuthion	ND		1.7	0.13	ug/L		03/01/17 17:19	03/09/17 04:08	1
Trichloronate	ND		1.6	0.26	ug/L		03/01/17 17:19	03/09/17 04:08	1
Ethoprop	ND		1.6	0.19	ug/L		03/01/17 17:19	03/09/17 04:08	1
Propazine	ND		11	0.31	ug/L		03/01/17 17:19	03/09/17 04:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*51*		*49 - 171*	*03/01/17 17:19*	*03/09/17 04:08*	*1*
Triphenylphosphate	*68*		*60 - 154*	*03/01/17 17:19*	*03/09/17 04:08*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/06/17 22:13	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/06/17 22:13	1
2,4-DB	ND		3.9	0.35	ug/L		02/28/17 10:10	03/06/17 22:13	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/06/17 22:13	1
Dicamba	ND		1.9	0.15	ug/L		02/28/17 10:10	03/06/17 22:13	1

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/06/17 22:13	1
MCPA	ND		390	17	ug/L		02/28/17 10:10	03/06/17 22:13	1
MCPP	ND		390	32	ug/L		02/28/17 10:10	03/06/17 22:13	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		02/28/17 10:10	03/06/17 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*85*		*39 - 135*	*02/28/17 10:10*	*03/06/17 22:13*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 15:29	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*02/28/17 09:16*	*02/28/17 15:29*	*1*
n-Triacontane-d62	*98*		*50 - 150*	*02/28/17 09:16*	*02/28/17 15:29*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.0**		0.80	0.42	mg/L			02/23/17 12:07	1
Nitrate as N	**0.19**	**J**	0.20	0.039	mg/L			02/23/17 12:07	1
Nitrite as N	ND		0.20	0.069	mg/L			02/23/17 12:07	1
Sulfate	**5.8**		0.50	0.13	mg/L			02/23/17 12:07	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.25	pg/L		03/09/17 12:14	03/12/17 01:30	1
2,3,7,8-TCDF	ND		10	0.097	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,7,8-PeCDD	ND		50	0.28	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,7,8-PeCDF	ND		50	0.11	pg/L		03/09/17 12:14	03/12/17 01:30	1
2,3,4,7,8-PeCDF	ND		50	0.12	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,4,7,8-HxCDD	ND		50	0.32	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,6,7,8-HxCDD	ND		50	0.26	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,7,8,9-HxCDD	ND		50	0.23	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,4,7,8-HxCDF	ND		50	0.13	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,6,7,8-HxCDF	ND		50	0.11	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,7,8,9-HxCDF	**0.27**	**J B**	50	0.12	pg/L		03/09/17 12:14	03/12/17 01:30	1
2,3,4,6,7,8-HxCDF	ND		50	0.12	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.75	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,4,6,7,8-HpCDF	**0.89**	**J**	50	0.14	pg/L		03/09/17 12:14	03/12/17 01:30	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.16	pg/L		03/09/17 12:14	03/12/17 01:30	1
OCDD	**6.6**	**J B**	100	0.18	pg/L		03/09/17 12:14	03/12/17 01:30	1
OCDF	**3.0**	**J B**	100	0.23	pg/L		03/09/17 12:14	03/12/17 01:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*87*		*40 - 135*	*03/09/17 12:14*	*03/12/17 01:30*	*1*
13C-2,3,7,8-TCDF	*83*		*40 - 135*	*03/09/17 12:14*	*03/12/17 01:30*	*1*
13C-1,2,3,7,8-PeCDD	*88*		*40 - 135*	*03/09/17 12:14*	*03/12/17 01:30*	*1*
13C-1,2,3,7,8-PeCDF	*81*		*40 - 135*	*03/09/17 12:14*	*03/12/17 01:30*	*1*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*	*03/09/17 12:14*	*03/12/17 01:30*	*1*

Client Sample ID: MW-7D:022217
Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDF	82		40 - 135	03/09/17 12:14	03/12/17 01:30	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135	03/09/17 12:14	03/12/17 01:30	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135	03/09/17 12:14	03/12/17 01:30	1
13C-OCDD	94		40 - 135	03/09/17 12:14	03/12/17 01:30	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00057**	**J**	0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:24	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:24	1
Barium	**0.022**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:24	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:24	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:24	1
Chromium	**0.0020**		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:24	1
Copper	ND		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:24	1
Iron	**0.10**		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:24	1
Lead	**0.00034**	**J**	0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:24	1
Manganese	**0.0073**		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:24	1
Nickel	ND		0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:24	1
Selenium	**0.00035**	**J**	0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:24	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:24	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:24	1
Vanadium	**0.012**		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:24	1
Zinc	**0.011**		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:24	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00040**	**J**	0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 10:58	1
Antimony	ND		0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 10:58	1
Barium	**0.021**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 10:58	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 10:58	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 10:58	1
Chromium	**0.0016**		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 10:58	1
Copper	ND		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 10:58	1
Iron	ND		0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 10:58	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 10:58	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 10:58	1
Nickel	ND		0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 10:58	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 10:58	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 10:58	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 10:58	1
Vanadium	**0.012**		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 10:58	1
Zinc	**0.0095**		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 10:58	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 10:23	03/09/17 14:07	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:17	1

Client Sample ID: MW-7D:022217

Lab Sample ID: 590-5559-1

Date Collected: 02/22/17 10:30

Matrix: Water

Date Received: 02/23/17 11:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:12	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:09	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	ND		1.0	0.50	mg/L			03/03/17 12:31	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-7B:022217

Lab Sample ID: 590-5559-2

Date Collected: 02/22/17 11:55

Matrix: Water

Date Received: 02/23/17 11:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 16:06	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 16:06	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 16:06	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 16:06	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 16:06	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 16:06	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:06	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 16:06	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 16:06	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 16:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 16:06	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 16:06	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 16:06	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 16:06	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 16:06	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 16:06	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 16:06	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 16:06	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 16:06	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 16:06	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 16:06	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 16:06	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 16:06	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 16:06	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 16:06	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 16:06	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 16:06	1
Acetone	ND		30	14	ug/L			03/01/17 16:06	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 16:06	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 16:06	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 16:06	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 16:06	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 16:06	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 16:06	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 16:06	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 16:06	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 16:06	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 16:06	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 16:06	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 16:06	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 16:06	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 16:06	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 16:06	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 16:06	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 16:06	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 16:06	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 16:06	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 16:06	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 16:06	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 16:06	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 16:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 16:06	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 16:06	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 16:06	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 16:06	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 16:06	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 16:06	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 16:06	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 16:06	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 16:06	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 16:06	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 16:06	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 16:06	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:06	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 16:06	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:06	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 16:06	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 16:06	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 125*		*03/01/17 16:06*	*1*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*03/01/17 16:06*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*03/01/17 16:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*03/01/17 16:06*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*		*03/01/17 16:06*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
1,2-Dichlorobenzene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
1,3-Dichlorobenzene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
1,4-Dichlorobenzene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
1-Methylnaphthalene	ND		0.062	0.031	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,4,5-Trichlorophenol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,4,6-Trichlorophenol	ND		0.62	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,4-Dichlorophenol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,4-Dimethylphenol	ND		2.1	0.31	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,4-Dinitrophenol	ND		5.2	1.0	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,4-Dinitrotoluene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2,6-Dinitrotoluene	**0.18**	**J**	0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2-Chloronaphthalene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
2-Chlorophenol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2-Methylnaphthalene	ND		0.21	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
2-Methylphenol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2-Nitroaniline	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
2-Nitrophenol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
3 & 4 Methylphenol	ND		0.83	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
3,3'-Dichlorobenzidine	ND		2.1	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
3-Nitroaniline	ND		0.41	0.12	ug/L		02/27/17 16:44	03/03/17 21:31	1
4,6-Dinitro-2-methylphenol	ND	*	4.1	1.0	ug/L		02/27/17 16:44	03/03/17 21:31	1
4-Bromophenyl phenyl ether	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
4-Chloro-3-methylphenol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
4-Chloroaniline	ND	*	0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
4-Chlorophenyl phenyl ether	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
4-Nitroaniline	ND		0.62	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
4-Nitrophenol	ND		3.1	1.0	ug/L		02/27/17 16:44	03/03/17 21:31	1
Acenaphthene	ND		0.10	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Acenaphthylene	ND		0.083	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Anthracene	ND		0.041	0.010	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzo[a]anthracene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzo[a]pyrene	ND		0.041	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzo[b]fluoranthene	ND		0.083	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzo[g,h,i]perylene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzo[k]fluoranthene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzoic acid	ND		3.1	0.62	ug/L		02/27/17 16:44	03/03/17 21:31	1
Benzyl alcohol	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
bis (2-chloroisopropyl) ether	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Bis(2-chloroethoxy)methane	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Bis(2-chloroethyl)ether	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Bis(2-ethylhexyl) phthalate	ND	*	3.1	1.2	ug/L		02/27/17 16:44	03/03/17 21:31	1
Butyl benzyl phthalate	ND		0.62	0.21	ug/L		02/27/17 16:44	03/03/17 21:31	1
Carbazole	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Chrysene	ND		0.041	0.013	ug/L		02/27/17 16:44	03/03/17 21:31	1
Dibenz(a,h)anthracene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Dibenzofuran	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Diethyl phthalate	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Dimethyl phthalate	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.41	0.13	ug/L		02/27/17 16:44	03/03/17 21:31	1
Di-n-octyl phthalate	ND		0.41	0.19	ug/L		02/27/17 16:44	03/03/17 21:31	1
Fluoranthene	ND		0.052	0.013	ug/L		02/27/17 16:44	03/03/17 21:31	1
Fluorene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Hexachlorobenzene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Hexachlorobutadiene	ND		0.62	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Hexachlorocyclopentadiene	ND		2.1	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Hexachloroethane	ND		0.62	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Indeno[1,2,3-cd]pyrene	ND		0.062	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Isophorone	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Naphthalene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Nitrobenzene	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
N-Nitrosodi-n-propylamine	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
N-Nitrosodiphenylamine	ND		0.41	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Pentachlorophenol	ND		0.73	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Phenanthrene	ND		0.083	0.021	ug/L		02/27/17 16:44	03/03/17 21:31	1
Phenol	ND		0.62	0.10	ug/L		02/27/17 16:44	03/03/17 21:31	1
Pyrene	ND		0.062	0.013	ug/L		02/27/17 16:44	03/03/17 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*77*		*57 - 132*	*02/27/17 16:44*	*03/03/17 21:31*	*1*
2-Fluorobiphenyl	*87*		*50 - 120*	*02/27/17 16:44*	*03/03/17 21:31*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 21:31*	*1*
Nitrobenzene-d5	*80*		*59 - 120*	*02/27/17 16:44*	*03/03/17 21:31*	*1*
Phenol-d5	*84*		*52 - 120*	*02/27/17 16:44*	*03/03/17 21:31*	*1*
Terphenyl-d14	*106*		*72 - 140*	*02/27/17 16:44*	*03/03/17 21:31*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 12:45	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0059	ug/L		02/28/17 10:48	02/28/17 23:00	1
4,4'-DDE	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:00	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 23:00	1
Aldrin	ND		0.029	0.0069	ug/L		02/28/17 10:48	02/28/17 23:00	1
alpha-BHC	ND		0.029	0.0069	ug/L		02/28/17 10:48	02/28/17 23:00	1
alpha-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:00	1
beta-BHC	ND		0.049	0.012	ug/L		02/28/17 10:48	02/28/17 23:00	1
delta-BHC	ND		0.049	0.0098	ug/L		02/28/17 10:48	02/28/17 23:00	1
Dieldrin	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 23:00	1
Endosulfan I	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:00	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:00	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:00	1
Endrin	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:00	1
Endrin aldehyde	ND		0.20	0.033	ug/L		02/28/17 10:48	02/28/17 23:00	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:00	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 23:00	1
gamma-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:00	1

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.020	0.0039	ug/L		02/28/17 10:48	02/28/17 23:00	1
Heptachlor epoxide	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:00	1
Methoxychlor	ND		0.098	0.0020	ug/L		02/28/17 10:48	02/28/17 23:00	1
Toxaphene	ND		0.98	0.22	ug/L		02/28/17 10:48	02/28/17 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*22 - 150*	*02/28/17 10:48*	*02/28/17 23:00*	*1*
Tetrachloro-m-xylene	*107*		*40 - 113*	*02/28/17 10:48*	*02/28/17 23:00*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 20:37	1
PCB-1221	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 20:37	1
PCB-1232	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 20:37	1
PCB-1242	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 20:37	1
PCB-1248	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 20:37	1
PCB-1254	ND		0.099	0.061	ug/L		02/23/17 12:49	02/23/17 20:37	1
PCB-1260	ND		0.099	0.043	ug/L		02/23/17 12:49	02/23/17 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*20 - 120*	*02/23/17 12:49*	*02/23/17 20:37*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*36 - 138*	*02/23/17 12:49*	*02/23/17 20:37*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.31	ug/L		03/01/17 17:19	03/09/17 04:40	1
Azinphos-methyl	ND		2.6	0.17	ug/L		03/01/17 17:19	03/09/17 04:40	1
Bolstar	ND		1.0	0.33	ug/L		03/01/17 17:19	03/09/17 04:40	1
Chlorpyrifos	ND		1.6	0.37	ug/L		03/01/17 17:19	03/09/17 04:40	1
Coumaphos	ND		1.0	0.14	ug/L		03/01/17 17:19	03/09/17 04:40	1
Demeton, Total	ND		3.1	0.22	ug/L		03/01/17 17:19	03/09/17 04:40	1
Diazinon	ND		0.52	0.15	ug/L		03/01/17 17:19	03/09/17 04:40	1
Dichlorvos	ND		0.52	0.17	ug/L		03/01/17 17:19	03/09/17 04:40	1
Dimethoate	ND		1.6	0.47	ug/L		03/01/17 17:19	03/09/17 04:40	1
Disulfoton	ND		1.0	0.34	ug/L		03/01/17 17:19	03/09/17 04:40	1
EPN	ND		1.2	0.16	ug/L		03/01/17 17:19	03/09/17 04:40	1
Famphur	ND		1.0	0.19	ug/L		03/01/17 17:19	03/09/17 04:40	1
Fensulfothion	ND		2.6	0.57	ug/L		03/01/17 17:19	03/09/17 04:40	1
Fenthion	ND		2.6	0.16	ug/L		03/01/17 17:19	03/09/17 04:40	1
Malathion	ND		2.1	0.14	ug/L		03/01/17 17:19	03/09/17 04:40	1
Merphos	ND		5.2	0.18	ug/L		03/01/17 17:19	03/09/17 04:40	1
Methyl parathion	ND		4.2	0.15	ug/L		03/01/17 17:19	03/09/17 04:40	1
Mevinphos	ND		6.5	0.48	ug/L		03/01/17 17:19	03/09/17 04:40	1
Ethyl Parathion	ND		1.0	0.15	ug/L		03/01/17 17:19	03/09/17 04:40	1
Phorate	ND		1.2	0.16	ug/L		03/01/17 17:19	03/09/17 04:40	1
Ronnel	ND		10	0.12	ug/L		03/01/17 17:19	03/09/17 04:40	1
Simazine	ND		10	0.23	ug/L		03/01/17 17:19	03/09/17 04:40	1
Sulfotepp	ND		1.6	0.17	ug/L		03/01/17 17:19	03/09/17 04:40	1
Thionazin	ND		1.0	0.32	ug/L		03/01/17 17:19	03/09/17 04:40	1
Tokuthion	ND		1.7	0.13	ug/L		03/01/17 17:19	03/09/17 04:40	1

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.6	0.25	ug/L		03/01/17 17:19	03/09/17 04:40	1
Ethoprop	ND		1.6	0.18	ug/L		03/01/17 17:19	03/09/17 04:40	1
Propazine	ND		10	0.31	ug/L		03/01/17 17:19	03/09/17 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*56*		*49 - 171*	*03/01/17 17:19*	*03/09/17 04:40*	*1*
Triphenylphosphate	*86*		*60 - 154*	*03/01/17 17:19*	*03/09/17 04:40*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/06/17 22:36	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/06/17 22:36	1
2,4-DB	**0.55**	**J p B**	3.9	0.35	ug/L		02/28/17 10:10	03/06/17 22:36	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/06/17 22:36	1
Dicamba	ND		1.9	0.14	ug/L		02/28/17 10:10	03/06/17 22:36	1
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/06/17 22:36	1
MCPA	**35**	**J B**	390	16	ug/L		02/28/17 10:10	03/06/17 22:36	1
MCPP	ND		390	32	ug/L		02/28/17 10:10	03/06/17 22:36	1
Silvex (2,4,5-TP)	ND		0.97	0.16	ug/L		02/28/17 10:10	03/06/17 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*02/28/17 10:10*	*03/06/17 22:36*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.044	mg/L		02/28/17 09:16	02/28/17 15:47	1
Residual Range Organics (RRO) (C25-C36)	ND		0.22	0.065	mg/L		02/28/17 09:16	02/28/17 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*02/28/17 09:16*	*02/28/17 15:47*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*02/28/17 09:16*	*02/28/17 15:47*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.1**		0.80	0.42	mg/L			02/23/17 12:19	1
Nitrate as N	**0.28**		0.20	0.039	mg/L			02/23/17 12:19	1
Nitrite as N	ND		0.20	0.069	mg/L			02/23/17 12:19	1
Sulfate	**4.1**		0.50	0.13	mg/L			02/23/17 12:19	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.19	pg/L		03/10/17 08:23	03/13/17 20:21	1
2,3,7,8-TCDF	**0.58**	**J q**	9.6	0.15	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,7,8-PeCDD	ND		48	0.26	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,7,8-PeCDF	**0.22**	**J q**	48	0.21	pg/L		03/10/17 08:23	03/13/17 20:21	1
2,3,4,7,8-PeCDF	**0.39**	**J q**	48	0.22	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,4,7,8-HxCDD	ND		48	0.20	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,6,7,8-HxCDD	ND		48	0.16	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,7,8,9-HxCDD	ND		48	0.15	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,4,7,8-HxCDF	**0.74**	**J q**	48	0.26	pg/L		03/10/17 08:23	03/13/17 20:21	1

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	0.40	J q	48	0.22	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,7,8,9-HxCDF	ND		48	0.24	pg/L		03/10/17 08:23	03/13/17 20:21	1
2,3,4,6,7,8-HxCDF	0.59	J q	48	0.24	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,4,6,7,8-HpCDD	1.9	J q	48	0.35	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,4,6,7,8-HpCDF	1.8	J B	48	0.20	pg/L		03/10/17 08:23	03/13/17 20:21	1
1,2,3,4,7,8,9-HpCDF	0.52	J	48	0.22	pg/L		03/10/17 08:23	03/13/17 20:21	1
OCDD	7.2	J B	96	0.23	pg/L		03/10/17 08:23	03/13/17 20:21	1
OCDF	3.4	J B	96	0.23	pg/L		03/10/17 08:23	03/13/17 20:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*82*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-1,2,3,7,8-PeCDD	*87*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-1,2,3,7,8-PeCDF	*82*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-1,2,3,6,7,8-HxCDD	*105*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*
13C-OCDD	*87*		*40 - 135*	*03/10/17 08:23*	*03/13/17 20:21*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00072	J	0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:28	1
Antimony	0.00079		0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:28	1
Barium	0.058		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:28	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:28	1
Cadmium	0.00011	J	0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:28	1
Chromium	0.0023		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:28	1
Copper	0.029		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:28	1
Iron	2.2		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:28	1
Lead	0.0093		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:28	1
Manganese	0.012		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:28	1
Nickel	0.0024	J	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:28	1
Selenium	0.00040	J	0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:28	1
Silver	0.00057		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:28	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:28	1
Vanadium	0.0043		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:28	1
Zinc	0.095		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:28	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00045	J	0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 11:48	1
Antimony	0.00049		0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 11:48	1
Barium	0.052		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 11:48	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 11:48	1
Cadmium	0.000034	J	0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 11:48	1
Chromium	0.00093		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 11:48	1
Copper	0.0027		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 11:48	1
Iron	0.013	J	0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 11:48	1
Lead	0.000049	J	0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 11:48	1
Manganese	0.00039	J	0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 11:48	1

Client Sample ID: MW-7B:022217

Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0013**	**J**	0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 11:48	1
Selenium	**0.00032**	**J**	0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 11:48	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 11:48	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 11:48	1
Vanadium	**0.0030**	**J**	0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 11:48	1
Zinc	**0.041**		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 11:48	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 10:23	03/09/17 14:10	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:13	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:10	1
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	ND		1.0	0.50	mg/L			03/03/17 12:31	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-5A:022217

Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 16:28	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 16:28	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 16:28	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 16:28	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 16:28	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 16:28	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:28	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 16:28	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 16:28	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 16:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 16:28	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 16:28	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 16:28	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 16:28	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 16:28	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 16:28	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 16:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 16:28	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-5A:022217
Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 16:28	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 16:28	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 16:28	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 16:28	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 16:28	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 16:28	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 16:28	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 16:28	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 16:28	1
Acetone	ND		30	14	ug/L			03/01/17 16:28	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 16:28	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 16:28	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 16:28	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 16:28	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 16:28	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 16:28	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 16:28	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 16:28	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 16:28	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 16:28	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 16:28	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 16:28	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 16:28	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 16:28	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 16:28	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 16:28	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 16:28	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 16:28	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 16:28	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 16:28	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 16:28	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 16:28	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 16:28	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 16:28	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 16:28	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 16:28	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 16:28	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 16:28	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 16:28	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 16:28	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 16:28	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 16:28	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 16:28	1
Tetrachloroethene	**0.45**	**J**	1.0	0.22	ug/L			03/01/17 16:28	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 16:28	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:28	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 16:28	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:28	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 16:28	1

Client Sample ID: MW-5A:022217
Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 16:28	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 125*		*03/01/17 16:28*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*03/01/17 16:28*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*03/01/17 16:28*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*03/01/17 16:28*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*03/01/17 16:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
3 & 4 Methylphenol	ND		0.77	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 21:55	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/03/17 21:55	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/03/17 21:55	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1

Client Sample ID: MW-5A:022217
Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 21:55	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 21:55	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 21:55	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		02/27/17 16:44	03/03/17 21:55	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/03/17 21:55	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 21:55	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 21:55	1
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 21:55	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*57 - 132*	*02/27/17 16:44*	*03/03/17 21:55*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*02/27/17 16:44*	*03/03/17 21:55*	*1*
2-Fluorophenol	*72*		*50 - 113*	*02/27/17 16:44*	*03/03/17 21:55*	*1*
Nitrobenzene-d5	*71*		*59 - 120*	*02/27/17 16:44*	*03/03/17 21:55*	*1*
Phenol-d5	*76*		*52 - 120*	*02/27/17 16:44*	*03/03/17 21:55*	*1*
Terphenyl-d14	*95*		*72 - 140*	*02/27/17 16:44*	*03/03/17 21:55*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	**22**	*	14	5.7	ug/L		02/27/17 16:44	03/06/17 21:17	5

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 13:09	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-5A:022217
Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/28/17 10:48	02/28/17 23:20	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 23:20	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 23:20	1
Aldrin	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 23:20	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 23:20	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 23:20	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	02/28/17 23:20	1
delta-BHC	ND		0.050	0.010	ug/L		02/28/17 10:48	02/28/17 23:20	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 23:20	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 23:20	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:20	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:20	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 23:20	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	02/28/17 23:20	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:20	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 23:20	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 23:20	1
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	02/28/17 23:20	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 23:20	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/28/17 10:48	02/28/17 23:20	1
Toxaphene	ND		1.0	0.22	ug/L		02/28/17 10:48	02/28/17 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*98*		*22 - 150*	*02/28/17 10:48*	*02/28/17 23:20*	*1*
Tetrachloro-m-xylene	*105*		*40 - 113*	*02/28/17 10:48*	*02/28/17 23:20*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.096	0.060	ug/L		02/23/17 12:49	02/23/17 20:57	1
PCB-1221	ND		0.096	0.060	ug/L		02/23/17 12:49	02/23/17 20:57	1
PCB-1232	ND		0.096	0.060	ug/L		02/23/17 12:49	02/23/17 20:57	1
PCB-1242	ND		0.096	0.060	ug/L		02/23/17 12:49	02/23/17 20:57	1
PCB-1248	ND		0.096	0.060	ug/L		02/23/17 12:49	02/23/17 20:57	1
PCB-1254	ND		0.096	0.060	ug/L		02/23/17 12:49	02/23/17 20:57	1
PCB-1260	ND		0.096	0.042	ug/L		02/23/17 12:49	02/23/17 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*20 - 120*	*02/23/17 12:49*	*02/23/17 20:57*	*1*
DCB Decachlorobiphenyl (Surr)	*100*		*36 - 138*	*02/23/17 12:49*	*02/23/17 20:57*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 05:11	1
Azinphos-methyl	ND		2.4	0.16	ug/L		03/01/17 17:19	03/09/17 05:11	1
Bolstar	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 05:11	1
Chlorpyrifos	ND		1.5	0.35	ug/L		03/01/17 17:19	03/09/17 05:11	1
Coumaphos	ND		0.97	0.13	ug/L		03/01/17 17:19	03/09/17 05:11	1
Demeton, Total	ND		2.9	0.20	ug/L		03/01/17 17:19	03/09/17 05:11	1
Diazinon	ND		0.48	0.14	ug/L		03/01/17 17:19	03/09/17 05:11	1
Dichlorvos	ND		0.48	0.16	ug/L		03/01/17 17:19	03/09/17 05:11	1

Client Sample ID: MW-5A:022217
Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.43	ug/L		03/01/17 17:19	03/09/17 05:11	1
Disulfoton	ND		0.97	0.31	ug/L		03/01/17 17:19	03/09/17 05:11	1
EPN	ND		1.2	0.14	ug/L		03/01/17 17:19	03/09/17 05:11	1
Famphur	ND		0.97	0.17	ug/L		03/01/17 17:19	03/09/17 05:11	1
Fensulfothion	ND		2.4	0.53	ug/L		03/01/17 17:19	03/09/17 05:11	1
Fenthion	ND		2.4	0.15	ug/L		03/01/17 17:19	03/09/17 05:11	1
Malathion	ND		1.9	0.13	ug/L		03/01/17 17:19	03/09/17 05:11	1
Merphos	ND		4.8	0.17	ug/L		03/01/17 17:19	03/09/17 05:11	1
Methyl parathion	ND		3.9	0.14	ug/L		03/01/17 17:19	03/09/17 05:11	1
Mevinphos	ND		6.0	0.44	ug/L		03/01/17 17:19	03/09/17 05:11	1
Ethyl Parathion	ND		0.97	0.14	ug/L		03/01/17 17:19	03/09/17 05:11	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 05:11	1
Ronnel	ND		9.7	0.11	ug/L		03/01/17 17:19	03/09/17 05:11	1
Simazine	ND		9.7	0.22	ug/L		03/01/17 17:19	03/09/17 05:11	1
Sulfotepp	ND		1.5	0.16	ug/L		03/01/17 17:19	03/09/17 05:11	1
Thionazin	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 05:11	1
Tokuthion	ND		1.5	0.12	ug/L		03/01/17 17:19	03/09/17 05:11	1
Trichloronate	ND		1.5	0.23	ug/L		03/01/17 17:19	03/09/17 05:11	1
Ethoprop	ND		1.5	0.17	ug/L		03/01/17 17:19	03/09/17 05:11	1
Propazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*64*		*49 - 171*	*03/01/17 17:19*	*03/09/17 05:11*	*1*
Triphenylphosphate	*84*		*60 - 154*	*03/01/17 17:19*	*03/09/17 05:11*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/06/17 22:59	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/06/17 22:59	1
2,4-DB	ND		3.9	0.35	ug/L		02/28/17 10:10	03/06/17 22:59	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/06/17 22:59	1
Dicamba	ND		1.9	0.15	ug/L		02/28/17 10:10	03/06/17 22:59	1
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/06/17 22:59	1
MCPA	ND		390	17	ug/L		02/28/17 10:10	03/06/17 22:59	1
MCPP	ND		390	32	ug/L		02/28/17 10:10	03/06/17 22:59	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		02/28/17 10:10	03/06/17 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*74*		*39 - 135*	*02/28/17 10:10*	*03/06/17 22:59*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 16:04	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*02/28/17 09:16*	*02/28/17 16:04*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 16:04*	*1*

Client Sample ID: MW-5A:022217

Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		0.80	0.42	mg/L			02/23/17 12:32	1
Nitrate as N	**4.3**		0.20	0.039	mg/L			02/23/17 12:32	1
Nitrite as N	ND		0.20	0.069	mg/L			02/23/17 12:32	1
Sulfate	**19**		0.50	0.13	mg/L			02/23/17 12:32	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.17	pg/L		03/10/17 08:23	03/13/17 21:08	1
2,3,7,8-TCDF	ND		9.7	0.097	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,7,8-PeCDD	**0.27**	**J**	49	0.18	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,7,8-PeCDF	**0.18**	**J q**	49	0.13	pg/L		03/10/17 08:23	03/13/17 21:08	1
2,3,4,7,8-PeCDF	**0.27**	**J**	49	0.13	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,4,7,8-HxCDD	ND		49	0.16	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,6,7,8-HxCDD	ND		49	0.13	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,7,8,9-HxCDD	ND		49	0.12	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,4,7,8-HxCDF	ND		49	0.20	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,6,7,8-HxCDF	ND		49	0.17	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,7,8,9-HxCDF	**0.29**	**J**	49	0.18	pg/L		03/10/17 08:23	03/13/17 21:08	1
2,3,4,6,7,8-HxCDF	**0.19**	**J q**	49	0.18	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,4,6,7,8-HpCDD	**0.48**	**J q**	49	0.33	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,4,6,7,8-HpCDF	**0.64**	**J B q**	49	0.16	pg/L		03/10/17 08:23	03/13/17 21:08	1
1,2,3,4,7,8,9-HpCDF	**0.24**	**J q**	49	0.17	pg/L		03/10/17 08:23	03/13/17 21:08	1
OCDD	**4.4**	**J B**	97	0.22	pg/L		03/10/17 08:23	03/13/17 21:08	1
OCDF	**2.4**	**J B**	97	0.21	pg/L		03/10/17 08:23	03/13/17 21:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*90*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-2,3,7,8-TCDF	*88*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-1,2,3,7,8-PeCDD	*98*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-1,2,3,7,8-PeCDF	*91*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-1,2,3,6,7,8-HxCDD	*114*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*92*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*
13C-OCDD	*86*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:08*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0017**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:33	1
Antimony	**0.00025**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:33	1
Barium	**0.15**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:33	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:33	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:33	1
Chromium	**0.00030**	**J**	0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:33	1
Copper	ND		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:33	1
Iron	ND		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:33	1
Lead	ND		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:33	1
Manganese	ND		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:33	1
Nickel	ND		0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:33	1
Selenium	ND		0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:33	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:33	1

Client Sample ID: MW-5A:022217

Lab Sample ID: 590-5559-3

Date Collected: 02/22/17 10:24

Matrix: Water

Date Received: 02/23/17 11:20

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:33	1
Vanadium	**0.0027**	**J**	0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:33	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:33	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 11:52	1
Antimony	**0.00019**	**J**	0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 11:52	1
Barium	**0.14**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 11:52	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 11:52	1
Cadmium	**0.000042**	**J**	0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 11:52	1
Chromium	**0.00019**	**J**	0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 11:52	1
Copper	**0.00080**	**J**	0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 11:52	1
Iron	**0.0077**	**J**	0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 11:52	1
Lead	**0.00036**	**J**	0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 11:52	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 11:52	1
Nickel	ND		0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 11:52	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 11:52	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 11:52	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 11:52	1
Vanadium	**0.0022**	**J**	0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 11:52	1
Zinc	ND		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 11:52	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 10:23	03/09/17 14:12	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:16	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 15:11	1
Chemical Oxygen Demand	**5.3**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**0.99**	**J**	1.0	0.50	mg/L			03/03/17 12:31	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-5:022217

Lab Sample ID: 590-5559-4

Date Collected: 02/22/17 11:44

Matrix: Water

Date Received: 02/23/17 11:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 16:50	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 16:50	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 16:50	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 16:50	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 16:50	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 16:50	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:50	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 16:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 16:50	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 16:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 16:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 16:50	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 16:50	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 16:50	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 16:50	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 16:50	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 16:50	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 16:50	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 16:50	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 16:50	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 16:50	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 16:50	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 16:50	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 16:50	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 16:50	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 16:50	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 16:50	1
Acetone	ND		30	14	ug/L			03/01/17 16:50	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 16:50	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 16:50	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 16:50	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 16:50	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 16:50	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 16:50	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 16:50	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 16:50	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 16:50	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 16:50	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 16:50	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 16:50	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 16:50	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 16:50	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 16:50	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 16:50	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 16:50	1
Dichlorofluoromethane	**0.32**	**J B**	1.0	0.30	ug/L			03/01/17 16:50	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 16:50	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 16:50	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 16:50	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 16:50	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 16:50	1

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 16:50	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 16:50	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 16:50	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 16:50	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 16:50	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 16:50	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 16:50	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 16:50	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 16:50	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 16:50	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 16:50	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 16:50	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:50	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 16:50	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 16:50	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 16:50	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 16:50	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 125*		*03/01/17 16:50*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*03/01/17 16:50*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*03/01/17 16:50*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*03/01/17 16:50*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*03/01/17 16:50*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,4-Dinitrophenol	ND		4.9	0.97	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
3 & 4 Methylphenol	ND		0.78	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 22:20	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/03/17 22:20	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/03/17 22:20	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Acenaphthylene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzo[b]fluoranthene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 22:20	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 22:20	1
Butyl benzyl phthalate	**0.63**		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 22:20	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 22:20	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Di-n-butyl phthalate	**0.17**	**J**	0.39	0.13	ug/L		02/27/17 16:44	03/03/17 22:20	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/03/17 22:20	1
Fluoranthene	ND		0.049	0.013	ug/L		02/27/17 16:44	03/03/17 22:20	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Phenanthrene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/03/17 22:20	1

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 22:20	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*57 - 132*	*02/27/17 16:44*	*03/03/17 22:20*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*02/27/17 16:44*	*03/03/17 22:20*	*1*
2-Fluorophenol	*76*		*50 - 113*	*02/27/17 16:44*	*03/03/17 22:20*	*1*
Nitrobenzene-d5	*76*		*59 - 120*	*02/27/17 16:44*	*03/03/17 22:20*	*1*
Phenol-d5	*80*		*52 - 120*	*02/27/17 16:44*	*03/03/17 22:20*	*1*
Terphenyl-d14	*98*		*72 - 140*	*02/27/17 16:44*	*03/03/17 22:20*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 13:34	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0059	ug/L		02/28/17 10:48	02/28/17 23:39	1
4,4'-DDE	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:39	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 23:39	1
Aldrin	ND		0.029	0.0069	ug/L		02/28/17 10:48	02/28/17 23:39	1
alpha-BHC	ND		0.029	0.0069	ug/L		02/28/17 10:48	02/28/17 23:39	1
alpha-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:39	1
beta-BHC	ND		0.049	0.012	ug/L		02/28/17 10:48	02/28/17 23:39	1
delta-BHC	ND		0.049	0.0098	ug/L		02/28/17 10:48	02/28/17 23:39	1
Dieldrin	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 23:39	1
Endosulfan I	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:39	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:39	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:39	1
Endrin	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:39	1
Endrin aldehyde	ND		0.20	0.033	ug/L		02/28/17 10:48	02/28/17 23:39	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 23:39	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/28/17 10:48	02/28/17 23:39	1
gamma-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:39	1
Heptachlor	ND		0.020	0.0039	ug/L		02/28/17 10:48	02/28/17 23:39	1
Heptachlor epoxide	ND		0.020	0.0029	ug/L		02/28/17 10:48	02/28/17 23:39	1
Methoxychlor	ND		0.098	0.0020	ug/L		02/28/17 10:48	02/28/17 23:39	1
Toxaphene	ND		0.98	0.22	ug/L		02/28/17 10:48	02/28/17 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*22 - 150*	*02/28/17 10:48*	*02/28/17 23:39*	*1*
Tetrachloro-m-xylene	*102*		*40 - 113*	*02/28/17 10:48*	*02/28/17 23:39*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 21:18	1
PCB-1221	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 21:18	1
PCB-1232	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 21:18	1
PCB-1242	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 21:18	1
PCB-1248	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 21:18	1
PCB-1254	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 21:18	1

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.098	0.042	ug/L		02/23/17 12:49	02/23/17 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*20 - 120*	*02/23/17 12:49*	*02/23/17 21:18*	*1*
DCB Decachlorobiphenyl (Surr)	*88*		*36 - 138*	*02/23/17 12:49*	*02/23/17 21:18*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 05:42	1
Azinphos-methyl	ND		2.4	0.16	ug/L		03/01/17 17:19	03/09/17 05:42	1
Bolstar	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 05:42	1
Chlorpyrifos	ND		1.5	0.35	ug/L		03/01/17 17:19	03/09/17 05:42	1
Coumaphos	ND		0.97	0.13	ug/L		03/01/17 17:19	03/09/17 05:42	1
Demeton, Total	ND		2.9	0.20	ug/L		03/01/17 17:19	03/09/17 05:42	1
Diazinon	ND		0.49	0.14	ug/L		03/01/17 17:19	03/09/17 05:42	1
Dichlorvos	ND		0.49	0.16	ug/L		03/01/17 17:19	03/09/17 05:42	1
Dimethoate	ND		1.5	0.44	ug/L		03/01/17 17:19	03/09/17 05:42	1
Disulfoton	ND		0.97	0.31	ug/L		03/01/17 17:19	03/09/17 05:42	1
EPN	ND		1.2	0.14	ug/L		03/01/17 17:19	03/09/17 05:42	1
Famphur	ND		0.97	0.17	ug/L		03/01/17 17:19	03/09/17 05:42	1
Fensulfothion	ND		2.4	0.53	ug/L		03/01/17 17:19	03/09/17 05:42	1
Fenthion	ND		2.4	0.15	ug/L		03/01/17 17:19	03/09/17 05:42	1
Malathion	ND		1.9	0.13	ug/L		03/01/17 17:19	03/09/17 05:42	1
Merphos	ND		4.9	0.17	ug/L		03/01/17 17:19	03/09/17 05:42	1
Methyl parathion	ND		3.9	0.14	ug/L		03/01/17 17:19	03/09/17 05:42	1
Mevinphos	ND		6.0	0.45	ug/L		03/01/17 17:19	03/09/17 05:42	1
Ethyl Parathion	ND		0.97	0.14	ug/L		03/01/17 17:19	03/09/17 05:42	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 05:42	1
Ronnel	ND		9.7	0.11	ug/L		03/01/17 17:19	03/09/17 05:42	1
Simazine	ND		9.7	0.22	ug/L		03/01/17 17:19	03/09/17 05:42	1
Sulfotepp	ND		1.5	0.16	ug/L		03/01/17 17:19	03/09/17 05:42	1
Thionazin	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 05:42	1
Tokuthion	ND		1.6	0.12	ug/L		03/01/17 17:19	03/09/17 05:42	1
Trichloronate	ND		1.5	0.23	ug/L		03/01/17 17:19	03/09/17 05:42	1
Ethoprop	ND		1.5	0.17	ug/L		03/01/17 17:19	03/09/17 05:42	1
Propazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*68*		*49 - 171*	*03/01/17 17:19*	*03/09/17 05:42*	*1*
Triphenylphosphate	*93*		*60 - 154*	*03/01/17 17:19*	*03/09/17 05:42*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/06/17 23:21	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/06/17 23:21	1
2,4-DB	ND		3.9	0.35	ug/L		02/28/17 10:10	03/06/17 23:21	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/06/17 23:21	1
Dicamba	ND		1.9	0.15	ug/L		02/28/17 10:10	03/06/17 23:21	1
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/06/17 23:21	1
MCPA	ND		390	17	ug/L		02/28/17 10:10	03/06/17 23:21	1

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	**59**	**J**	390	32	ug/L		02/28/17 10:10	03/06/17 23:21	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		02/28/17 10:10	03/06/17 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*76*		*39 - 135*	*02/28/17 10:10*	*03/06/17 23:21*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.042	mg/L		02/28/17 09:16	02/28/17 16:21	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.062	mg/L		02/28/17 09:16	02/28/17 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*02/28/17 09:16*	*02/28/17 16:21*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*02/28/17 09:16*	*02/28/17 16:21*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41**	**F1**	0.80	0.42	mg/L			02/23/17 12:44	1
Nitrate as N	**0.80**		0.20	0.039	mg/L			02/23/17 12:44	1
Nitrite as N	**0.16**	**J**	0.20	0.069	mg/L			02/23/17 12:44	1
Sulfate	**15**		0.50	0.13	mg/L			02/23/17 12:44	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.19	pg/L		03/10/17 08:23	03/13/17 21:54	1
2,3,7,8-TCDF	ND		9.7	0.10	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,7,8-PeCDD	ND		49	0.19	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,7,8-PeCDF	ND		49	0.14	pg/L		03/10/17 08:23	03/13/17 21:54	1
2,3,4,7,8-PeCDF	ND		49	0.15	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,4,7,8-HxCDD	ND		49	0.18	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,6,7,8-HxCDD	ND		49	0.15	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,7,8,9-HxCDD	ND		49	0.13	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,4,7,8-HxCDF	ND		49	0.19	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,6,7,8-HxCDF	ND		49	0.16	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,7,8,9-HxCDF	**0.20**	**J q**	49	0.17	pg/L		03/10/17 08:23	03/13/17 21:54	1
2,3,4,6,7,8-HxCDF	**0.39**	**J q**	49	0.17	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,4,6,7,8-HpCDD	**0.74**	**J**	49	0.38	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,4,6,7,8-HpCDF	**0.54**	**J B q**	49	0.17	pg/L		03/10/17 08:23	03/13/17 21:54	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.19	pg/L		03/10/17 08:23	03/13/17 21:54	1
OCDD	**3.0**	**J B**	97	0.20	pg/L		03/10/17 08:23	03/13/17 21:54	1
OCDF	**1.1**	**J B**	97	0.22	pg/L		03/10/17 08:23	03/13/17 21:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-2,3,7,8-TCDF	*83*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-1,2,3,7,8-PeCDD	*89*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-1,2,3,6,7,8-HxCDD	*106*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*93*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDF	*93*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*
13C-OCDD	*90*		*40 - 135*	*03/10/17 08:23*	*03/13/17 21:54*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:37	1
Antimony	**0.00026**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:37	1
Barium	**0.097**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:37	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:37	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:37	1
Chromium	**0.00021**	**J**	0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:37	1
Copper	**0.0024**		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:37	1
Iron	ND		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:37	1
Lead	ND		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:37	1
Manganese	ND		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:37	1
Nickel	**0.00089**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:37	1
Selenium	ND		0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:37	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:37	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:37	1
Vanadium	**0.0025**	**J**	0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:37	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:37	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0015**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 11:57	1
Antimony	**0.00020**	**J**	0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 11:57	1
Barium	**0.094**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 11:57	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 11:57	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 11:57	1
Chromium	ND		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 11:57	1
Copper	**0.0027**		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 11:57	1
Iron	**0.0058**	**J**	0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 11:57	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 11:57	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 11:57	1
Nickel	**0.00086**	**J**	0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 11:57	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 11:57	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 11:57	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 11:57	1
Vanadium	**0.0019**	**J**	0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 11:57	1
Zinc	ND		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 11:57	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 12:40	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:24	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-5:022217

Lab Sample ID: 590-5559-4

Date Collected: 02/22/17 11:44

Matrix: Water

Date Received: 02/23/17 11:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:17	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:44	1
Chemical Oxygen Demand	**8.7**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**2.8**		1.0	0.50	mg/L			03/03/17 12:31	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-15:022217

Lab Sample ID: 590-5559-5

Date Collected: 02/22/17 13:25

Matrix: Water

Date Received: 02/23/17 11:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 17:12	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 17:12	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 17:12	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 17:12	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 17:12	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 17:12	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:12	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 17:12	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 17:12	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 17:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 17:12	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 17:12	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 17:12	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 17:12	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 17:12	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 17:12	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 17:12	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 17:12	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 17:12	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 17:12	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 17:12	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 17:12	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 17:12	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 17:12	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 17:12	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 17:12	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 17:12	1
Acetone	ND		30	14	ug/L			03/01/17 17:12	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 17:12	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 17:12	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 17:12	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 17:12	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 17:12	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 17:12	1

Client Sample ID: MW-15:022217
Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 17:12	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 17:12	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 17:12	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 17:12	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 17:12	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 17:12	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 17:12	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 17:12	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 17:12	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 17:12	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 17:12	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 17:12	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 17:12	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 17:12	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 17:12	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 17:12	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 17:12	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 17:12	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 17:12	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 17:12	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 17:12	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 17:12	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 17:12	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 17:12	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 17:12	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 17:12	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 17:12	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 17:12	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 17:12	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:12	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 17:12	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:12	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 17:12	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 17:12	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 125*		*03/01/17 17:12*	*1*
4-Bromofluorobenzene (Surr)	*105*		*69 - 120*		*03/01/17 17:12*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*03/01/17 17:12*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*03/01/17 17:12*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*03/01/17 17:12*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-15:022217
Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
1,2-Dichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
1,3-Dichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
1,4-Dichlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,4,5-Trichlorophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,4,6-Trichlorophenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,4-Dichlorophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,4-Dinitrophenol	ND		4.8	0.96	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,4-Dinitrotoluene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2,6-Dinitrotoluene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
2-Chlorophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
2-Methylphenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2-Nitroaniline	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
2-Nitrophenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
3 & 4 Methylphenol	ND		0.77	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
3,3'-Dichlorobenzidine	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 22:44	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.96	ug/L		02/27/17 16:44	03/03/17 22:44	1
4-Bromophenyl phenyl ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
4-Chloro-3-methylphenol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
4-Chloroaniline	ND	*	0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
4-Chlorophenyl phenyl ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
4-Nitroaniline	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
4-Nitrophenol	ND		2.9	0.96	ug/L		02/27/17 16:44	03/03/17 22:44	1
Acenaphthene	ND		0.096	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Anthracene	ND		0.039	0.0096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 22:44	1
Benzyl alcohol	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
bis (2-chloroisopropyl) ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Bis(2-chloroethoxy)methane	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Bis(2-chloroethyl)ether	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 22:44	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 22:44	1
Carbazole	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 22:44	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Dibenzofuran	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Diethyl phthalate	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Dimethyl phthalate	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-15:022217
Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.39	0.13	ug/L		02/27/17 16:44	03/03/17 22:44	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/03/17 22:44	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 22:44	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Hexachlorobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Hexachlorobutadiene	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Hexachlorocyclopentadiene	ND		1.9	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Hexachloroethane	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Isophorone	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Naphthalene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Nitrobenzene	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
N-Nitrosodi-n-propylamine	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
N-Nitrosodiphenylamine	ND		0.39	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Pentachlorophenol	ND		0.67	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 22:44	1
Phenol	ND		0.58	0.096	ug/L		02/27/17 16:44	03/03/17 22:44	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*77*		*57 - 132*	*02/27/17 16:44*	*03/03/17 22:44*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*02/27/17 16:44*	*03/03/17 22:44*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 22:44*	*1*
Nitrobenzene-d5	*80*		*59 - 120*	*02/27/17 16:44*	*03/03/17 22:44*	*1*
Phenol-d5	*85*		*52 - 120*	*02/27/17 16:44*	*03/03/17 22:44*	*1*
Terphenyl-d14	*104*		*72 - 140*	*02/27/17 16:44*	*03/03/17 22:44*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 13:58	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0057	ug/L		02/28/17 10:48	02/28/17 23:58	1
4,4'-DDE	ND		0.019	0.0029	ug/L		02/28/17 10:48	02/28/17 23:58	1
4,4'-DDT	ND		0.029	0.0048	ug/L		02/28/17 10:48	02/28/17 23:58	1
Aldrin	ND		0.029	0.0067	ug/L		02/28/17 10:48	02/28/17 23:58	1
alpha-BHC	ND		0.029	0.0067	ug/L		02/28/17 10:48	02/28/17 23:58	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		02/28/17 10:48	02/28/17 23:58	1
beta-BHC	ND		0.048	0.011	ug/L		02/28/17 10:48	02/28/17 23:58	1
delta-BHC	ND		0.048	0.0095	ug/L		02/28/17 10:48	02/28/17 23:58	1
Dieldrin	ND		0.029	0.0048	ug/L		02/28/17 10:48	02/28/17 23:58	1
Endosulfan I	ND		0.019	0.0029	ug/L		02/28/17 10:48	02/28/17 23:58	1
Endosulfan II	ND		0.019	0.0019	ug/L		02/28/17 10:48	02/28/17 23:58	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		02/28/17 10:48	02/28/17 23:58	1
Endrin	ND		0.019	0.0029	ug/L		02/28/17 10:48	02/28/17 23:58	1
Endrin aldehyde	ND		0.19	0.032	ug/L		02/28/17 10:48	02/28/17 23:58	1
Endrin ketone	ND		0.019	0.0019	ug/L		02/28/17 10:48	02/28/17 23:58	1
gamma-BHC (Lindane)	ND		0.029	0.0048	ug/L		02/28/17 10:48	02/28/17 23:58	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		02/28/17 10:48	02/28/17 23:58	1

Client Sample ID: MW-15:022217

Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.019	0.0038	ug/L		02/28/17 10:48	02/28/17 23:58	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		02/28/17 10:48	02/28/17 23:58	1
Methoxychlor	ND		0.095	0.0019	ug/L		02/28/17 10:48	02/28/17 23:58	1
Toxaphene	ND		0.95	0.21	ug/L		02/28/17 10:48	02/28/17 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*101*		*22 - 150*	*02/28/17 10:48*	*02/28/17 23:58*	*1*
Tetrachloro-m-xylene	*108*		*40 - 113*	*02/28/17 10:48*	*02/28/17 23:58*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.095	0.059	ug/L		02/23/17 12:49	02/23/17 21:39	1
PCB-1221	ND		0.095	0.059	ug/L		02/23/17 12:49	02/23/17 21:39	1
PCB-1232	ND		0.095	0.059	ug/L		02/23/17 12:49	02/23/17 21:39	1
PCB-1242	ND		0.095	0.059	ug/L		02/23/17 12:49	02/23/17 21:39	1
PCB-1248	ND		0.095	0.059	ug/L		02/23/17 12:49	02/23/17 21:39	1
PCB-1254	ND		0.095	0.059	ug/L		02/23/17 12:49	02/23/17 21:39	1
PCB-1260	ND		0.095	0.041	ug/L		02/23/17 12:49	02/23/17 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*20 - 120*	*02/23/17 12:49*	*02/23/17 21:39*	*1*
DCB Decachlorobiphenyl (Surr)	*91*		*36 - 138*	*02/23/17 12:49*	*02/23/17 21:39*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.9	0.29	ug/L		03/01/17 17:19	03/09/17 06:14	1
Azinphos-methyl	ND		2.5	0.17	ug/L		03/01/17 17:19	03/09/17 06:14	1
Bolstar	ND		0.99	0.31	ug/L		03/01/17 17:19	03/09/17 06:14	1
Chlorpyrifos	ND		1.5	0.36	ug/L		03/01/17 17:19	03/09/17 06:14	1
Coumaphos	ND		0.99	0.13	ug/L		03/01/17 17:19	03/09/17 06:14	1
Demeton, Total	ND		3.0	0.21	ug/L		03/01/17 17:19	03/09/17 06:14	1
Diazinon	ND		0.50	0.15	ug/L		03/01/17 17:19	03/09/17 06:14	1
Dichlorvos	ND		0.50	0.16	ug/L		03/01/17 17:19	03/09/17 06:14	1
Dimethoate	ND		1.5	0.45	ug/L		03/01/17 17:19	03/09/17 06:14	1
Disulfoton	ND		0.99	0.32	ug/L		03/01/17 17:19	03/09/17 06:14	1
EPN	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 06:14	1
Famphur	ND		0.99	0.18	ug/L		03/01/17 17:19	03/09/17 06:14	1
Fensulfothion	ND		2.5	0.54	ug/L		03/01/17 17:19	03/09/17 06:14	1
Fenthion	ND		2.5	0.15	ug/L		03/01/17 17:19	03/09/17 06:14	1
Malathion	ND		2.0	0.13	ug/L		03/01/17 17:19	03/09/17 06:14	1
Merphos	ND		5.0	0.17	ug/L		03/01/17 17:19	03/09/17 06:14	1
Methyl parathion	ND		4.0	0.14	ug/L		03/01/17 17:19	03/09/17 06:14	1
Mevinphos	ND		6.2	0.46	ug/L		03/01/17 17:19	03/09/17 06:14	1
Ethyl Parathion	ND		0.99	0.14	ug/L		03/01/17 17:19	03/09/17 06:14	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 06:14	1
Ronnel	ND		9.9	0.12	ug/L		03/01/17 17:19	03/09/17 06:14	1
Simazine	ND		9.9	0.22	ug/L		03/01/17 17:19	03/09/17 06:14	1
Sulfotepp	ND		1.5	0.17	ug/L		03/01/17 17:19	03/09/17 06:14	1
Thionazin	ND		0.99	0.31	ug/L		03/01/17 17:19	03/09/17 06:14	1
Tokuthion	ND		1.6	0.12	ug/L		03/01/17 17:19	03/09/17 06:14	1

Client Sample ID: MW-15:022217
Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.5	0.24	ug/L		03/01/17 17:19	03/09/17 06:14	1
Ethoprop	ND		1.5	0.18	ug/L		03/01/17 17:19	03/09/17 06:14	1
Propazine	ND		9.9	0.29	ug/L		03/01/17 17:19	03/09/17 06:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*61*		*49 - 171*	*03/01/17 17:19*	*03/09/17 06:14*	*1*
Triphenylphosphate	*80*		*60 - 154*	*03/01/17 17:19*	*03/09/17 06:14*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		02/28/17 10:10	03/06/17 23:44	1
2,4-D	ND		4.1	0.21	ug/L		02/28/17 10:10	03/06/17 23:44	1
2,4-DB	ND		4.1	0.37	ug/L		02/28/17 10:10	03/06/17 23:44	1
Dalapon	ND		2.0	0.93	ug/L		02/28/17 10:10	03/06/17 23:44	1
Dicamba	ND		2.0	0.15	ug/L		02/28/17 10:10	03/06/17 23:44	1
Dichlorprop	ND		4.1	0.66	ug/L		02/28/17 10:10	03/06/17 23:44	1
MCPA	ND		410	17	ug/L		02/28/17 10:10	03/06/17 23:44	1
MCPP	ND		410	34	ug/L		02/28/17 10:10	03/06/17 23:44	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		02/28/17 10:10	03/06/17 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*02/28/17 10:10*	*03/06/17 23:44*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.044	mg/L		02/28/17 09:16	02/28/17 16:55	1
Residual Range Organics (RRO) (C25-C36)	ND		0.22	0.066	mg/L		02/28/17 09:16	02/28/17 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*50 - 150*	*02/28/17 09:16*	*02/28/17 16:55*	*1*
n-Triacontane-d62	*101*		*50 - 150*	*02/28/17 09:16*	*02/28/17 16:55*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47**		0.80	0.42	mg/L			02/23/17 13:32	1
Nitrate as N	**0.20**		0.20	0.039	mg/L			02/23/17 13:32	1
Nitrite as N	**0.16**	**J**	0.20	0.069	mg/L			02/23/17 13:32	1
Sulfate	**17**		0.50	0.13	mg/L			02/23/17 13:32	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.19	pg/L		03/10/17 08:23	03/13/17 22:40	1
2,3,7,8-TCDF	ND		9.6	0.11	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,7,8-PeCDD	ND		48	0.20	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,7,8-PeCDF	ND		48	0.17	pg/L		03/10/17 08:23	03/13/17 22:40	1
2,3,4,7,8-PeCDF	ND		48	0.18	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,4,7,8-HxCDD	ND		48	0.17	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,6,7,8-HxCDD	ND		48	0.14	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,7,8,9-HxCDD	ND		48	0.13	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,4,7,8-HxCDF	**0.36**	**J**	48	0.12	pg/L		03/10/17 08:23	03/13/17 22:40	1

Client Sample ID: MW-15:022217
Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	**0.17**	**J q**	48	0.099	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,7,8,9-HxCDF	**0.34**	**J q**	48	0.11	pg/L		03/10/17 08:23	03/13/17 22:40	1
2,3,4,6,7,8-HxCDF	ND		48	0.11	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,4,6,7,8-HpCDD	**2.2**	**J q**	48	0.40	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,4,6,7,8-HpCDF	**1.8**	**J B**	48	0.20	pg/L		03/10/17 08:23	03/13/17 22:40	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.22	pg/L		03/10/17 08:23	03/13/17 22:40	1
OCDD	**17**	**J B**	96	0.25	pg/L		03/10/17 08:23	03/13/17 22:40	1
OCDF	**8.0**	**J B**	96	0.25	pg/L		03/10/17 08:23	03/13/17 22:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*81*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-1,2,3,6,7,8-HxCDD	*107*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-1,2,3,4,7,8-HxCDF	*89*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*97*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*
13C-OCDD	*92*		*40 - 135*	*03/10/17 08:23*	*03/13/17 22:40*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:42	1
Antimony	**0.00016**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:42	1
Barium	**0.049**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:42	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:42	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:42	1
Chromium	**0.0011**		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:42	1
Copper	**0.0047**		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:42	1
Iron	**0.19**		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:42	1
Lead	**0.00012**	**J**	0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:42	1
Manganese	**0.0045**		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:42	1
Nickel	**0.0019**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:42	1
Selenium	**0.00031**	**J**	0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:42	1
Silver	**0.000039**	**J**	0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:42	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:42	1
Vanadium	**0.0033**	**J**	0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:42	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:42	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 12:01	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 12:01	1
Barium	**0.047**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 12:01	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 12:01	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 12:01	1
Chromium	**0.00014**	**J**	0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 12:01	1
Copper	**0.0051**		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 12:01	1
Iron	**0.0068**	**J**	0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 12:01	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 12:01	1
Manganese	**0.0010**	**J**	0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 12:01	1

Client Sample ID: MW-15:022217

Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0017**	**J**	0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 12:01	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 12:01	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 12:01	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 12:01	1
Vanadium	**0.0027**	**J**	0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 12:01	1
Zinc	ND		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 12:01	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 12:50	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:17	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:45	1
Chemical Oxygen Demand	**8.9**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**2.9**		1.0	0.50	mg/L			03/03/17 12:31	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-15A:022217

Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 17:33	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 17:33	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 17:33	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 17:33	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 17:33	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 17:33	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 17:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 17:33	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 17:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 17:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 17:33	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 17:33	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 17:33	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 17:33	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 17:33	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 17:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 17:33	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-15A:022217
Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 17:33	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 17:33	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 17:33	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 17:33	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 17:33	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 17:33	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 17:33	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 17:33	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 17:33	1
Acetone	ND		30	14	ug/L			03/01/17 17:33	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 17:33	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 17:33	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 17:33	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 17:33	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 17:33	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 17:33	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 17:33	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 17:33	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 17:33	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 17:33	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 17:33	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 17:33	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 17:33	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 17:33	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 17:33	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 17:33	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 17:33	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 17:33	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 17:33	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 17:33	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 17:33	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 17:33	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 17:33	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 17:33	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 17:33	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 17:33	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 17:33	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 17:33	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 17:33	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 17:33	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 17:33	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 17:33	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 17:33	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 17:33	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 17:33	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:33	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 17:33	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:33	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 17:33	1

Client Sample ID: MW-15A:022217
Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 17:33	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 125*		*03/01/17 17:33*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*03/01/17 17:33*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*03/01/17 17:33*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*03/01/17 17:33*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*03/01/17 17:33*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
1,2-Dichlorobenzene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
1,3-Dichlorobenzene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
1,4-Dichlorobenzene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
1-Methylnaphthalene	ND		0.066	0.033	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,4,5-Trichlorophenol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,4,6-Trichlorophenol	ND		0.66	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,4-Dichlorophenol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,4-Dimethylphenol	ND		2.2	0.33	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,4-Dinitrophenol	ND		5.5	1.1	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,4-Dinitrotoluene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2,6-Dinitrotoluene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2-Chloronaphthalene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
2-Chlorophenol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2-Methylnaphthalene	ND		0.22	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
2-Methylphenol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2-Nitroaniline	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
2-Nitrophenol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
3 & 4 Methylphenol	ND		0.88	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
3,3'-Dichlorobenzidine	ND		2.2	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
3-Nitroaniline	ND		0.44	0.13	ug/L		02/27/17 16:44	03/03/17 23:09	1
4,6-Dinitro-2-methylphenol	ND	*	4.4	1.1	ug/L		02/27/17 16:44	03/03/17 23:09	1
4-Bromophenyl phenyl ether	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
4-Chloro-3-methylphenol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
4-Chloroaniline	ND	*	0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
4-Chlorophenyl phenyl ether	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
4-Nitroaniline	ND		0.66	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
4-Nitrophenol	ND		3.3	1.1	ug/L		02/27/17 16:44	03/03/17 23:09	1
Acenaphthene	ND		0.11	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Acenaphthylene	ND		0.088	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Anthracene	ND		0.044	0.011	ug/L		02/27/17 16:44	03/03/17 23:09	1
Benzo[a]anthracene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1

Client Sample ID: MW-15A:022217
Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.044	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Benzo[b]fluoranthene	ND		0.088	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Benzo[g,h,i]perylene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Benzo[k]fluoranthene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Benzoic acid	ND		3.3	0.66	ug/L		02/27/17 16:44	03/03/17 23:09	1
Benzyl alcohol	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
bis (2-chloroisopropyl) ether	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Bis(2-chloroethoxy)methane	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Bis(2-chloroethyl)ether	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Bis(2-ethylhexyl) phthalate	**2.2**	**J ***	3.3	1.3	ug/L		02/27/17 16:44	03/03/17 23:09	1
Butyl benzyl phthalate	ND		0.66	0.22	ug/L		02/27/17 16:44	03/03/17 23:09	1
Carbazole	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Chrysene	ND		0.044	0.014	ug/L		02/27/17 16:44	03/03/17 23:09	1
Dibenz(a,h)anthracene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Dibenzofuran	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Diethyl phthalate	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Dimethyl phthalate	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Di-n-butyl phthalate	ND		0.44	0.14	ug/L		02/27/17 16:44	03/03/17 23:09	1
Di-n-octyl phthalate	ND		0.44	0.20	ug/L		02/27/17 16:44	03/03/17 23:09	1
Fluoranthene	ND		0.055	0.014	ug/L		02/27/17 16:44	03/03/17 23:09	1
Fluorene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Hexachlorobenzene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Hexachlorobutadiene	ND		0.66	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Hexachlorocyclopentadiene	ND		2.2	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Hexachloroethane	ND		0.66	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Indeno[1,2,3-cd]pyrene	ND		0.066	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Isophorone	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Naphthalene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Nitrobenzene	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
N-Nitrosodi-n-propylamine	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
N-Nitrosodiphenylamine	ND		0.44	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Pentachlorophenol	ND		0.77	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Phenanthrene	ND		0.088	0.022	ug/L		02/27/17 16:44	03/03/17 23:09	1
Phenol	ND		0.66	0.11	ug/L		02/27/17 16:44	03/03/17 23:09	1
Pyrene	ND		0.066	0.014	ug/L		02/27/17 16:44	03/03/17 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*57 - 132*	*02/27/17 16:44*	*03/03/17 23:09*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*02/27/17 16:44*	*03/03/17 23:09*	*1*
2-Fluorophenol	*75*		*50 - 113*	*02/27/17 16:44*	*03/03/17 23:09*	*1*
Nitrobenzene-d5	*73*		*59 - 120*	*02/27/17 16:44*	*03/03/17 23:09*	*1*
Phenol-d5	*78*		*52 - 120*	*02/27/17 16:44*	*03/03/17 23:09*	*1*
Terphenyl-d14	*99*		*72 - 140*	*02/27/17 16:44*	*03/03/17 23:09*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 14:23	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-15A:022217
Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0058	ug/L		02/28/17 10:48	03/01/17 00:17	1
4,4'-DDE	ND		0.019	0.0029	ug/L		02/28/17 10:48	03/01/17 00:17	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/28/17 10:48	03/01/17 00:17	1
Aldrin	ND		0.029	0.0068	ug/L		02/28/17 10:48	03/01/17 00:17	1
alpha-BHC	ND		0.029	0.0068	ug/L		02/28/17 10:48	03/01/17 00:17	1
alpha-Chlordane	ND		0.019	0.0029	ug/L		02/28/17 10:48	03/01/17 00:17	1
beta-BHC	ND		0.049	0.012	ug/L		02/28/17 10:48	03/01/17 00:17	1
delta-BHC	ND		0.049	0.0097	ug/L		02/28/17 10:48	03/01/17 00:17	1
Dieldrin	ND		0.029	0.0049	ug/L		02/28/17 10:48	03/01/17 00:17	1
Endosulfan I	ND		0.019	0.0029	ug/L		02/28/17 10:48	03/01/17 00:17	1
Endosulfan II	ND		0.019	0.0019	ug/L		02/28/17 10:48	03/01/17 00:17	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		02/28/17 10:48	03/01/17 00:17	1
Endrin	ND		0.019	0.0029	ug/L		02/28/17 10:48	03/01/17 00:17	1
Endrin aldehyde	ND		0.19	0.033	ug/L		02/28/17 10:48	03/01/17 00:17	1
Endrin ketone	ND		0.019	0.0019	ug/L		02/28/17 10:48	03/01/17 00:17	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/28/17 10:48	03/01/17 00:17	1
gamma-Chlordane	ND		0.019	0.0029	ug/L		02/28/17 10:48	03/01/17 00:17	1
Heptachlor	ND		0.019	0.0039	ug/L		02/28/17 10:48	03/01/17 00:17	1
Heptachlor epoxide	ND		0.019	0.0029	ug/L		02/28/17 10:48	03/01/17 00:17	1
Methoxychlor	ND		0.097	0.0019	ug/L		02/28/17 10:48	03/01/17 00:17	1
Toxaphene	ND		0.97	0.21	ug/L		02/28/17 10:48	03/01/17 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*22 - 150*	*02/28/17 10:48*	*03/01/17 00:17*	*1*
Tetrachloro-m-xylene	*98*		*40 - 113*	*02/28/17 10:48*	*03/01/17 00:17*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 21:59	1
PCB-1221	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 21:59	1
PCB-1232	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 21:59	1
PCB-1242	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 21:59	1
PCB-1248	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 21:59	1
PCB-1254	ND		0.10	0.063	ug/L		02/23/17 12:49	02/23/17 21:59	1
PCB-1260	ND		0.10	0.044	ug/L		02/23/17 12:49	02/23/17 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*20 - 120*	*02/23/17 12:49*	*02/23/17 21:59*	*1*
DCB Decachlorobiphenyl (Surr)	*87*		*36 - 138*	*02/23/17 12:49*	*02/23/17 21:59*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		12	0.35	ug/L		03/01/17 17:19	03/09/17 06:45	1
Azinphos-methyl	ND		3.0	0.20	ug/L		03/01/17 17:19	03/09/17 06:45	1
Bolstar	ND		1.2	0.37	ug/L		03/01/17 17:19	03/09/17 06:45	1
Chlorpyrifos	ND		1.8	0.43	ug/L		03/01/17 17:19	03/09/17 06:45	1
Coumaphos	ND		1.2	0.16	ug/L		03/01/17 17:19	03/09/17 06:45	1
Demeton, Total	ND		3.6	0.25	ug/L		03/01/17 17:19	03/09/17 06:45	1
Diazinon	ND		0.59	0.17	ug/L		03/01/17 17:19	03/09/17 06:45	1
Dichlorvos	ND		0.59	0.19	ug/L		03/01/17 17:19	03/09/17 06:45	1

Client Sample ID: MW-15A:022217
Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.8	0.53	ug/L		03/01/17 17:19	03/09/17 06:45	1
Disulfoton	ND		1.2	0.38	ug/L		03/01/17 17:19	03/09/17 06:45	1
EPN	ND		1.4	0.18	ug/L		03/01/17 17:19	03/09/17 06:45	1
Famphur	ND		1.2	0.21	ug/L		03/01/17 17:19	03/09/17 06:45	1
Fensulfothion	ND		3.0	0.65	ug/L		03/01/17 17:19	03/09/17 06:45	1
Fenthion	ND		3.0	0.18	ug/L		03/01/17 17:19	03/09/17 06:45	1
Malathion	ND		2.4	0.16	ug/L		03/01/17 17:19	03/09/17 06:45	1
Merphos	ND		5.9	0.21	ug/L		03/01/17 17:19	03/09/17 06:45	1
Methyl parathion	ND		4.8	0.17	ug/L		03/01/17 17:19	03/09/17 06:45	1
Mevinphos	ND		7.4	0.55	ug/L		03/01/17 17:19	03/09/17 06:45	1
Ethyl Parathion	ND		1.2	0.17	ug/L		03/01/17 17:19	03/09/17 06:45	1
Phorate	ND		1.4	0.18	ug/L		03/01/17 17:19	03/09/17 06:45	1
Ronnel	ND		12	0.14	ug/L		03/01/17 17:19	03/09/17 06:45	1
Simazine	ND		12	0.26	ug/L		03/01/17 17:19	03/09/17 06:45	1
Sulfotepp	ND		1.8	0.20	ug/L		03/01/17 17:19	03/09/17 06:45	1
Thionazin	ND		1.2	0.37	ug/L		03/01/17 17:19	03/09/17 06:45	1
Tokuthion	ND		1.9	0.15	ug/L		03/01/17 17:19	03/09/17 06:45	1
Trichloronate	ND		1.8	0.29	ug/L		03/01/17 17:19	03/09/17 06:45	1
Ethoprop	ND		1.8	0.21	ug/L		03/01/17 17:19	03/09/17 06:45	1
Propazine	ND		12	0.35	ug/L		03/01/17 17:19	03/09/17 06:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*56*		*49 - 171*	*03/01/17 17:19*	*03/09/17 06:45*	*1*
Triphenylphosphate	*73*		*60 - 154*	*03/01/17 17:19*	*03/09/17 06:45*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.1	0.21	ug/L		02/28/17 10:10	03/07/17 00:07	1
2,4-D	ND		4.4	0.23	ug/L		02/28/17 10:10	03/07/17 00:07	1
2,4-DB	ND		4.4	0.40	ug/L		02/28/17 10:10	03/07/17 00:07	1
Dalapon	ND		2.2	1.0	ug/L		02/28/17 10:10	03/07/17 00:07	1
Dicamba	ND		2.2	0.17	ug/L		02/28/17 10:10	03/07/17 00:07	1
Dichlorprop	ND		4.4	0.72	ug/L		02/28/17 10:10	03/07/17 00:07	1
MCPA	**54**	**J B**	440	19	ug/L		02/28/17 10:10	03/07/17 00:07	1
MCPP	ND		440	37	ug/L		02/28/17 10:10	03/07/17 00:07	1
Silvex (2,4,5-TP)	ND		1.1	0.19	ug/L		02/28/17 10:10	03/07/17 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*85*		*39 - 135*	*02/28/17 10:10*	*03/07/17 00:07*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.045	mg/L		02/28/17 09:16	02/28/17 17:13	1
Residual Range Organics (RRO) (C25-C36)	ND		0.22	0.067	mg/L		02/28/17 09:16	02/28/17 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*02/28/17 09:16*	*02/28/17 17:13*	*1*
n-Triacontane-d62	*99*		*50 - 150*	*02/28/17 09:16*	*02/28/17 17:13*	*1*

Client Sample ID: MW-15A:022217

Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50**		0.80	0.42	mg/L			02/23/17 14:09	1
Nitrate as N	**1.3**		0.20	0.039	mg/L			02/23/17 14:09	1
Nitrite as N	**0.16**	**J**	0.20	0.069	mg/L			02/23/17 14:09	1
Sulfate	**28**		0.50	0.13	mg/L			02/23/17 14:09	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.23	pg/L		03/10/17 08:24	03/14/17 09:47	1
2,3,7,8-TCDF	**0.81**	**J**	11	0.18	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,7,8-PeCDD	ND		56	0.26	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,7,8-PeCDF	ND		56	0.25	pg/L		03/10/17 08:24	03/14/17 09:47	1
2,3,4,7,8-PeCDF	ND		56	0.26	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,4,7,8-HxCDD	ND		56	0.21	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,6,7,8-HxCDD	ND		56	0.17	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,7,8,9-HxCDD	ND		56	0.16	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,4,7,8-HxCDF	ND		56	0.23	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,6,7,8-HxCDF	ND		56	0.19	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,7,8,9-HxCDF	ND		56	0.21	pg/L		03/10/17 08:24	03/14/17 09:47	1
2,3,4,6,7,8-HxCDF	ND		56	0.22	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,4,6,7,8-HpCDD	**1.2**	**J q**	56	0.47	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,4,6,7,8-HpCDF	**0.75**	**J B q**	56	0.18	pg/L		03/10/17 08:24	03/14/17 09:47	1
1,2,3,4,7,8,9-HpCDF	ND		56	0.20	pg/L		03/10/17 08:24	03/14/17 09:47	1
OCDD	**3.6**	**J B q**	110	0.25	pg/L		03/10/17 08:24	03/14/17 09:47	1
OCDF	**1.6**	**J B**	110	0.30	pg/L		03/10/17 08:24	03/14/17 09:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-2,3,7,8-TCDF	*73*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-1,2,3,7,8-PeCDD	*78*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-1,2,3,6,7,8-HxCDD	*98*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-1,2,3,4,7,8-HxCDF	*76*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*
13C-OCDD	*80*		*40 - 135*	*03/10/17 08:24*	*03/14/17 09:47*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0036**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:46	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:46	1
Barium	**0.049**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:46	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:46	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:46	1
Chromium	**0.00028**	**J**	0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:46	1
Copper	**0.0053**		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:46	1
Iron	ND		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:46	1
Lead	**0.000049**	**J**	0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:46	1
Manganese	**0.00045**	**J**	0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:46	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:46	1
Selenium	ND		0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:46	1
Silver	**0.000036**	**J**	0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:46	1

Client Sample ID: MW-15A:022217

Lab Sample ID: 590-5559-6

Date Collected: 02/22/17 14:40

Matrix: Water

Date Received: 02/23/17 11:20

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:46	1
Vanadium	**0.0075**		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:46	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:46	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0036**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 12:06	1
Antimony	**0.00013**	**J**	0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 12:06	1
Barium	**0.049**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 12:06	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 12:06	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 12:06	1
Chromium	**0.00014**	**J**	0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 12:06	1
Copper	**0.0061**		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 12:06	1
Iron	ND		0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 12:06	1
Lead	**0.000035**	**J**	0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 12:06	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 12:06	1
Nickel	**0.0014**	**J**	0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 12:06	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 12:06	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 12:06	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 12:06	1
Vanadium	**0.0070**		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 12:06	1
Zinc	**0.0019**	**J**	0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 12:06	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 12:52	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:18	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:46	1
Chemical Oxygen Demand	**11**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**3.5**		1.0	0.50	mg/L			03/01/17 21:04	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**6.3**		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-9A:022217

Lab Sample ID: 590-5559-7

Date Collected: 02/22/17 13:21

Matrix: Water

Date Received: 02/23/17 11:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 17:55	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 17:55	1

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 17:55	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 17:55	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 17:55	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 17:55	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:55	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 17:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 17:55	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 17:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 17:55	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 17:55	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 17:55	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 17:55	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 17:55	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 17:55	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 17:55	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 17:55	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 17:55	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 17:55	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 17:55	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 17:55	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 17:55	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 17:55	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 17:55	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 17:55	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 17:55	1
Acetone	ND		30	14	ug/L			03/01/17 17:55	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 17:55	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 17:55	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 17:55	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 17:55	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 17:55	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 17:55	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 17:55	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 17:55	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 17:55	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 17:55	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 17:55	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 17:55	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 17:55	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 17:55	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 17:55	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 17:55	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 17:55	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 17:55	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 17:55	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 17:55	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 17:55	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 17:55	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 17:55	1

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 17:55	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 17:55	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 17:55	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 17:55	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 17:55	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 17:55	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 17:55	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 17:55	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 17:55	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 17:55	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 17:55	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 17:55	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:55	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 17:55	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 17:55	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 17:55	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 17:55	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 125*		*03/01/17 17:55*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*03/01/17 17:55*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*03/01/17 17:55*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/01/17 17:55*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*		*03/01/17 17:55*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
3 & 4 Methylphenol	ND		0.77	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 23:33	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/03/17 23:33	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/03/17 23:33	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Acenaphthylene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzo[b]fluoranthene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/03/17 23:33	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/03/17 23:33	1
Butyl benzyl phthalate	**0.64**		0.58	0.19	ug/L		02/27/17 16:44	03/03/17 23:33	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 23:33	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Di-n-butyl phthalate	**0.19**	**J**	0.39	0.13	ug/L		02/27/17 16:44	03/03/17 23:33	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/03/17 23:33	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/03/17 23:33	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Phenanthrene	ND		0.077	0.019	ug/L		02/27/17 16:44	03/03/17 23:33	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/03/17 23:33	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/03/17 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*77*		*57 - 132*	*02/27/17 16:44*	*03/03/17 23:33*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*02/27/17 16:44*	*03/03/17 23:33*	*1*
2-Fluorophenol	*67*		*50 - 113*	*02/27/17 16:44*	*03/03/17 23:33*	*1*
Nitrobenzene-d5	*73*		*59 - 120*	*02/27/17 16:44*	*03/03/17 23:33*	*1*
Phenol-d5	*71*		*52 - 120*	*02/27/17 16:44*	*03/03/17 23:33*	*1*
Terphenyl-d14	*108*		*72 - 140*	*02/27/17 16:44*	*03/03/17 23:33*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 14:48	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.029	0.0059	ug/L		02/28/17 10:48	03/01/17 00:36	1
4,4'-DDE	ND		0.020	0.0029	ug/L		02/28/17 10:48	03/01/17 00:36	1
4,4'-DDT	ND		0.029	0.0049	ug/L		02/28/17 10:48	03/01/17 00:36	1
Aldrin	ND		0.029	0.0068	ug/L		02/28/17 10:48	03/01/17 00:36	1
alpha-BHC	ND		0.029	0.0068	ug/L		02/28/17 10:48	03/01/17 00:36	1
alpha-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	03/01/17 00:36	1
beta-BHC	ND		0.049	0.012	ug/L		02/28/17 10:48	03/01/17 00:36	1
delta-BHC	ND		0.049	0.0098	ug/L		02/28/17 10:48	03/01/17 00:36	1
Dieldrin	ND		0.029	0.0049	ug/L		02/28/17 10:48	03/01/17 00:36	1
Endosulfan I	ND		0.020	0.0029	ug/L		02/28/17 10:48	03/01/17 00:36	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 00:36	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 00:36	1
Endrin	ND		0.020	0.0029	ug/L		02/28/17 10:48	03/01/17 00:36	1
Endrin aldehyde	ND		0.20	0.033	ug/L		02/28/17 10:48	03/01/17 00:36	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 00:36	1
gamma-BHC (Lindane)	ND		0.029	0.0049	ug/L		02/28/17 10:48	03/01/17 00:36	1
gamma-Chlordane	ND		0.020	0.0029	ug/L		02/28/17 10:48	03/01/17 00:36	1
Heptachlor	ND		0.020	0.0039	ug/L		02/28/17 10:48	03/01/17 00:36	1
Heptachlor epoxide	ND		0.020	0.0029	ug/L		02/28/17 10:48	03/01/17 00:36	1
Methoxychlor	ND		0.098	0.0020	ug/L		02/28/17 10:48	03/01/17 00:36	1
Toxaphene	ND		0.98	0.21	ug/L		02/28/17 10:48	03/01/17 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*99*		*22 - 150*	*02/28/17 10:48*	*03/01/17 00:36*	*1*
Tetrachloro-m-xylene	*104*		*40 - 113*	*02/28/17 10:48*	*03/01/17 00:36*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 22:20	1
PCB-1221	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 22:20	1
PCB-1232	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 22:20	1
PCB-1242	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 22:20	1
PCB-1248	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 22:20	1
PCB-1254	ND		0.098	0.061	ug/L		02/23/17 12:49	02/23/17 22:20	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	ND		0.098	0.042	ug/L		02/23/17 12:49	02/23/17 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*20 - 120*	*02/23/17 12:49*	*02/23/17 22:20*	*1*
DCB Decachlorobiphenyl (Surr)	*95*		*36 - 138*	*02/23/17 12:49*	*02/23/17 22:20*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 07:17	1
Azinphos-methyl	ND		2.4	0.16	ug/L		03/01/17 17:19	03/09/17 07:17	1
Bolstar	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 07:17	1
Chlorpyrifos	ND		1.5	0.35	ug/L		03/01/17 17:19	03/09/17 07:17	1
Coumaphos	ND		0.97	0.13	ug/L		03/01/17 17:19	03/09/17 07:17	1
Demeton, Total	ND		2.9	0.20	ug/L		03/01/17 17:19	03/09/17 07:17	1
Diazinon	ND		0.48	0.14	ug/L		03/01/17 17:19	03/09/17 07:17	1
Dichlorvos	ND		0.48	0.16	ug/L		03/01/17 17:19	03/09/17 07:17	1
Dimethoate	ND		1.5	0.43	ug/L		03/01/17 17:19	03/09/17 07:17	1
Disulfoton	ND		0.97	0.31	ug/L		03/01/17 17:19	03/09/17 07:17	1
EPN	ND		1.2	0.14	ug/L		03/01/17 17:19	03/09/17 07:17	1
Famphur	ND		0.97	0.17	ug/L		03/01/17 17:19	03/09/17 07:17	1
Fensulfothion	ND		2.4	0.53	ug/L		03/01/17 17:19	03/09/17 07:17	1
Fenthion	ND		2.4	0.15	ug/L		03/01/17 17:19	03/09/17 07:17	1
Malathion	ND		1.9	0.13	ug/L		03/01/17 17:19	03/09/17 07:17	1
Merphos	ND		4.8	0.17	ug/L		03/01/17 17:19	03/09/17 07:17	1
Methyl parathion	ND		3.9	0.14	ug/L		03/01/17 17:19	03/09/17 07:17	1
Mevinphos	ND		6.0	0.44	ug/L		03/01/17 17:19	03/09/17 07:17	1
Ethyl Parathion	ND		0.97	0.14	ug/L		03/01/17 17:19	03/09/17 07:17	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 07:17	1
Ronnel	ND		9.7	0.11	ug/L		03/01/17 17:19	03/09/17 07:17	1
Simazine	ND		9.7	0.22	ug/L		03/01/17 17:19	03/09/17 07:17	1
Sulfotepp	ND		1.5	0.16	ug/L		03/01/17 17:19	03/09/17 07:17	1
Thionazin	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 07:17	1
Tokuthion	ND		1.5	0.12	ug/L		03/01/17 17:19	03/09/17 07:17	1
Trichloronate	ND		1.5	0.23	ug/L		03/01/17 17:19	03/09/17 07:17	1
Ethoprop	ND		1.5	0.17	ug/L		03/01/17 17:19	03/09/17 07:17	1
Propazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 07:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*66*		*49 - 171*	*03/01/17 17:19*	*03/09/17 07:17*	*1*
Triphenylphosphate	*81*		*60 - 154*	*03/01/17 17:19*	*03/09/17 07:17*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/07/17 00:30	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/07/17 00:30	1
2,4-DB	ND		3.9	0.35	ug/L		02/28/17 10:10	03/07/17 00:30	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/07/17 00:30	1
Dicamba	ND		1.9	0.15	ug/L		02/28/17 10:10	03/07/17 00:30	1
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/07/17 00:30	1
MCPA	ND		390	16	ug/L		02/28/17 10:10	03/07/17 00:30	1

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		390	32	ug/L		02/28/17 10:10	03/07/17 00:30	1
Silvex (2,4,5-TP)	ND		0.97	0.16	ug/L		02/28/17 10:10	03/07/17 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*77*		*39 - 135*	*02/28/17 10:10*	*03/07/17 00:30*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.041	mg/L		02/28/17 09:16	02/28/17 17:30	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.061	mg/L		02/28/17 09:16	02/28/17 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*02/28/17 09:16*	*02/28/17 17:30*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*02/28/17 09:16*	*02/28/17 17:30*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50**		0.80	0.42	mg/L			02/23/17 14:21	1
Nitrate as N	**2.6**		0.20	0.039	mg/L			02/23/17 14:21	1
Nitrite as N	**0.15**	**J**	0.20	0.069	mg/L			02/23/17 14:21	1
Sulfate	**25**		0.50	0.13	mg/L			02/23/17 14:21	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.19	pg/L		03/10/17 11:17	03/14/17 10:33	1
2,3,7,8-TCDF	ND		9.7	0.13	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,7,8-PeCDD	ND		49	0.19	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,7,8-PeCDF	ND		49	0.14	pg/L		03/10/17 11:17	03/14/17 10:33	1
2,3,4,7,8-PeCDF	ND		49	0.15	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,4,7,8-HxCDD	ND		49	0.17	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,6,7,8-HxCDD	ND		49	0.14	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,7,8,9-HxCDD	ND		49	0.13	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,4,7,8-HxCDF	ND		49	0.12	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,6,7,8-HxCDF	ND		49	0.10	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,7,8,9-HxCDF	ND		49	0.11	pg/L		03/10/17 11:17	03/14/17 10:33	1
2,3,4,6,7,8-HxCDF	ND		49	0.11	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,4,6,7,8-HpCDD	ND		49	0.42	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,4,6,7,8-HpCDF	**0.31**	**J B q**	49	0.11	pg/L		03/10/17 11:17	03/14/17 10:33	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.13	pg/L		03/10/17 11:17	03/14/17 10:33	1
OCDD	**1.1**	**J B q**	97	0.20	pg/L		03/10/17 11:17	03/14/17 10:33	1
OCDF	**0.38**	**J B q**	97	0.25	pg/L		03/10/17 11:17	03/14/17 10:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*74*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-2,3,7,8-TCDF	*69*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-1,2,3,7,8-PeCDF	*71*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*81*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*

Client Sample ID: MW-9A:022217
Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDF	*83*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*
13C-OCDD	*78*		*40 - 135*	*03/10/17 11:17*	*03/14/17 10:33*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0023**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:50	1
Antimony	**0.00014**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:50	1
Barium	**0.046**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:50	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:50	1
Cadmium	**0.000046**	**J**	0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:50	1
Chromium	**0.00020**	**J**	0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:50	1
Copper	**0.0017**	**J**	0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:50	1
Iron	ND		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:50	1
Lead	**0.000041**	**J**	0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:50	1
Manganese	ND		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:50	1
Nickel	**0.00092**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:50	1
Selenium	**0.00033**	**J**	0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:50	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:50	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:50	1
Vanadium	**0.0069**		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:50	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:50	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 12:10	1
Antimony	**0.00011**	**J**	0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 12:10	1
Barium	**0.044**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 12:10	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 12:10	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 12:10	1
Chromium	ND		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 12:10	1
Copper	**0.0022**		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 12:10	1
Iron	**0.046**		0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 12:10	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 12:10	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 12:10	1
Nickel	**0.00091**	**J**	0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 12:10	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 12:10	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 12:10	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 12:10	1
Vanadium	**0.0060**		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 12:10	1
Zinc	**0.0027**	**J**	0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 12:10	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 12:54	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:36	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-9A:022217

Lab Sample ID: 590-5559-7

Date Collected: 02/22/17 13:21

Matrix: Water

Date Received: 02/23/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:19	1
Ammonia (as N)	**0.061**	**J**	0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:47	1
Chemical Oxygen Demand	**9.8**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**2.9**		1.0	0.50	mg/L			03/01/17 21:21	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**2.0**		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: MW-12A:022217

Lab Sample ID: 590-5559-8

Date Collected: 02/22/17 16:19

Matrix: Water

Date Received: 02/23/17 11:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 18:17	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 18:17	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 18:17	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 18:17	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 18:17	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 18:17	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 18:17	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 18:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 18:17	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 18:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 18:17	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 18:17	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 18:17	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 18:17	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 18:17	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 18:17	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 18:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 18:17	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 18:17	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 18:17	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 18:17	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 18:17	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 18:17	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 18:17	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 18:17	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 18:17	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 18:17	1
Acetone	ND		30	14	ug/L			03/01/17 18:17	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 18:17	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 18:17	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 18:17	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 18:17	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 18:17	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 18:17	1

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 18:17	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 18:17	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 18:17	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 18:17	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 18:17	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 18:17	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 18:17	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 18:17	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 18:17	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 18:17	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 18:17	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 18:17	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 18:17	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 18:17	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 18:17	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 18:17	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 18:17	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 18:17	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 18:17	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 18:17	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 18:17	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 18:17	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 18:17	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 18:17	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 18:17	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 18:17	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 18:17	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 18:17	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 18:17	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 18:17	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 18:17	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 18:17	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 18:17	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 18:17	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 125*		*03/01/17 18:17*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*03/01/17 18:17*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 120*		*03/01/17 18:17*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/01/17 18:17*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*		*03/01/17 18:17*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-8
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
1,2-Dichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
1,3-Dichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
1,4-Dichlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
1-Methylnaphthalene	ND		0.059	0.029	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,4-Dichlorophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,4-Dimethylphenol	ND		2.0	0.29	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,4-Dinitrotoluene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2,6-Dinitrotoluene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2-Chloronaphthalene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
2-Chlorophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
2-Methylphenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2-Nitroaniline	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
2-Nitrophenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
3 & 4 Methylphenol	ND		0.78	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
3,3'-Dichlorobenzidine	ND		2.0	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/03/17 23:57	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.98	ug/L		02/27/17 16:44	03/03/17 23:57	1
4-Bromophenyl phenyl ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
4-Chloro-3-methylphenol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
4-Chloroaniline	ND	*	0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
4-Chlorophenyl phenyl ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
4-Nitroaniline	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
4-Nitrophenol	ND		2.9	0.98	ug/L		02/27/17 16:44	03/03/17 23:57	1
Acenaphthene	ND		0.098	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Acenaphthylene	ND		0.078	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Anthracene	ND		0.039	0.0098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzo[a]anthracene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzo[a]pyrene	ND		0.039	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzo[b]fluoranthene	ND		0.078	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzo[g,h,i]perylene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzo[k]fluoranthene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzoic acid	ND		2.9	0.59	ug/L		02/27/17 16:44	03/03/17 23:57	1
Benzyl alcohol	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
bis (2-chloroisopropyl) ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Bis(2-chloroethoxy)methane	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Bis(2-chloroethyl)ether	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.2	ug/L		02/27/17 16:44	03/03/17 23:57	1
Butyl benzyl phthalate	ND		0.59	0.20	ug/L		02/27/17 16:44	03/03/17 23:57	1
Carbazole	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/03/17 23:57	1
Dibenz(a,h)anthracene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Dibenzofuran	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Diethyl phthalate	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Dimethyl phthalate	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-8
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	**0.14**	**J**	0.39	0.13	ug/L		02/27/17 16:44	03/03/17 23:57	1
Di-n-octyl phthalate	ND		0.39	0.18	ug/L		02/27/17 16:44	03/03/17 23:57	1
Fluoranthene	ND		0.049	0.013	ug/L		02/27/17 16:44	03/03/17 23:57	1
Fluorene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Hexachlorobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Hexachlorobutadiene	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Hexachlorocyclopentadiene	ND		2.0	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Hexachloroethane	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Indeno[1,2,3-cd]pyrene	ND		0.059	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Isophorone	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Naphthalene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Nitrobenzene	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
N-Nitrosodi-n-propylamine	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
N-Nitrosodiphenylamine	ND		0.39	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Pentachlorophenol	ND		0.68	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Phenanthrene	ND		0.078	0.020	ug/L		02/27/17 16:44	03/03/17 23:57	1
Phenol	ND		0.59	0.098	ug/L		02/27/17 16:44	03/03/17 23:57	1
Pyrene	ND		0.059	0.013	ug/L		02/27/17 16:44	03/03/17 23:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*63*		*57 - 132*	*02/27/17 16:44*	*03/03/17 23:57*	*1*
2-Fluorobiphenyl	*69*		*50 - 120*	*02/27/17 16:44*	*03/03/17 23:57*	*1*
2-Fluorophenol	*52*		*50 - 113*	*02/27/17 16:44*	*03/03/17 23:57*	*1*
Nitrobenzene-d5	*63*		*59 - 120*	*02/27/17 16:44*	*03/03/17 23:57*	*1*
Phenol-d5	*57*		*52 - 120*	*02/27/17 16:44*	*03/03/17 23:57*	*1*
Terphenyl-d14	*91*		*72 - 140*	*02/27/17 16:44*	*03/03/17 23:57*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 15:37	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/28/17 10:48	03/01/17 00:55	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 00:55	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	03/01/17 00:55	1
Aldrin	ND		0.030	0.0070	ug/L		02/28/17 10:48	03/01/17 00:55	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/28/17 10:48	03/01/17 00:55	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 00:55	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	03/01/17 00:55	1
delta-BHC	ND		0.050	0.010	ug/L		02/28/17 10:48	03/01/17 00:55	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	03/01/17 00:55	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 00:55	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 00:55	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 00:55	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 00:55	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	03/01/17 00:55	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 00:55	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	03/01/17 00:55	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 00:55	1

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
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Lab Sample ID: 590-5559-8
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	03/01/17 00:55	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 00:55	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/28/17 10:48	03/01/17 00:55	1
Toxaphene	ND		1.0	0.22	ug/L		02/28/17 10:48	03/01/17 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*85*		*22 - 150*	*02/28/17 10:48*	*03/01/17 00:55*	*1*
Tetrachloro-m-xylene	*104*		*40 - 113*	*02/28/17 10:48*	*03/01/17 00:55*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 22:41	1
PCB-1221	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 22:41	1
PCB-1232	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 22:41	1
PCB-1242	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 22:41	1
PCB-1248	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 22:41	1
PCB-1254	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 22:41	1
PCB-1260	ND		0.10	0.044	ug/L		02/23/17 12:49	02/23/17 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*20 - 120*	*02/23/17 12:49*	*02/23/17 22:41*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*36 - 138*	*02/23/17 12:49*	*02/23/17 22:41*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 07:48	1
Azinphos-methyl	ND		2.4	0.16	ug/L		03/01/17 17:19	03/09/17 07:48	1
Bolstar	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 07:48	1
Chlorpyrifos	ND		1.5	0.35	ug/L		03/01/17 17:19	03/09/17 07:48	1
Coumaphos	ND		0.97	0.13	ug/L		03/01/17 17:19	03/09/17 07:48	1
Demeton, Total	ND		2.9	0.20	ug/L		03/01/17 17:19	03/09/17 07:48	1
Diazinon	ND		0.48	0.14	ug/L		03/01/17 17:19	03/09/17 07:48	1
Dichlorvos	ND		0.48	0.16	ug/L		03/01/17 17:19	03/09/17 07:48	1
Dimethoate	ND		1.5	0.44	ug/L		03/01/17 17:19	03/09/17 07:48	1
Disulfoton	ND		0.97	0.31	ug/L		03/01/17 17:19	03/09/17 07:48	1
EPN	ND		1.2	0.14	ug/L		03/01/17 17:19	03/09/17 07:48	1
Famphur	ND		0.97	0.17	ug/L		03/01/17 17:19	03/09/17 07:48	1
Fensulfothion	ND		2.4	0.53	ug/L		03/01/17 17:19	03/09/17 07:48	1
Fenthion	ND		2.4	0.15	ug/L		03/01/17 17:19	03/09/17 07:48	1
Malathion	ND		1.9	0.13	ug/L		03/01/17 17:19	03/09/17 07:48	1
Merphos	ND		4.8	0.17	ug/L		03/01/17 17:19	03/09/17 07:48	1
Methyl parathion	ND		3.9	0.14	ug/L		03/01/17 17:19	03/09/17 07:48	1
Mevinphos	ND		6.0	0.45	ug/L		03/01/17 17:19	03/09/17 07:48	1
Ethyl Parathion	ND		0.97	0.14	ug/L		03/01/17 17:19	03/09/17 07:48	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 07:48	1
Ronnel	ND		9.7	0.11	ug/L		03/01/17 17:19	03/09/17 07:48	1
Simazine	ND		9.7	0.22	ug/L		03/01/17 17:19	03/09/17 07:48	1
Sulfotepp	ND		1.5	0.16	ug/L		03/01/17 17:19	03/09/17 07:48	1
Thionazin	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 07:48	1
Tokuthion	ND		1.6	0.12	ug/L		03/01/17 17:19	03/09/17 07:48	1

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-8
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	ND		1.5	0.23	ug/L		03/01/17 17:19	03/09/17 07:48	1
Ethoprop	ND		1.5	0.17	ug/L		03/01/17 17:19	03/09/17 07:48	1
Propazine	ND		9.7	0.28	ug/L		03/01/17 17:19	03/09/17 07:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*54*		*49 - 171*	*03/01/17 17:19*	*03/09/17 07:48*	*1*
Triphenylphosphate	*79*		*60 - 154*	*03/01/17 17:19*	*03/09/17 07:48*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/07/17 01:16	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/07/17 01:16	1
2,4-DB	ND		3.9	0.35	ug/L		02/28/17 10:10	03/07/17 01:16	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/07/17 01:16	1
Dicamba	ND		1.9	0.15	ug/L		02/28/17 10:10	03/07/17 01:16	1
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/07/17 01:16	1
MCPA	**17**	**J p**	390	16	ug/L		02/28/17 10:10	03/07/17 01:16	1
MCPP	ND		390	32	ug/L		02/28/17 10:10	03/07/17 01:16	1
Silvex (2,4,5-TP)	ND		0.97	0.16	ug/L		02/28/17 10:10	03/07/17 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*86*		*39 - 135*	*02/28/17 10:10*	*03/07/17 01:16*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 17:47	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.064	mg/L		02/28/17 09:16	02/28/17 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*02/28/17 09:16*	*02/28/17 17:47*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*02/28/17 09:16*	*02/28/17 17:47*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.8**		0.80	0.42	mg/L			02/23/17 14:33	1
Nitrate as N	**4.1**		0.20	0.039	mg/L			02/23/17 14:33	1
Nitrite as N	ND		0.20	0.069	mg/L			02/23/17 14:33	1
Sulfate	**30**		0.50	0.13	mg/L			02/23/17 14:33	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.17	pg/L		03/10/17 11:17	03/14/17 11:19	1
2,3,7,8-TCDF	ND		9.7	0.11	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,7,8-PeCDD	ND		48	0.19	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,7,8-PeCDF	ND		48	0.14	pg/L		03/10/17 11:17	03/14/17 11:19	1
2,3,4,7,8-PeCDF	ND		48	0.14	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,4,7,8-HxCDD	ND		48	0.17	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,6,7,8-HxCDD	ND		48	0.14	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,7,8,9-HxCDD	ND		48	0.13	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,4,7,8-HxCDF	ND		48	0.20	pg/L		03/10/17 11:17	03/14/17 11:19	1

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-8
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		48	0.17	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,7,8,9-HxCDF	ND		48	0.19	pg/L		03/10/17 11:17	03/14/17 11:19	1
2,3,4,6,7,8-HxCDF	ND		48	0.19	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,4,6,7,8-HpCDD	**0.87**	**J q**	48	0.37	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,4,6,7,8-HpCDF	**0.31**	**J B q**	48	0.12	pg/L		03/10/17 11:17	03/14/17 11:19	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.13	pg/L		03/10/17 11:17	03/14/17 11:19	1
OCDD	**7.9**	**J B**	97	0.21	pg/L		03/10/17 11:17	03/14/17 11:19	1
OCDF	**0.71**	**J B**	97	0.26	pg/L		03/10/17 11:17	03/14/17 11:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-1,2,3,7,8-PeCDD	*89*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-1,2,3,7,8-PeCDF	*85*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*110*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*92*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*
13C-OCDD	*88*		*40 - 135*	*03/10/17 11:17*	*03/14/17 11:19*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:55	1
Antimony	**0.00010**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:55	1
Barium	**0.016**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:55	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:55	1
Cadmium	**0.000055**	**J**	0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:55	1
Chromium	**0.0025**		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:55	1
Copper	**0.0013**	**J**	0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:55	1
Iron	**1.8**		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:55	1
Lead	**0.0015**		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:55	1
Manganese	**0.038**		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:55	1
Nickel	**0.0011**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:55	1
Selenium	**0.00035**	**J**	0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:55	1
Silver	**0.00077**		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:55	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:55	1
Vanadium	**0.013**		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:55	1
Zinc	**0.018**		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:55	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0010**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 12:15	1
Antimony	ND		0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 12:15	1
Barium	**0.0065**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 12:15	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 12:15	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 12:15	1
Chromium	ND		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 12:15	1
Copper	ND		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 12:15	1
Iron	**0.0069**	**J**	0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 12:15	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 12:15	1
Manganese	**0.00070**	**J**	0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 12:15	1

Client Sample ID: MW-12A:022217

Lab Sample ID: 590-5559-8

Date Collected: 02/22/17 16:19

Matrix: Water

Date Received: 02/23/17 11:00

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 12:15	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 12:15	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 12:15	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 12:15	1
Vanadium	**0.0089**		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 12:15	1
Zinc	**0.0037**	**J**	0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 12:15	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 13:01	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:20	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:48	1
Chemical Oxygen Demand	**9.0**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**2.6**		1.0	0.50	mg/L			03/01/17 21:38	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Client Sample ID: Dup:022217

Lab Sample ID: 590-5559-9

Date Collected: 02/22/17 08:00

Matrix: Water

Date Received: 02/23/17 11:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 19:00	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 19:00	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 19:00	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 19:00	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 19:00	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 19:00	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 19:00	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 19:00	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 19:00	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 19:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 19:00	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 19:00	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 19:00	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 19:00	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 19:00	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 19:00	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 19:00	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 19:00	1

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 19:00	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 19:00	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 19:00	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 19:00	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 19:00	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 19:00	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 19:00	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 19:00	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 19:00	1
Acetone	ND		30	14	ug/L			03/01/17 19:00	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 19:00	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 19:00	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 19:00	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 19:00	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 19:00	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 19:00	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 19:00	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 19:00	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 19:00	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 19:00	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 19:00	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 19:00	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 19:00	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 19:00	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 19:00	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 19:00	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 19:00	1
Dichlorofluoromethane	**0.30**	**J B**	1.0	0.30	ug/L			03/01/17 19:00	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 19:00	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 19:00	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 19:00	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 19:00	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 19:00	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 19:00	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 19:00	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 19:00	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 19:00	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 19:00	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 19:00	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 19:00	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 19:00	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 19:00	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 19:00	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 19:00	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 19:00	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 19:00	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 19:00	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 19:00	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 19:00	1

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 19:00	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*		*03/01/17 19:00*	*1*
4-Bromofluorobenzene (Surr)	*106*		*69 - 120*		*03/01/17 19:00*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*03/01/17 19:00*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*03/01/17 19:00*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*03/01/17 19:00*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
3 & 4 Methylphenol	ND		0.78	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/04/17 00:22	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/04/17 00:22	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/04/17 00:22	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Acenaphthylene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Benzo[b]fluoranthene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/04/17 00:22	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Bis(2-ethylhexyl) phthalate	**1.9**	**J ***	2.9	1.1	ug/L		02/27/17 16:44	03/04/17 00:22	1
Butyl benzyl phthalate	ND		0.58	0.19	ug/L		02/27/17 16:44	03/04/17 00:22	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/04/17 00:22	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Di-n-butyl phthalate	**0.13**	**J**	0.39	0.13	ug/L		02/27/17 16:44	03/04/17 00:22	1
Di-n-octyl phthalate	ND		0.39	0.17	ug/L		02/27/17 16:44	03/04/17 00:22	1
Fluoranthene	ND		0.048	0.013	ug/L		02/27/17 16:44	03/04/17 00:22	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Phenanthrene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/04/17 00:22	1
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:22	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/04/17 00:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*57 - 132*	*02/27/17 16:44*	*03/04/17 00:22*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*02/27/17 16:44*	*03/04/17 00:22*	*1*
2-Fluorophenol	*75*		*50 - 113*	*02/27/17 16:44*	*03/04/17 00:22*	*1*
Nitrobenzene-d5	*79*		*59 - 120*	*02/27/17 16:44*	*03/04/17 00:22*	*1*
Phenol-d5	*77*		*52 - 120*	*02/27/17 16:44*	*03/04/17 00:22*	*1*
Terphenyl-d14	*104*		*72 - 140*	*02/27/17 16:44*	*03/04/17 00:22*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 16:01	1

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/28/17 10:48	03/01/17 01:14	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 01:14	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	03/01/17 01:14	1
Aldrin	ND		0.030	0.0069	ug/L		02/28/17 10:48	03/01/17 01:14	1
alpha-BHC	ND		0.030	0.0069	ug/L		02/28/17 10:48	03/01/17 01:14	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 01:14	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	03/01/17 01:14	1
delta-BHC	ND		0.050	0.0099	ug/L		02/28/17 10:48	03/01/17 01:14	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	03/01/17 01:14	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 01:14	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 01:14	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 01:14	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 01:14	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	03/01/17 01:14	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	03/01/17 01:14	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	03/01/17 01:14	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 01:14	1
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	03/01/17 01:14	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	03/01/17 01:14	1
Methoxychlor	ND		0.099	0.0020	ug/L		02/28/17 10:48	03/01/17 01:14	1
Toxaphene	ND		0.99	0.22	ug/L		02/28/17 10:48	03/01/17 01:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*22 - 150*	*02/28/17 10:48*	*03/01/17 01:14*	*1*
Tetrachloro-m-xylene	*103*		*40 - 113*	*02/28/17 10:48*	*03/01/17 01:14*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.096	0.059	ug/L		02/23/17 12:49	02/23/17 23:22	1
PCB-1221	ND		0.096	0.059	ug/L		02/23/17 12:49	02/23/17 23:22	1
PCB-1232	ND		0.096	0.059	ug/L		02/23/17 12:49	02/23/17 23:22	1
PCB-1242	ND		0.096	0.059	ug/L		02/23/17 12:49	02/23/17 23:22	1
PCB-1248	ND		0.096	0.059	ug/L		02/23/17 12:49	02/23/17 23:22	1
PCB-1254	ND		0.096	0.059	ug/L		02/23/17 12:49	02/23/17 23:22	1
PCB-1260	ND		0.096	0.042	ug/L		02/23/17 12:49	02/23/17 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*20 - 120*	*02/23/17 12:49*	*02/23/17 23:22*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*36 - 138*	*02/23/17 12:49*	*02/23/17 23:22*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.7	0.29	ug/L		03/01/17 17:19	03/09/17 08:20	1
Azinphos-methyl	ND		2.4	0.16	ug/L		03/01/17 17:19	03/09/17 08:20	1
Bolstar	ND		0.97	0.31	ug/L		03/01/17 17:19	03/09/17 08:20	1
Chlorpyrifos	ND		1.5	0.35	ug/L		03/01/17 17:19	03/09/17 08:20	1
Coumaphos	ND		0.97	0.13	ug/L		03/01/17 17:19	03/09/17 08:20	1
Demeton, Total	ND		2.9	0.20	ug/L		03/01/17 17:19	03/09/17 08:20	1
Diazinon	ND		0.49	0.14	ug/L		03/01/17 17:19	03/09/17 08:20	1
Dichlorvos	ND		0.49	0.16	ug/L		03/01/17 17:19	03/09/17 08:20	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.44	ug/L		03/01/17 17:19	03/09/17 08:20	1
Disulfoton	ND		0.97	0.31	ug/L		03/01/17 17:19	03/09/17 08:20	1
EPN	ND		1.2	0.14	ug/L		03/01/17 17:19	03/09/17 08:20	1
Famphur	ND		0.97	0.17	ug/L		03/01/17 17:19	03/09/17 08:20	1
Fensulfothion	ND		2.4	0.53	ug/L		03/01/17 17:19	03/09/17 08:20	1
Fenthion	ND		2.4	0.15	ug/L		03/01/17 17:19	03/09/17 08:20	1
Malathion	ND		1.9	0.13	ug/L		03/01/17 17:19	03/09/17 08:20	1
Merphos	ND		4.9	0.17	ug/L		03/01/17 17:19	03/09/17 08:20	1
Methyl parathion	ND		3.9	0.14	ug/L		03/01/17 17:19	03/09/17 08:20	1
Mevinphos	ND		6.0	0.45	ug/L		03/01/17 17:19	03/09/17 08:20	1
Ethyl Parathion	ND		0.97	0.14	ug/L		03/01/17 17:19	03/09/17 08:20	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/09/17 08:20	1
Ronnel	ND		9.7	0.11	ug/L		03/01/17 17:19	03/09/17 08:20	1
Simazine	ND		9.7	0.22	ug/L		03/01/17 17:19	03/09/17 08:20	1
Sulfotepp	ND		1.5	0.16	ug/L		03/01/17 17:19	03/09/17 08:20	1
Thionazin	ND		0.97	0.30	ug/L		03/01/17 17:19	03/09/17 08:20	1
Tokuthion	ND		1.6	0.12	ug/L		03/01/17 17:19	03/09/17 08:20	1
Trichloronate	ND		1.5	0.24	ug/L		03/01/17 17:19	03/09/17 08:20	1
Ethoprop	ND		1.5	0.17	ug/L		03/01/17 17:19	03/09/17 08:20	1
Propazine	ND		9.7	0.29	ug/L		03/01/17 17:19	03/09/17 08:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*66*		*49 - 171*	*03/01/17 17:19*	*03/09/17 08:20*	*1*
Triphenylphosphate	*79*		*60 - 154*	*03/01/17 17:19*	*03/09/17 08:20*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.97	0.18	ug/L		02/28/17 10:10	03/07/17 01:39	1
2,4-D	ND		3.9	0.20	ug/L		02/28/17 10:10	03/07/17 01:39	1
2,4-DB	ND		3.9	0.35	ug/L		02/28/17 10:10	03/07/17 01:39	1
Dalapon	ND		1.9	0.88	ug/L		02/28/17 10:10	03/07/17 01:39	1
Dicamba	ND		1.9	0.15	ug/L		02/28/17 10:10	03/07/17 01:39	1
Dichlorprop	ND		3.9	0.63	ug/L		02/28/17 10:10	03/07/17 01:39	1
MCPA	**19**	**J p**	390	17	ug/L		02/28/17 10:10	03/07/17 01:39	1
MCPP	ND		390	32	ug/L		02/28/17 10:10	03/07/17 01:39	1
Silvex (2,4,5-TP)	ND		0.97	0.17	ug/L		02/28/17 10:10	03/07/17 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*39 - 135*	*02/28/17 10:10*	*03/07/17 01:39*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 18:04	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*02/28/17 09:16*	*02/28/17 18:04*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*02/28/17 09:16*	*02/28/17 18:04*	*1*

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.4**		0.80	0.42	mg/L			02/23/17 14:45	1
Nitrate as N	**4.0**		0.20	0.039	mg/L			02/23/17 14:45	1
Nitrite as N	ND		0.20	0.069	mg/L			02/23/17 14:45	1
Sulfate	**27**		0.50	0.13	mg/L			02/23/17 14:45	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
2,3,7,8-TCDF	**0.36**	**J**	9.7	0.14	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,7,8-PeCDD	ND		49	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,7,8-PeCDF	ND		49	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
2,3,4,7,8-PeCDF	ND		49	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,4,7,8-HxCDD	ND		49	0.18	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,6,7,8-HxCDD	ND		49	0.15	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,7,8,9-HxCDD	ND		49	0.13	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,4,7,8-HxCDF	ND		49	0.20	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,6,7,8-HxCDF	ND		49	0.17	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,7,8,9-HxCDF	ND		49	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
2,3,4,6,7,8-HxCDF	**0.31**	**J q**	49	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,4,6,7,8-HpCDD	**2.0**	**J**	49	0.40	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,4,6,7,8-HpCDF	**1.6**	**J B**	49	0.17	pg/L		03/10/17 11:17	03/14/17 12:05	1
1,2,3,4,7,8,9-HpCDF	**0.32**	**J q**	49	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
OCDD	**7.9**	**J B**	97	0.19	pg/L		03/10/17 11:17	03/14/17 12:05	1
OCDF	**2.8**	**J B q**	97	0.23	pg/L		03/10/17 11:17	03/14/17 12:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*86*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-2,3,7,8-TCDF	*87*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-1,2,3,7,8-PeCDD	*98*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-1,2,3,7,8-PeCDF	*90*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-1,2,3,6,7,8-HxCDD	*105*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*95*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*96*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*
13C-OCDD	*89*		*40 - 135*	*03/10/17 11:17*	*03/14/17 12:05*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 16:59	1
Antimony	ND		0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 16:59	1
Barium	**0.015**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 16:59	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 16:59	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 16:59	1
Chromium	**0.0011**		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 16:59	1
Copper	**0.0013**	**J**	0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 16:59	1
Iron	**1.7**		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 16:59	1
Lead	**0.0014**		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 16:59	1
Manganese	**0.037**		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 16:59	1
Nickel	**0.0010**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 16:59	1
Selenium	ND		0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 16:59	1
Silver	**0.00074**		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 16:59	1

Client Sample ID: Dup:022217
Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 16:59	1
Vanadium	**0.012**		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 16:59	1
Zinc	**0.018**		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 16:59	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0010**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 12:19	1
Antimony	ND		0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 12:19	1
Barium	**0.0066**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 12:19	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 12:19	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 12:19	1
Chromium	ND		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 12:19	1
Copper	ND		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 12:19	1
Iron	**0.0096**	**J**	0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 12:19	1
Lead	**0.000051**	**J**	0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 12:19	1
Manganese	**0.00068**	**J**	0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 12:19	1
Nickel	ND		0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 12:19	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 12:19	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 12:19	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 12:19	1
Vanadium	**0.0089**		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 12:19	1
Zinc	**0.0066**	**J**	0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 12:19	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 13:03	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:31	03/01/17 15:21	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:49	1
Chemical Oxygen Demand	**9.0**	**J**	20	4.0	mg/L			02/28/17 16:50	1
Total Organic Carbon	**2.6**		1.0	0.50	mg/L			03/01/17 21:54	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1
Escherichia coli	ND		1.0	1.0	MPN/100mL			02/23/17 11:50	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 10:56	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 10:56	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 10:56	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 10:56	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 10:56	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 10:56	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 10:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 10:56	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 10:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 10:56	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 10:56	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 10:56	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 10:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 10:56	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 10:56	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 10:56	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 10:56	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 10:56	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 10:56	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 10:56	1
Acetone	ND		30	14	ug/L			03/01/17 10:56	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 10:56	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 10:56	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 10:56	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 10:56	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 10:56	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 10:56	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 10:56	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 10:56	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 10:56	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 10:56	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 10:56	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 10:56	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 10:56	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 10:56	1
Dichlorofluoromethane	0.341	J	1.0	0.30	ug/L			03/01/17 10:56	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 10:56	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			03/01/17 10:56	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 10:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 10:56	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 10:56	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 10:56	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 10:56	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 10:56	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 10:56	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 10:56	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 10:56	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 10:56	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 10:56	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 10:56	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*03/01/17 10:56*	*1*
4-Bromofluorobenzene (Surr)	*108*		*69 - 120*		*03/01/17 10:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/01/17 10:56*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.77		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	71 - 130
1,1,2,2-Tetrachloroethane	10.0	9.74		ug/L		97	66 - 122
1,1,2-Trichloroethane	10.0	9.86		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	10.1		ug/L		101	70 - 127
1,1-Dichloroethane	10.0	9.77		ug/L		98	79 - 121
1,1-Dichloroethene	10.0	9.57		ug/L		96	69 - 127
1,1-Dichloropropene	10.0	9.83		ug/L		98	76 - 125
1,2,3-Trichlorobenzene	10.0	9.57		ug/L		96	60 - 125
1,2,3-Trichloropropane	10.0	9.70		ug/L		97	60 - 124
1,2,4-Trichlorobenzene	10.0	9.75		ug/L		98	66 - 124
1,2,4-Trimethylbenzene	10.0	10.2		ug/L		102	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.91	J	ug/L		89	36 - 140
1,2-Dichlorobenzene	10.0	9.95		ug/L		99	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	9.74		ug/L		97	76 - 121
1,3,5-Trimethylbenzene	10.0	10.2		ug/L		102	75 - 122
1,3-Dichlorobenzene	10.0	10.0		ug/L		100	77 - 120
1,3-Dichloropropane	10.0	10.1		ug/L		101	75 - 120
1,4-Dichlorobenzene	10.0	9.38		ug/L		94	77 - 121
2,2-Dichloropropane	10.0	11.1		ug/L		111	49 - 147
2-Butanone (MEK)	50.0	51.5		ug/L		103	40 - 150
2-Chlorotoluene	10.0	9.80		ug/L		98	75 - 121
2-Hexanone	50.0	45.7		ug/L		91	46 - 146
4-Chlorotoluene	10.0	10.4		ug/L		104	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	47.0		ug/L		94	60 - 127
Acetone	50.0	46.9		ug/L		94	20 - 150
Benzene	10.0	9.81		ug/L		98	80 - 120
Bromobenzene	10.0	9.65		ug/L		97	74 - 121
Bromochloromethane	10.0	9.93		ug/L		99	70 - 126
Bromodichloromethane	10.0	9.74		ug/L		97	67 - 125
Bromoform	10.0	9.76		ug/L		98	60 - 122
Bromomethane	10.0	10.2		ug/L		102	45 - 150
Carbon disulfide	10.0	9.59		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.95		ug/L		99	68 - 134
Chlorobenzene	10.0	9.97		ug/L		100	79 - 125
Chloroethane	10.0	10.3		ug/L		103	48 - 150
Chloroform	10.0	10.0		ug/L		100	73 - 126
Chloromethane	10.0	9.03		ug/L		90	51 - 150
cis-1,2-Dichloroethene	10.0	9.74		ug/L		97	76 - 121
cis-1,3-Dichloropropene	10.0	9.04		ug/L		90	72 - 120
Dibromochloromethane	10.0	10.3		ug/L		103	72 - 120
Dibromomethane	10.0	10.3		ug/L		103	71 - 120
Dichlorodifluoromethane	10.0	8.24		ug/L		82	32 - 150
Dichlorofluoromethane	10.0	9.98		ug/L		100	60 - 140
Ethylbenzene	10.0	9.95		ug/L		99	80 - 120
Hexachlorobutadiene	10.0	9.76		ug/L		98	62 - 132
Hexane	10.0	9.50		ug/L		95	68 - 125
Isopropylbenzene	10.0	9.58		ug/L		96	77 - 123
m,p-Xylene	10.0	9.48		ug/L		95	80 - 120
Methyl tert-butyl ether	10.0	9.43		ug/L		94	71 - 128
Methylene Chloride	10.0	9.67		ug/L		97	20 - 150
Naphthalene	10.0	8.71		ug/L		87	63 - 124
n-Butylbenzene	10.0	9.50		ug/L		95	71 - 120
N-Propylbenzene	10.0	9.61		ug/L		96	76 - 120
o-Xylene	10.0	9.48		ug/L		95	80 - 120
p-Isopropyltoluene	10.0	9.47		ug/L		95	77 - 120
sec-Butylbenzene	10.0	9.96		ug/L		100	74 - 121
Styrene	10.0	9.61		ug/L		96	73 - 120
tert-Butylbenzene	10.0	9.42		ug/L		94	79 - 120
Tetrachloroethene	10.0	10.2		ug/L		102	71 - 132
Toluene	10.0	10.0		ug/L		100	80 - 123
trans-1,2-Dichloroethene	10.0	9.53		ug/L		95	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	70 - 121
Trichloroethene	10.0	10.2		ug/L		102	75 - 129
Trichlorofluoromethane	10.0	9.70		ug/L		97	60 - 140
Vinyl chloride	10.0	9.31		ug/L		93	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-10911/5
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10911/1004
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	919		ug/L		92	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		02/27/17 16:44	03/03/17 16:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthene	ND		0.10	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Anthracene	ND		0.040	0.010	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzoic acid	ND		3.0	0.60	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		02/27/17 16:44	03/03/17 16:12	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		02/27/17 16:44	03/03/17 16:12	1
Carbazole	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Chrysene	ND		0.040	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluoranthene	ND		0.050	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluorene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Isophorone	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Naphthalene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pentachlorophenol	ND		0.70	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenanthrene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pyrene	ND		0.060	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*57 - 132*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Nitrobenzene-d5	*81*		*59 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Phenol-d5	*85*		*52 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Terphenyl-d14	*101*		*72 - 140*	*02/27/17 16:44*	*03/03/17 16:12*	*1*

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.91		ug/L		95	40 - 115
1,2-Dichlorobenzene	2.00	1.79		ug/L		89	44 - 119
1,3-Dichlorobenzene	2.00	1.71		ug/L		86	34 - 116
1,4-Dichlorobenzene	2.00	1.70		ug/L		85	40 - 118
1-Methylnaphthalene	2.00	1.95		ug/L		97	54 - 119
2,4,5-Trichlorophenol	2.00	1.75		ug/L		88	56 - 122
2,4,6-Trichlorophenol	2.00	1.96		ug/L		98	55 - 134
2,4-Dichlorophenol	2.00	2.06		ug/L		103	50 - 125
2,4-Dimethylphenol	2.00	1.66	J	ug/L		83	20 - 106
2,4-Dinitrophenol	4.00	1.72	J	ug/L		43	24 - 139
2,4-Dinitrotoluene	2.00	1.86		ug/L		93	40 - 143
2,6-Dinitrotoluene	2.00	1.86		ug/L		93	45 - 134
2-Chloronaphthalene	2.00	1.99		ug/L		100	55 - 125
2-Chlorophenol	2.00	1.97		ug/L		99	57 - 125
2-Methylnaphthalene	2.00	2.01		ug/L		101	56 - 117
2-Methylphenol	2.00	1.81		ug/L		91	53 - 118
2-Nitroaniline	2.00	1.81		ug/L		90	58 - 124
2-Nitrophenol	2.00	1.56		ug/L		78	20 - 150
3 & 4 Methylphenol	2.00	1.92		ug/L		96	54 - 112
3,3'-Dichlorobenzidine	4.00	2.65		ug/L		66	20 - 121
3-Nitroaniline	2.00	1.43		ug/L		71	22 - 124
4,6-Dinitro-2-methylphenol	4.00	2.00	J	ug/L		50	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	2.07		ug/L		104	62 - 132
4-Chloro-3-methylphenol	2.00	1.91		ug/L		95	56 - 133
4-Chloroaniline	2.00	0.422		ug/L		21	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.99		ug/L		99	59 - 125
4-Nitroaniline	2.00	1.74		ug/L		87	40 - 118
4-Nitrophenol	4.00	3.75		ug/L		94	20 - 150
Acenaphthene	2.00	1.84		ug/L		92	55 - 113
Acenaphthylene	2.00	1.80		ug/L		90	24 - 135
Anthracene	2.00	1.83		ug/L		91	20 - 125
Benzo[a]anthracene	2.00	2.03		ug/L		101	49 - 115
Benzo[a]pyrene	2.00	1.54		ug/L		77	20 - 115
Benzo[b]fluoranthene	2.00	2.07		ug/L		103	63 - 129
Benzo[g,h,i]perylene	2.00	1.83		ug/L		91	58 - 127
Benzo[k]fluoranthene	2.00	1.91		ug/L		96	60 - 134
Benzoic acid	4.00	1.95	J	ug/L		49	20 - 150
Benzyl alcohol	2.00	2.01		ug/L		100	52 - 124
bis (2-chloroisopropyl) ether	2.00	2.01		ug/L		100	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.98		ug/L		99	59 - 125
Bis(2-chloroethyl)ether	2.00	1.91		ug/L		95	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.26	J	ug/L		113	22 - 150
Butyl benzyl phthalate	2.00	2.38		ug/L		119	46 - 150
Carbazole	2.00	2.34		ug/L		117	68 - 142
Chrysene	2.00	2.03		ug/L		101	57 - 131
Dibenz(a,h)anthracene	2.00	1.51		ug/L		76	56 - 124
Dibenzofuran	2.00	1.97		ug/L		98	60 - 125
Diethyl phthalate	2.00	2.05		ug/L		102	60 - 134
Dimethyl phthalate	2.00	2.14		ug/L		107	65 - 134
Di-n-butyl phthalate	2.00	2.47		ug/L		123	67 - 140
Di-n-octyl phthalate	2.00	2.03		ug/L		102	55 - 150
Fluoranthene	2.00	2.25		ug/L		113	70 - 135
Fluorene	2.00	1.95		ug/L		98	57 - 125
Hexachlorobenzene	2.00	1.84		ug/L		92	55 - 135
Hexachlorobutadiene	2.00	1.83		ug/L		91	25 - 125
Hexachlorocyclopentadiene	2.00	0.793	J	ug/L		40	20 - 110
Hexachloroethane	2.00	1.65		ug/L		82	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.81		ug/L		91	54 - 124
Isophorone	2.00	1.91		ug/L		95	64 - 125
Naphthalene	2.00	1.88		ug/L		94	56 - 119
Nitrobenzene	2.00	1.85		ug/L		92	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.77		ug/L		89	54 - 120
N-Nitrosodiphenylamine	2.00	1.68		ug/L		84	40 - 124
Pentachlorophenol	4.00	2.30		ug/L		58	30 - 122
Phenanthrene	2.00	2.00		ug/L		100	57 - 125
Phenol	2.00	1.85		ug/L		93	53 - 113
Pyrene	2.00	2.24		ug/L		112	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*85*		*59 - 120*
Phenol-d5	*88*		*52 - 120*
Terphenyl-d14	*102*		*72 - 140*

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.91		ug/L		95	40 - 115	0	20
1,2-Dichlorobenzene			2.00	1.85		ug/L		92	44 - 119	3	20
1,3-Dichlorobenzene			2.00	1.82		ug/L		91	34 - 116	6	29
1,4-Dichlorobenzene			2.00	1.78		ug/L		89	40 - 118	5	20
1-Methylnaphthalene			2.00	1.92		ug/L		96	54 - 119	1	20
2,4,5-Trichlorophenol			2.00	1.76		ug/L		88	56 - 122	1	20
2,4,6-Trichlorophenol			2.00	1.91		ug/L		96	55 - 134	2	20
2,4-Dichlorophenol			2.00	2.06		ug/L		103	50 - 125	0	26
2,4-Dimethylphenol			2.00	1.57	J	ug/L		79	20 - 106	5	35
2,4-Dinitrophenol			4.00	2.34	J	ug/L		59	24 - 139	31	35
2,4-Dinitrotoluene			2.00	1.95		ug/L		98	40 - 143	5	29
2,6-Dinitrotoluene			2.00	1.92		ug/L		96	45 - 134	3	31
2-Chloronaphthalene			2.00	2.03		ug/L		102	55 - 125	2	20
2-Chlorophenol			2.00	2.02		ug/L		101	57 - 125	3	20
2-Methylnaphthalene			2.00	2.00		ug/L		100	56 - 117	1	20
2-Methylphenol			2.00	1.83		ug/L		92	53 - 118	1	33
2-Nitroaniline			2.00	1.92		ug/L		96	58 - 124	6	20
2-Nitrophenol			2.00	1.69		ug/L		85	20 - 150	8	35
3 & 4 Methylphenol			2.00	1.93		ug/L		96	54 - 112	0	20
3,3'-Dichlorobenzidine			4.00	2.70		ug/L		67	20 - 121	2	35
3-Nitroaniline			2.00	1.47		ug/L		74	22 - 124	3	35
4,6-Dinitro-2-methylphenol			4.00	2.85	J *	ug/L		71	20 - 150	35	30
4-Bromophenyl phenyl ether			2.00	2.08		ug/L		104	62 - 132	0	20
4-Chloro-3-methylphenol			2.00	1.91		ug/L		95	56 - 133	0	20
4-Chloroaniline			2.00	ND	*	ug/L		5	20 - 110	128	35
4-Chlorophenyl phenyl ether			2.00	2.02		ug/L		101	59 - 125	2	20
4-Nitroaniline			2.00	1.98		ug/L		99	40 - 118	13	20
4-Nitrophenol			4.00	3.95		ug/L		99	20 - 150	5	29
Acenaphthene			2.00	1.91		ug/L		95	55 - 113	4	20
Acenaphthylene			2.00	1.86		ug/L		93	24 - 135	3	20
Anthracene			2.00	1.71		ug/L		85	20 - 125	7	26
Benzo[a]anthracene			2.00	2.01		ug/L		101	49 - 115	1	20
Benzo[a]pyrene			2.00	1.45		ug/L		73	20 - 115	6	35
Benzo[b]fluoranthene			2.00	2.16		ug/L		108	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	1.84		ug/L		92	58 - 127	1	20
Benzo[k]fluoranthene			2.00	1.96		ug/L		98	60 - 134	3	20
Benzoic acid			4.00	1.96	J	ug/L		49	20 - 150	0	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	2.07		ug/L		104	52 - 124	3	20
bis (2-chloroisopropyl) ether	2.00	2.05		ug/L		102	44 - 123	2	20
Bis(2-chloroethoxy)methane	2.00	2.03		ug/L		101	59 - 125	2	20
Bis(2-chloroethyl)ether	2.00	1.97		ug/L		98	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	3.09	*	ug/L		154	22 - 150	31	20
Butyl benzyl phthalate	2.00	2.39		ug/L		119	46 - 150	0	20
Carbazole	2.00	2.33		ug/L		117	68 - 142	0	20
Chrysene	2.00	2.04		ug/L		102	57 - 131	1	20
Dibenz(a,h)anthracene	2.00	1.57		ug/L		78	56 - 124	3	20
Dibenzofuran	2.00	2.00		ug/L		100	60 - 125	2	20
Diethyl phthalate	2.00	2.10		ug/L		105	60 - 134	3	20
Dimethyl phthalate	2.00	2.21		ug/L		110	65 - 134	3	20
Di-n-butyl phthalate	2.00	2.51		ug/L		126	67 - 140	2	20
Di-n-octyl phthalate	2.00	2.07		ug/L		103	55 - 150	2	20
Fluoranthene	2.00	2.27		ug/L		113	70 - 135	1	20
Fluorene	2.00	2.00		ug/L		100	57 - 125	3	20
Hexachlorobenzene	2.00	1.80		ug/L		90	55 - 135	2	20
Hexachlorobutadiene	2.00	1.90		ug/L		95	25 - 125	4	31
Hexachlorocyclopentadiene	2.00	1.01	J	ug/L		51	20 - 110	24	35
Hexachloroethane	2.00	1.81		ug/L		91	24 - 125	9	35
Indeno[1,2,3-cd]pyrene	2.00	1.87		ug/L		93	54 - 124	3	20
Isophorone	2.00	1.99		ug/L		99	64 - 125	4	20
Naphthalene	2.00	1.87		ug/L		93	56 - 119	0	20
Nitrobenzene	2.00	1.97		ug/L		98	62 - 125	6	20
N-Nitrosodi-n-propylamine	2.00	1.84		ug/L		92	54 - 120	4	20
N-Nitrosodiphenylamine	2.00	1.71		ug/L		86	40 - 124	2	20
Pentachlorophenol	4.00	2.47		ug/L		62	30 - 122	7	35
Phenanthrene	2.00	1.99		ug/L		99	57 - 125	1	20
Phenol	2.00	1.85		ug/L		92	53 - 113	0	20
Pyrene	2.00	2.23		ug/L		111	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*
2-Fluorobiphenyl	*82*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*84*		*59 - 120*
Phenol-d5	*86*		*52 - 120*
Terphenyl-d14	*104*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-10924/2-A
Matrix: Water
Analysis Batch: 10926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 11:07	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-10924/3-A
Matrix: Water
Analysis Batch: 10926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10924

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.129		ug/L		103	60 - 140

Lab Sample ID: LCSD 590-10924/4-A
Matrix: Water
Analysis Batch: 10926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10924

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.125		ug/L		100	60 - 140	4	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-239427/1-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239427

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/28/17 10:48	02/28/17 21:06	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
Aldrin	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 21:06	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 21:06	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	02/28/17 21:06	1
delta-BHC	ND		0.050	0.010	ug/L		02/28/17 10:48	02/28/17 21:06	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	02/28/17 21:06	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Toxaphene	ND		1.0	0.22	ug/L		02/28/17 10:48	02/28/17 21:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*22 - 150*	*02/28/17 10:48*	*02/28/17 21:06*	*1*
Tetrachloro-m-xylene	*97*		*40 - 113*	*02/28/17 10:48*	*02/28/17 21:06*	*1*

Lab Sample ID: LCS 580-239427/2-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239427

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.207		ug/L		104	32 - 133

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-239427/2-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDE			0.200	0.207		ug/L		103	30 - 138		
4,4'-DDT			0.200	0.190		ug/L		95	34 - 131		
Aldrin			0.200	0.183		ug/L		92	35 - 124		
alpha-BHC			0.200	0.197		ug/L		99	39 - 126		
alpha-Chlordane			0.200	0.188		ug/L		94	37 - 133		
beta-BHC			0.200	0.185		ug/L		93	38 - 114		
delta-BHC			0.200	0.208		ug/L		104	20 - 138		
Dieldrin			0.200	0.190		ug/L		95	39 - 140		
Endosulfan I			0.200	0.189		ug/L		95	23 - 142		
Endosulfan II			0.200	0.209		ug/L		105	20 - 150		
Endosulfan sulfate			0.200	0.184		ug/L		92	36 - 130		
Endrin			0.200	0.211		ug/L		105	32 - 130		
Endrin aldehyde			0.200	0.270		ug/L		135	37 - 139		
Endrin ketone			0.200	0.195		ug/L		98	32 - 136		
gamma-BHC (Lindane)			0.200	0.208		ug/L		104	40 - 121		
gamma-Chlordane			0.200	0.190		ug/L		95	38 - 136		
Heptachlor			0.200	0.180		ug/L		90	39 - 129		
Heptachlor epoxide			0.200	0.188		ug/L		94	34 - 135		
Methoxychlor			0.200	0.184		ug/L		92	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*22 - 150*
Tetrachloro-m-xylene	*105*		*40 - 113*

Lab Sample ID: LCSD 580-239427/3-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.207		ug/L		104	32 - 133	0	35
4,4'-DDE			0.200	0.200		ug/L		100	30 - 138	3	35
4,4'-DDT			0.200	0.194		ug/L		97	34 - 131	2	35
Aldrin			0.200	0.176		ug/L		88	35 - 124	4	35
alpha-BHC			0.200	0.200		ug/L		100	39 - 126	1	35
alpha-Chlordane			0.200	0.175		ug/L		88	37 - 133	7	35
beta-BHC			0.200	0.187		ug/L		93	38 - 114	1	35
delta-BHC			0.200	0.209		ug/L		105	20 - 138	1	35
Dieldrin			0.200	0.187		ug/L		94	39 - 140	1	35
Endosulfan I			0.200	0.184		ug/L		92	23 - 142	3	35
Endosulfan II			0.200	0.208		ug/L		104	20 - 150	1	35
Endosulfan sulfate			0.200	0.185		ug/L		92	36 - 130	0	35
Endrin			0.200	0.206		ug/L		103	32 - 130	2	35
Endrin aldehyde			0.200	0.270		ug/L		135	37 - 139	0	35
Endrin ketone			0.200	0.195		ug/L		97	32 - 136	0	35
gamma-BHC (Lindane)			0.200	0.208		ug/L		104	40 - 121	0	35
gamma-Chlordane			0.200	0.186		ug/L		93	38 - 136	2	35
Heptachlor			0.200	0.186		ug/L		93	39 - 129	4	35
Heptachlor epoxide			0.200	0.187		ug/L		94	34 - 135	1	35

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-239427/3-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methoxychlor			0.200	0.187		ug/L		93	33 - 139	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*97*		*22 - 150*
Tetrachloro-m-xylene	*106*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-10839/1-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10839

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1221	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1232	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1242	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1248	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1254	ND		0.10	0.062	ug/L		02/23/17 12:49	02/23/17 16:08	1
PCB-1260	ND		0.10	0.043	ug/L		02/23/17 12:49	02/23/17 16:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*20 - 120*	*02/23/17 12:49*	*02/23/17 16:08*	*1*
DCB Decachlorobiphenyl (Surr)	*110*		*36 - 138*	*02/23/17 12:49*	*02/23/17 16:08*	*1*

Lab Sample ID: LCS 590-10839/2-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10839

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016			1.60	1.33		ug/L		83	23 - 140
PCB-1260			1.60	1.07		ug/L		67	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*94*		*36 - 138*

Lab Sample ID: LCSD 590-10839/3-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10839

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.35		ug/L		84	23 - 140	1	35
PCB-1260			1.60	1.13		ug/L		71	22 - 139	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*65*		*20 - 120*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 590-10839/3-A
Matrix: Water
Analysis Batch: 10828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10839

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	96		36 - 138

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-363945/1-A
Matrix: Water
Analysis Batch: 364803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363945

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		03/01/17 17:19	03/08/17 20:16	1
Azinphos-methyl	ND		2.5	0.17	ug/L		03/01/17 17:19	03/08/17 20:16	1
Bolstar	ND		1.0	0.31	ug/L		03/01/17 17:19	03/08/17 20:16	1
Chlorpyrifos	ND		1.5	0.36	ug/L		03/01/17 17:19	03/08/17 20:16	1
Coumaphos	ND		1.0	0.14	ug/L		03/01/17 17:19	03/08/17 20:16	1
Demeton, Total	ND		3.0	0.21	ug/L		03/01/17 17:19	03/08/17 20:16	1
Diazinon	ND		0.50	0.15	ug/L		03/01/17 17:19	03/08/17 20:16	1
Dichlorvos	ND		0.50	0.16	ug/L		03/01/17 17:19	03/08/17 20:16	1
Dimethoate	ND		1.5	0.45	ug/L		03/01/17 17:19	03/08/17 20:16	1
Disulfoton	ND		1.0	0.32	ug/L		03/01/17 17:19	03/08/17 20:16	1
EPN	ND		1.2	0.15	ug/L		03/01/17 17:19	03/08/17 20:16	1
Famphur	ND		1.0	0.18	ug/L		03/01/17 17:19	03/08/17 20:16	1
Fensulfothion	ND		2.5	0.54	ug/L		03/01/17 17:19	03/08/17 20:16	1
Fenthion	ND		2.5	0.15	ug/L		03/01/17 17:19	03/08/17 20:16	1
Malathion	ND		2.0	0.13	ug/L		03/01/17 17:19	03/08/17 20:16	1
Merphos	ND		5.0	0.17	ug/L		03/01/17 17:19	03/08/17 20:16	1
Methyl parathion	ND		4.0	0.14	ug/L		03/01/17 17:19	03/08/17 20:16	1
Mevinphos	ND		6.2	0.46	ug/L		03/01/17 17:19	03/08/17 20:16	1
Ethyl Parathion	ND		1.0	0.14	ug/L		03/01/17 17:19	03/08/17 20:16	1
Phorate	ND		1.2	0.15	ug/L		03/01/17 17:19	03/08/17 20:16	1
Ronnel	ND		10	0.12	ug/L		03/01/17 17:19	03/08/17 20:16	1
Simazine	ND		10	0.22	ug/L		03/01/17 17:19	03/08/17 20:16	1
Sulfotepp	ND		1.5	0.17	ug/L		03/01/17 17:19	03/08/17 20:16	1
Thionazin	ND		1.0	0.31	ug/L		03/01/17 17:19	03/08/17 20:16	1
Tokuthion	ND		1.6	0.12	ug/L		03/01/17 17:19	03/08/17 20:16	1
Trichloronate	ND		1.5	0.24	ug/L		03/01/17 17:19	03/08/17 20:16	1
Ethoprop	ND		1.5	0.18	ug/L		03/01/17 17:19	03/08/17 20:16	1
Propazine	ND		10	0.29	ug/L		03/01/17 17:19	03/08/17 20:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	60		49 - 171	03/01/17 17:19	03/08/17 20:16	1
Triphenylphosphate	88		60 - 154	03/01/17 17:19	03/08/17 20:16	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-363945/2-A
Matrix: Water
Analysis Batch: 364803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363945

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	3.05	J	ug/L		76	52 - 115
Azinphos-methyl	4.00	3.91		ug/L		98	59 - 115
Chlorpyrifos	4.00	3.41		ug/L		85	54 - 115
Coumaphos	4.00	3.97		ug/L		99	63 - 118
Demeton, Total	4.00	2.23	J	ug/L		56	44 - 115
Diazinon	4.00	3.09		ug/L		77	47 - 115
Dichlorvos	4.00	3.56		ug/L		89	53 - 128
Dimethoate	4.00	2.02		ug/L		50	42 - 115
Disulfoton	4.00	2.67		ug/L		67	45 - 115
EPN	4.00	3.31		ug/L		83	56 - 115
Famphur	4.00	3.28		ug/L		82	62 - 115
Fensulfothion	4.00	2.85		ug/L		71	50 - 115
Fenthion	4.00	3.08		ug/L		77	55 - 115
Malathion	4.00	2.72		ug/L		68	52 - 115
Merphos	4.00	3.34	J	ug/L		83	31 - 115
Methyl parathion	4.00	3.11	J	ug/L		78	58 - 115
Mevinphos	4.00	2.58	J	ug/L		65	42 - 115
Ethyl Parathion	4.00	3.33		ug/L		83	55 - 115
Phorate	4.00	2.50		ug/L		62	40 - 115
Ronnel	4.00	3.46	J	ug/L		87	55 - 115
Simazine	4.00	2.65	J	ug/L		66	39 - 115
Sulfotepp	4.00	3.16		ug/L		79	53 - 115
Thionazin	4.00	2.94		ug/L		73	54 - 115
Trichloronate	4.00	3.29		ug/L		82	48 - 115
Ethoprop	4.00	3.08		ug/L		77	50 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*74*		*49 - 171*
Triphenylphosphate	*88*		*60 - 154*

Lab Sample ID: LCSD 280-363945/3-A
Matrix: Water
Analysis Batch: 364803

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363945

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	4.00	2.63	J	ug/L		66	52 - 115	15	45
Azinphos-methyl	4.00	3.49		ug/L		87	59 - 115	11	20
Chlorpyrifos	4.00	2.98		ug/L		74	54 - 115	14	24
Coumaphos	4.00	3.51		ug/L		88	63 - 118	12	20
Demeton, Total	4.00	1.96	J	ug/L		49	44 - 115	13	38
Diazinon	4.00	2.85		ug/L		71	47 - 115	8	37
Dichlorvos	4.00	2.59		ug/L		65	53 - 128	32	37
Dimethoate	4.00	2.05		ug/L		51	42 - 115	2	38
Disulfoton	4.00	2.31		ug/L		58	45 - 115	15	31
EPN	4.00	3.02		ug/L		75	56 - 115	9	20
Famphur	4.00	2.99		ug/L		75	62 - 115	9	20

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCSD 280-363945/3-A
Matrix: Water
Analysis Batch: 364803

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363945

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fensulfothion	4.00	2.86		ug/L		71	50 - 115	0	27
Fenthion	4.00	2.74		ug/L		68	55 - 115	12	22
Malathion	4.00	2.30		ug/L		58	52 - 115	17	20
Merphos	4.00	2.84	J	ug/L		71	31 - 115	16	25
Methyl parathion	4.00	2.73	J	ug/L		68	58 - 115	13	20
Mevinphos	4.00	2.20	J	ug/L		55	42 - 115	16	27
Ethyl Parathion	4.00	2.93		ug/L		73	55 - 115	13	20
Phorate	4.00	2.04		ug/L		51	40 - 115	20	32
Ronnel	4.00	2.90	J	ug/L		73	55 - 115	18	28
Simazine	4.00	2.40	J	ug/L		60	39 - 115	10	53
Sulfotepp	4.00	2.69		ug/L		67	53 - 115	16	27
Thionazin	4.00	2.53		ug/L		63	54 - 115	15	27
Trichloronate	4.00	2.85		ug/L		71	48 - 115	14	26
Ethoprop	4.00	2.86		ug/L		71	50 - 115	7	29

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Chlormefos	*63*		*49 - 171*
Triphenylphosphate	*79*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-363686/1-A
Matrix: Water
Analysis Batch: 364437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363686

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		02/28/17 10:10	03/06/17 17:14	1
2,4-D	ND		4.0	0.21	ug/L		02/28/17 10:10	03/06/17 17:14	1
2,4-DB	ND		4.0	0.36	ug/L		02/28/17 10:10	03/06/17 17:14	1
Dalapon	ND		2.0	0.91	ug/L		02/28/17 10:10	03/06/17 17:14	1
Dicamba	ND		2.0	0.15	ug/L		02/28/17 10:10	03/06/17 17:14	1
Dichlorprop	ND		4.0	0.65	ug/L		02/28/17 10:10	03/06/17 17:14	1
MCPA	ND		400	17	ug/L		02/28/17 10:10	03/06/17 17:14	1
MCPP	ND		400	33	ug/L		02/28/17 10:10	03/06/17 17:14	1
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		02/28/17 10:10	03/06/17 17:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*39 - 135*	*02/28/17 10:10*	*03/06/17 17:14*	*1*

Lab Sample ID: LCS 280-363686/2-A
Matrix: Water
Analysis Batch: 364437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363686

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	4.18		ug/L		84	45 - 135
2,4-D	5.00	4.23		ug/L		85	46 - 126

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-363686/2-A
Matrix: Water
Analysis Batch: 364437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363686

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-DB	5.00	4.78		ug/L		96	18 - 135
Dalapon	5.00	4.28		ug/L		86	52 - 119
Dicamba	5.00	3.85		ug/L		77	50 - 128
Dichlorprop	5.00	4.07		ug/L		81	44 - 121
MCPA	500	479		ug/L		96	43 - 118
MCPP	500	473		ug/L		95	45 - 121
Silvex (2,4,5-TP)	5.00	3.58		ug/L		72	48 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*101*		*39 - 135*

Lab Sample ID: LCSD 280-363686/3-A
Matrix: Water
Analysis Batch: 364437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363686

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.87		ug/L		77	45 - 135	8	30
2,4-D	5.00	4.05		ug/L		81	46 - 126	4	30
2,4-DB	5.00	4.16		ug/L		83	18 - 135	14	30
Dalapon	5.00	4.31		ug/L		86	52 - 119	1	30
Dicamba	5.00	3.73		ug/L		75	50 - 128	3	30
Dichlorprop	5.00	3.70	J	ug/L		74	44 - 121	9	30
MCPA	500	368	J	ug/L		74	43 - 118	26	30
MCPP	500	425		ug/L		85	45 - 121	11	30
Silvex (2,4,5-TP)	5.00	3.49		ug/L		70	48 - 127	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*92*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-10887/1-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		02/28/17 09:16	02/28/17 11:37	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		02/28/17 09:16	02/28/17 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-10887/2-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			1.60	1.35		mg/L		84	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.36		mg/L		85	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*104*		*50 - 150*
n-Triacontane-d62	*106*		*50 - 150*

Lab Sample ID: LCSD 590-10887/3-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.60	1.25		mg/L		78	50 - 150	7	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.32		mg/L		82	50 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*101*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-10831/1014
Matrix: Water
Analysis Batch: 10831

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			02/23/17 13:56	1
Sulfate	ND		0.50	0.13	mg/L			02/23/17 13:56	1

Lab Sample ID: LCS 590-10831/1013
Matrix: Water
Analysis Batch: 10831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			12.5	13.0		mg/L		104	90 - 110		
Sulfate			12.5	12.9		mg/L		104	90 - 110		

Lab Sample ID: 590-5559-4 MS
Matrix: Water
Analysis Batch: 10831

Client Sample ID: MW-5:022217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	41	F1	12.5	47.3	F1	mg/L		54	80 - 120		
Sulfate	15		12.5	26.1		mg/L		89	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5559-4 MSD — **Client Sample ID: MW-5:022217**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	41	F1	12.5	47.4	F1	mg/L		55	80 - 120	0	10
Sulfate	15		12.5	26.2		mg/L		90	80 - 120	0	10

Lab Sample ID: 590-5559-4 DU — **Client Sample ID: MW-5:022217**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10831

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	41	F1	40.9		mg/L		0.8	18.8
Sulfate	15		15.2		mg/L		2	15.7

Lab Sample ID: MB 590-10832/1014 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10832

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			02/23/17 13:56	1
Nitrite as N	ND		0.20	0.069	mg/L			02/23/17 13:56	1

Lab Sample ID: LCS 590-10832/1013 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10832

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.10		mg/L		102	90 - 110
Nitrite as N	5.00	4.87		mg/L		97	90 - 110

Lab Sample ID: 590-5559-4 MS — **Client Sample ID: MW-5:022217**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10832

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.80		5.00	5.87		mg/L		101	80 - 120
Nitrite as N	0.16	J	5.00	5.22		mg/L		101	80 - 120

Lab Sample ID: 590-5559-4 MSD — **Client Sample ID: MW-5:022217**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10832

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.80		5.00	5.99		mg/L		104	80 - 120	2	12.1
Nitrite as N	0.16	J	5.00	5.19		mg/L		101	80 - 120	0	10

Lab Sample ID: 590-5559-4 DU — **Client Sample ID: MW-5:022217**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 10832

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.80		0.867		mg/L		8	13.1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5559-4 DU
Matrix: Water
Analysis Batch: 10832

Client Sample ID: MW-5:022217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	0.16	J		0.171	J	mg/L				7	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-154030/1-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154030

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.22	pg/L		03/09/17 08:35	03/11/17 11:56	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8-PeCDD	ND		50	0.30	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8-PeCDF	ND		50	0.16	pg/L		03/09/17 08:35	03/11/17 11:56	1
2,3,4,7,8-PeCDF	ND		50	0.17	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,7,8-HxCDD	ND		50	0.40	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,6,7,8-HxCDD	ND		50	0.33	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8,9-HxCDD	ND		50	0.29	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,7,8-HxCDF	ND		50	0.17	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,6,7,8-HxCDF	ND		50	0.14	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,7,8,9-HxCDF	0.249	J q	50	0.16	pg/L		03/09/17 08:35	03/11/17 11:56	1
2,3,4,6,7,8-HxCDF	ND		50	0.16	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.66	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,6,7,8-HpCDF	ND		50	0.13	pg/L		03/09/17 08:35	03/11/17 11:56	1
1,2,3,4,7,8,9-HpCDF	0.284	J q	50	0.15	pg/L		03/09/17 08:35	03/11/17 11:56	1
OCDD	1.02	J q	100	0.19	pg/L		03/09/17 08:35	03/11/17 11:56	1
OCDF	0.897	J	100	0.31	pg/L		03/09/17 08:35	03/11/17 11:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-2,3,7,8-TCDF	*79*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*81*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*
13C-OCDD	*85*		*40 - 135*	*03/09/17 08:35*	*03/11/17 11:56*	*1*

Lab Sample ID: LCS 320-154030/2-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154030

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD			200	195		pg/L		98	64 - 142		
2,3,7,8-TCDF			200	184		pg/L		92	71 - 142		
1,2,3,7,8-PeCDD			1000	964		pg/L		96	71 - 140		
1,2,3,7,8-PeCDF			1000	964		pg/L		96	76 - 135		
2,3,4,7,8-PeCDF			1000	1010		pg/L		101	74 - 137		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-154030/2-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154030

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	854		pg/L		85	56 - 146		
1,2,3,6,7,8-HxCDD			1000	929		pg/L		93	73 - 144		
1,2,3,7,8,9-HxCDD			1000	859		pg/L		86	71 - 151		
1,2,3,4,7,8-HxCDF			1000	942		pg/L		94	75 - 131		
1,2,3,6,7,8-HxCDF			1000	959		pg/L		96	76 - 133		
1,2,3,7,8,9-HxCDF			1000	936		pg/L		94	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1010		pg/L		101	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	914		pg/L		91	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	932		pg/L		93	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	890		pg/L		89	83 - 130		
OCDD			2000	1720		pg/L		86	80 - 132		
OCDF			2000	1680		pg/L		84	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*92*		*40 - 135*
13C-2,3,7,8-TCDF	*86*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*96*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*88*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*86*		*40 - 135*
13C-OCDD	*92*		*40 - 135*

Lab Sample ID: LCSD 320-154030/3-A
Matrix: Water
Analysis Batch: 154652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154030

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	198		pg/L		99	64 - 142	1	20
2,3,7,8-TCDF			200	188		pg/L		94	71 - 142	2	20
1,2,3,7,8-PeCDD			1000	985		pg/L		99	71 - 140	2	20
1,2,3,7,8-PeCDF			1000	988		pg/L		99	76 - 135	2	20
2,3,4,7,8-PeCDF			1000	983		pg/L		98	74 - 137	3	20
1,2,3,4,7,8-HxCDD			1000	853		pg/L		85	56 - 146	0	20
1,2,3,6,7,8-HxCDD			1000	966		pg/L		97	73 - 144	4	20
1,2,3,7,8,9-HxCDD			1000	875		pg/L		87	71 - 151	2	20
1,2,3,4,7,8-HxCDF			1000	960		pg/L		96	75 - 131	2	20
1,2,3,6,7,8-HxCDF			1000	981		pg/L		98	76 - 133	2	20
1,2,3,7,8,9-HxCDF			1000	968		pg/L		97	77 - 142	3	20
2,3,4,6,7,8-HxCDF			1000	1020		pg/L		102	80 - 137	1	20
1,2,3,4,6,7,8-HpCDD			1000	951		pg/L		95	78 - 139	4	20
1,2,3,4,6,7,8-HpCDF			1000	966		pg/L		97	79 - 133	4	20
1,2,3,4,7,8,9-HpCDF			1000	935		pg/L		94	83 - 130	5	20
OCDD			2000	1780		pg/L		89	80 - 132	3	20
OCDF			2000	1740		pg/L		87	72 - 140	3	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	*85*		*40 - 135*
13C-2,3,7,8-TCDF	*84*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*91*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*84*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*
13C-OCDD	*93*		*40 - 135*

Lab Sample ID: MB 320-154275/1-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154275

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.18	pg/L		03/10/17 08:23	03/13/17 18:03	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8-PeCDD	ND		50	0.24	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8-PeCDF	ND		50	0.18	pg/L		03/10/17 08:23	03/13/17 18:03	1
2,3,4,7,8-PeCDF	ND		50	0.19	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,7,8-HxCDD	ND		50	0.23	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,6,7,8-HxCDD	ND		50	0.19	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8,9-HxCDD	ND		50	0.17	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,7,8-HxCDF	ND		50	0.23	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,6,7,8-HxCDF	ND		50	0.19	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8,9-HxCDF	ND		50	0.21	pg/L		03/10/17 08:23	03/13/17 18:03	1
2,3,4,6,7,8-HxCDF	ND		50	0.21	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.54	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,6,7,8-HpCDF	0.200	J q	50	0.14	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.16	pg/L		03/10/17 08:23	03/13/17 18:03	1
OCDD	1.63	J q	100	0.23	pg/L		03/10/17 08:23	03/13/17 18:03	1
OCDF	0.920	J q	100	0.28	pg/L		03/10/17 08:23	03/13/17 18:03	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,6,7,8-HxCDD	*101*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*82*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*86*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-OCDD	*77*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*

Lab Sample ID: LCS 320-154275/2-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	200		pg/L		100	64 - 142
2,3,7,8-TCDF	200	197		pg/L		99	71 - 142
1,2,3,7,8-PeCDD	1000	1030		pg/L		103	71 - 140
1,2,3,7,8-PeCDF	1000	997		pg/L		100	76 - 135
2,3,4,7,8-PeCDF	1000	1020		pg/L		102	74 - 137

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-154275/2-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154275

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,7,8-HxCDD			1000	1060		pg/L		106	56 - 146		
1,2,3,6,7,8-HxCDD			1000	1040		pg/L		104	73 - 144		
1,2,3,7,8,9-HxCDD			1000	896		pg/L		90	71 - 151		
1,2,3,4,7,8-HxCDF			1000	1050		pg/L		105	75 - 131		
1,2,3,6,7,8-HxCDF			1000	1140		pg/L		114	76 - 133		
1,2,3,7,8,9-HxCDF			1000	1050		pg/L		105	77 - 142		
2,3,4,6,7,8-HxCDF			1000	1150		pg/L		115	80 - 137		
1,2,3,4,6,7,8-HpCDD			1000	967		pg/L		97	78 - 139		
1,2,3,4,6,7,8-HpCDF			1000	995		pg/L		99	79 - 133		
1,2,3,4,7,8,9-HpCDF			1000	919		pg/L		92	83 - 130		
OCDD			2000	1860		pg/L		93	80 - 132		
OCDF			2000	1870		pg/L		94	72 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*95*		*40 - 135*
13C-2,3,7,8-TCDF	*89*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*101*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*97*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*104*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*92*		*40 - 135*
13C-OCDD	*88*		*40 - 135*

Lab Sample ID: LCSD 320-154275/3-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154275

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	206		pg/L		103	64 - 142	3	20
2,3,7,8-TCDF			200	196		pg/L		98	71 - 142	0	20
1,2,3,7,8-PeCDD			1000	1060		pg/L		106	71 - 140	3	20
1,2,3,7,8-PeCDF			1000	1070		pg/L		107	76 - 135	7	20
2,3,4,7,8-PeCDF			1000	983		pg/L		98	74 - 137	4	20
1,2,3,4,7,8-HxCDD			1000	1030		pg/L		103	56 - 146	3	20
1,2,3,6,7,8-HxCDD			1000	1050		pg/L		105	73 - 144	1	20
1,2,3,7,8,9-HxCDD			1000	959		pg/L		96	71 - 151	7	20
1,2,3,4,7,8-HxCDF			1000	1060		pg/L		106	75 - 131	1	20
1,2,3,6,7,8-HxCDF			1000	1190		pg/L		119	76 - 133	3	20
1,2,3,7,8,9-HxCDF			1000	1160		pg/L		116	77 - 142	10	20
2,3,4,6,7,8-HxCDF			1000	1240		pg/L		124	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD			1000	1010		pg/L		101	78 - 139	4	20
1,2,3,4,6,7,8-HpCDF			1000	1030		pg/L		103	79 - 133	3	20
1,2,3,4,7,8,9-HpCDF			1000	971		pg/L		97	83 - 130	5	20
OCDD			2000	1930		pg/L		96	80 - 132	3	20
OCDF			2000	1890		pg/L		94	72 - 140	1	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	85		40 - 135
13C-2,3,7,8-TCDF	80		40 - 135
13C-1,2,3,7,8-PeCDD	85		40 - 135
13C-1,2,3,7,8-PeCDF	81		40 - 135
13C-1,2,3,6,7,8-HxCDD	95		40 - 135
13C-1,2,3,4,7,8-HxCDF	75		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135
13C-OCDD	85		40 - 135

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-239745/20-A
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239745

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.101		mg/L		101	85 - 115
Antimony	0.100	0.0953		mg/L		95	85 - 115
Barium	0.100	0.0966		mg/L		97	85 - 115
Beryllium	0.100	0.0964		mg/L		96	85 - 115
Cadmium	0.100	0.101		mg/L		101	85 - 115
Chromium	0.100	0.0969		mg/L		97	85 - 115
Copper	0.100	0.101		mg/L		101	85 - 115
Iron	10.0	9.42		mg/L		94	85 - 115
Lead	0.100	0.0987		mg/L		99	85 - 115
Manganese	0.100	0.0961		mg/L		96	85 - 115
Nickel	0.100	0.0995		mg/L		100	85 - 115
Selenium	0.100	0.102		mg/L		102	85 - 115
Silver	0.100	0.0988		mg/L		99	85 - 115
Thallium	0.100	0.0947		mg/L		95	85 - 115
Vanadium	0.100	0.0946		mg/L		95	85 - 115
Zinc	0.100	0.105		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-239745/21-A
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239745

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0979		mg/L		98	85 - 115	3	20
Antimony	0.100	0.0926		mg/L		93	85 - 115	3	20
Barium	0.100	0.0943		mg/L		94	85 - 115	2	20
Beryllium	0.100	0.0950		mg/L		95	85 - 115	1	20
Cadmium	0.100	0.0968		mg/L		97	85 - 115	4	20
Chromium	0.100	0.0952		mg/L		95	85 - 115	2	20
Copper	0.100	0.0987		mg/L		99	85 - 115	2	20
Iron	10.0	9.18		mg/L		92	85 - 115	3	20
Lead	0.100	0.0967		mg/L		97	85 - 115	2	20
Manganese	0.100	0.0936		mg/L		94	85 - 115	3	20
Nickel	0.100	0.0973		mg/L		97	85 - 115	2	20
Selenium	0.100	0.0985		mg/L		98	85 - 115	3	20
Silver	0.100	0.0955		mg/L		95	85 - 115	3	20
Thallium	0.100	0.0935		mg/L		93	85 - 115	1	20
Vanadium	0.100	0.0925		mg/L		92	85 - 115	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-239745/21-A
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239745

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc			0.100	0.102		mg/L		102	85 - 115	2	20

Lab Sample ID: MB 580-240170/14-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 15:30	1
Antimony	ND		0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 15:30	1
Barium	ND		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 15:30	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 15:30	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 15:30	1
Chromium	ND		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 15:30	1
Copper	ND		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 15:30	1
Iron	ND		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 15:30	1
Lead	ND		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 15:30	1
Manganese	ND		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 15:30	1
Nickel	ND		0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 15:30	1
Selenium	ND		0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 15:30	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 15:30	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 15:30	1
Vanadium	ND		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 15:30	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 15:30	1

Lab Sample ID: LCS 580-240170/15-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240170

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			0.100	0.101		mg/L		101	85 - 115
Antimony			0.100	0.0997		mg/L		100	85 - 115
Barium			0.100	0.0993		mg/L		99	85 - 115
Beryllium			0.100	0.101		mg/L		101	85 - 115
Cadmium			0.100	0.0998		mg/L		100	85 - 115
Chromium			0.100	0.0990		mg/L		99	85 - 115
Copper			0.100	0.0977		mg/L		98	85 - 115
Iron			10.0	9.65		mg/L		96	85 - 115
Lead			0.100	0.100		mg/L		100	85 - 115
Manganese			0.100	0.0966		mg/L		97	85 - 115
Nickel			0.100	0.0982		mg/L		98	85 - 115
Selenium			0.100	0.0978		mg/L		98	85 - 115
Silver			0.100	0.0984		mg/L		98	85 - 115
Thallium			0.100	0.0979		mg/L		98	85 - 115
Vanadium			0.100	0.0979		mg/L		98	85 - 115
Zinc			0.100	0.0969		mg/L		97	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-240170/16-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0999		mg/L		100	85 - 115	1	20
Antimony	0.100	0.0960		mg/L		96	85 - 115	4	20
Barium	0.100	0.0945		mg/L		94	85 - 115	5	20
Beryllium	0.100	0.0976		mg/L		98	85 - 115	3	20
Cadmium	0.100	0.0974		mg/L		97	85 - 115	2	20
Chromium	0.100	0.0968		mg/L		97	85 - 115	2	20
Copper	0.100	0.0967		mg/L		97	85 - 115	1	20
Iron	10.0	9.48		mg/L		95	85 - 115	2	20
Lead	0.100	0.0973		mg/L		97	85 - 115	3	20
Manganese	0.100	0.0939		mg/L		94	85 - 115	3	20
Nickel	0.100	0.0978		mg/L		98	85 - 115	0	20
Selenium	0.100	0.0974		mg/L		97	85 - 115	0	20
Silver	0.100	0.0970		mg/L		97	85 - 115	1	20
Thallium	0.100	0.0946		mg/L		95	85 - 115	3	20
Vanadium	0.100	0.0956		mg/L		96	85 - 115	2	20
Zinc	0.100	0.0965		mg/L		97	85 - 115	0	20

Lab Sample ID: MB 580-239239/13-B
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 10:49	1
Antimony	ND		0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 10:49	1
Barium	ND		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 10:49	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 10:49	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 10:49	1
Chromium	ND		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 10:49	1
Copper	ND		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 10:49	1
Iron	ND		0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 10:49	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 10:49	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 10:49	1
Nickel	ND		0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 10:49	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 10:49	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 10:49	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 10:49	1
Vanadium	ND		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 10:49	1
Zinc	ND		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 10:49	1

Lab Sample ID: 590-5559-1 MS
Matrix: Water
Analysis Batch: 239807

Client Sample ID: MW-7D:022217
Prep Type: Dissolved
Prep Batch: 239745

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00040	J	0.100	0.101		mg/L		101	70 - 130
Antimony	ND		0.100	0.0947		mg/L		95	70 - 130
Barium	0.021		0.100	0.116		mg/L		95	70 - 130
Beryllium	ND		0.100	0.0969		mg/L		97	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5559-1 MS
Matrix: Water
Analysis Batch: 239807

Client Sample ID: MW-7D:022217
Prep Type: Dissolved
Prep Batch: 239745

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		0.100	0.101		mg/L		101	70 - 130
Chromium	0.0016		0.100	0.0987		mg/L		97	70 - 130
Copper	ND		0.100	0.0974		mg/L		97	70 - 130
Iron	ND		10.0	9.30		mg/L		93	70 - 130
Lead	ND		0.100	0.0993		mg/L		99	70 - 130
Manganese	ND		0.100	0.0941		mg/L		94	70 - 130
Nickel	ND		0.100	0.0966		mg/L		97	70 - 130
Selenium	ND		0.100	0.100		mg/L		100	70 - 130
Silver	ND		0.100	0.0968		mg/L		97	70 - 130
Thallium	ND		0.100	0.0965		mg/L		97	70 - 130
Vanadium	0.012		0.100	0.105		mg/L		94	70 - 130
Zinc	0.0095		0.100	0.106		mg/L		97	70 - 130

Lab Sample ID: 590-5559-1 MSD
Matrix: Water
Analysis Batch: 239807

Client Sample ID: MW-7D:022217
Prep Type: Dissolved
Prep Batch: 239745

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.00040	J	0.100	0.100		mg/L		100	70 - 130	1	20
Antimony	ND		0.100	0.0962		mg/L		96	70 - 130	2	20
Barium	0.021		0.100	0.116		mg/L		94	70 - 130	1	20
Beryllium	ND		0.100	0.0961		mg/L		96	70 - 130	1	20
Cadmium	ND		0.100	0.0997		mg/L		100	70 - 130	2	20
Chromium	0.0016		0.100	0.0965		mg/L		95	70 - 130	2	20
Copper	ND		0.100	0.0971		mg/L		97	70 - 130	0	20
Iron	ND		10.0	9.16		mg/L		92	70 - 130	1	20
Lead	ND		0.100	0.0971		mg/L		97	70 - 130	2	20
Manganese	ND		0.100	0.0934		mg/L		93	70 - 130	1	20
Nickel	ND		0.100	0.0959		mg/L		96	70 - 130	1	20
Selenium	ND		0.100	0.101		mg/L		101	70 - 130	0	20
Silver	ND		0.100	0.0984		mg/L		98	70 - 130	2	20
Thallium	ND		0.100	0.0939		mg/L		94	70 - 130	3	20
Vanadium	0.012		0.100	0.105		mg/L		93	70 - 130	0	20
Zinc	0.0095		0.100	0.109		mg/L		99	70 - 130	2	20

Lab Sample ID: 590-5559-1 DU
Matrix: Water
Analysis Batch: 239807

Client Sample ID: MW-7D:022217
Prep Type: Dissolved
Prep Batch: 239745

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.00040	J	0.000432	J	mg/L		8	20
Antimony	ND		ND		mg/L		NC	20
Barium	0.021		0.0216		mg/L		1	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.0016		0.00168		mg/L		4	20
Copper	ND		ND		mg/L		NC	20
Iron	ND		ND		mg/L		NC	20
Lead	ND		0.000113	J	mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5559-1 DU
Matrix: Water
Analysis Batch: 239807

Client Sample ID: MW-7D:022217
Prep Type: Dissolved
Prep Batch: 239745

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Manganese	ND			ND		mg/L				NC	20
Nickel	ND			ND		mg/L				NC	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Thallium	ND			ND		mg/L				NC	20
Vanadium	0.012			0.0122		mg/L				3	20
Zinc	0.0095			0.00889		mg/L				6	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-240062/17-A
Matrix: Water
Analysis Batch: 240138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240062

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 12:34	1

Lab Sample ID: LCS 580-240062/18-A
Matrix: Water
Analysis Batch: 240138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240062

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00182		mg/L		91	85 - 115		

Lab Sample ID: LCSD 580-240062/19-A
Matrix: Water
Analysis Batch: 240138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240062

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00183		mg/L		92	85 - 115	1	20

Lab Sample ID: 590-5559-4 MS
Matrix: Water
Analysis Batch: 240138

Client Sample ID: MW-5:022217
Prep Type: Total/NA
Prep Batch: 240062

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00200	0.00176		mg/L		88	70 - 130		

Lab Sample ID: 590-5559-4 MSD
Matrix: Water
Analysis Batch: 240138

Client Sample ID: MW-5:022217
Prep Type: Total/NA
Prep Batch: 240062

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00174		mg/L		87	70 - 130	2	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 590-5559-4 DU — **Client Sample ID: MW-5:022217**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240138 — **Prep Batch: 240062**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	ND			ND		mg/L				NC	20

Lab Sample ID: MB 580-240082/20-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240138 — **Prep Batch: 240082**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 10:23	03/09/17 13:51	1

Lab Sample ID: LCS 580-240082/21-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240138 — **Prep Batch: 240082**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00192		mg/L		96	85 - 115		

Lab Sample ID: LCSD 580-240082/22-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240138 — **Prep Batch: 240082**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00188		mg/L		94	85 - 115	2	20

Lab Sample ID: LCS 580-240098/15-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240164 — **Prep Batch: 240098**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00218		mg/L		109	85 - 115		

Lab Sample ID: LCSD 580-240098/16-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240164 — **Prep Batch: 240098**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00223		mg/L		111	85 - 115	2	20

Lab Sample ID: MB 580-239239/13-C — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 240164 — **Prep Batch: 240098**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:03	1

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-410978/1-A
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:01	1

Lab Sample ID: LCS 490-410978/2-A
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.104		mg/L		104	90 - 110

Lab Sample ID: 590-5559-9 MS
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Dup:022217
Prep Type: Total/NA
Prep Batch: 410978

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.100	0.104		mg/L		104	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-410932/1-A
Matrix: Water
Analysis Batch: 411685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410932

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/02/17 14:46	1

Lab Sample ID: LCS 490-410932/2-A
Matrix: Water
Analysis Batch: 411685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410932

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.14		mg/L		103	90 - 110

Lab Sample ID: 590-5559-3 MS
Matrix: Water
Analysis Batch: 411685

Client Sample ID: MW-5A:022217
Prep Type: Total/NA
Prep Batch: 410932

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		5.00	4.50		mg/L		90	90 - 110

Lab Sample ID: MB 490-410933/1-A
Matrix: Water
Analysis Batch: 412339

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410933

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:42	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 490-410933/2-A
Matrix: Water
Analysis Batch: 412339

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410933

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.19		mg/L		104	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 490-411084/3
Matrix: Water
Analysis Batch: 411084

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			02/28/17 16:50	1

Lab Sample ID: LCS 490-411084/4
Matrix: Water
Analysis Batch: 411084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.3		mg/L		97	90 - 110

Lab Sample ID: LCSD 490-411084/5
Matrix: Water
Analysis Batch: 411084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	50.0	48.2		mg/L		96	90 - 110	0	20

Lab Sample ID: 590-5559-1 MS
Matrix: Water
Analysis Batch: 411084

Client Sample ID: MW-7D:022217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND		50.0	49.4		mg/L		99	90 - 110

Lab Sample ID: 590-5559-9 DU
Matrix: Water
Analysis Batch: 411084

Client Sample ID: Dup:022217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	9.0	J	9.13	J	mg/L		1	20

Method: SM 5310C - TOC

Lab Sample ID: LB 490-410091/1-A
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			03/01/17 19:25	1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: MB 490-411595/2
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			03/01/17 14:31	1

Lab Sample ID: LCS 490-411595/6
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.96		mg/L		100	90 - 110
TOC Result 1	10.0	10.1		mg/L		101	90 - 110
TOC Result 2	10.0	9.87		mg/L		99	90 - 110

Lab Sample ID: LCSD 490-411595/7
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	10.0	9.81		mg/L		98	90 - 110	2	20
TOC Result 1	10.0	9.86		mg/L		99	90 - 110	2	20
TOC Result 2	10.0	9.75		mg/L		98	90 - 110	1	20

Lab Sample ID: MB 490-412385/1
Matrix: Water
Analysis Batch: 412385

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			03/03/17 12:31	1

Lab Sample ID: LCS 490-412385/4
Matrix: Water
Analysis Batch: 412385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.91		mg/L		99	90 - 110
TOC Result 1	10.0	9.89		mg/L		99	90 - 110
TOC Result 2	10.0	9.94		mg/L		99	90 - 110

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-7D:022217

Date Collected: 02/22/17 10:30
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 15:44	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 15:44	MRS	TAL SPK
Total/NA	Prep	3520C			1039 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 21:07	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 12:20	NMI	TAL SPK
Total/NA	Prep	3510C			263.2 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 22:41	DCV	TAL SEA
Total/NA	Prep	3510C			255.8 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 20:16	NMI	TAL SPK
Total/NA	Prep	3510C			939.5 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 04:08	AMB1	TAL DEN
Total/NA	Prep	8151A			1029.1 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/06/17 22:13	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			236.4 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 15:29	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 12:07	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 12:07	CBW	TAL SPK
Total/NA	Prep	8290			996.6 mL	20 uL	154030	03/09/17 12:14	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154695	03/12/17 01:30	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 10:58	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:24	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:17	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240082	03/09/17 10:23	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 14:07	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:12	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:09	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	412385	03/03/17 12:31	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Client Sample ID: MW-7B:022217
Date Collected: 02/22/17 11:55
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 16:06	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 16:06	MRS	TAL SPK
Total/NA	Prep	3520C			965.4 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 21:31	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 12:45	NMI	TAL SPK
Total/NA	Prep	3510C			254.9 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 23:00	DCV	TAL SEA
Total/NA	Prep	3510C			252.8 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 20:37	NMI	TAL SPK
Total/NA	Prep	3510C			960.2 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 04:40	AMB1	TAL DEN
Total/NA	Prep	8151A			1036.2 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/06/17 22:36	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			229.3 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 15:47	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 12:19	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 12:19	CBW	TAL SPK
Total/NA	Prep	8290			1039.2 mL	20 uL	154275	03/10/17 08:23	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154960	03/13/17 20:21	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 11:48	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:28	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:19	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240082	03/09/17 10:23	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 14:10	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:13	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:10	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	412385	03/03/17 12:31	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-5A:022217

Date Collected: 02/22/17 10:24
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 16:28	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 16:28	MRS	TAL SPK
Total/NA	Prep	3520C			1034.8 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 21:55	W1T	TAL SEA
Total/NA	Prep	3520C	DL		1034.8 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D	DL	5			239800	03/06/17 21:17	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 13:09	NMI	TAL SPK
Total/NA	Prep	3510C			251.2 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 23:20	DCV	TAL SEA
Total/NA	Prep	3510C			259.6 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 20:57	NMI	TAL SPK
Total/NA	Prep	3510C			1034 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 05:11	AMB1	TAL DEN
Total/NA	Prep	8151A			1029.5 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/06/17 22:59	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			238.3 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 16:04	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 12:32	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 12:32	CBW	TAL SPK
Total/NA	Prep	8290			1029.7 mL	20 uL	154275	03/10/17 08:23	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154960	03/13/17 21:08	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 11:52	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:33	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:22	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240082	03/09/17 10:23	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 14:12	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:16	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410932	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	411685	03/02/17 15:11	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	412385	03/03/17 12:31	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Client Sample ID: MW-5:022217
Date Collected: 02/22/17 11:44
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 16:50	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 16:50	MRS	TAL SPK
Total/NA	Prep	3520C			1029.9 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 22:20	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 13:34	NMI	TAL SPK
Total/NA	Prep	3510C			254.5 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 23:39	DCV	TAL SEA
Total/NA	Prep	3510C			256.3 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 21:18	NMI	TAL SPK
Total/NA	Prep	3510C			1030.8 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 05:42	AMB1	TAL DEN
Total/NA	Prep	8151A			1030.1 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/06/17 23:21	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			240.2 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 16:21	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 12:44	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 12:44	CBW	TAL SPK
Total/NA	Prep	8290			1027.8 mL	20 uL	154275	03/10/17 08:23	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154960	03/13/17 21:54	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 11:57	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:37	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:24	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 12:40	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:17	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:44	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	412385	03/03/17 12:31	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Client Sample ID: MW-15:022217
Date Collected: 02/22/17 13:25
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 17:12	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 17:12	MRS	TAL SPK
Total/NA	Prep	3520C			1038.3 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 22:44	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 13:58	NMI	TAL SPK
Total/NA	Prep	3510C			262.6 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	02/28/17 23:58	DCV	TAL SEA
Total/NA	Prep	3510C			263.3 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 21:39	NMI	TAL SPK
Total/NA	Prep	3510C			1006.6 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 06:14	AMB1	TAL DEN
Total/NA	Prep	8151A			977.5 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/06/17 23:44	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			227.6 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 16:55	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 13:32	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 13:32	CBW	TAL SPK
Total/NA	Prep	8290			1036.6 mL	20 uL	154275	03/10/17 08:23	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154960	03/13/17 22:40	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 12:01	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:42	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:31	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 12:50	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:17	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:45	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	412385	03/03/17 12:31	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-15A:022217

Date Collected: 02/22/17 14:40
Date Received: 02/23/17 11:20

Lab Sample ID: 590-5559-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 17:33	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 17:33	MRS	TAL SPK
Total/NA	Prep	3520C			910.4 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 23:09	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 14:23	NMI	TAL SPK
Total/NA	Prep	3510C			256.8 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	03/01/17 00:17	DCV	TAL SEA
Total/NA	Prep	3510C			246 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 21:59	NMI	TAL SPK
Total/NA	Prep	3510C			842.1 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 06:45	AMB1	TAL DEN
Total/NA	Prep	8151A			901.4 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/07/17 00:07	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			223.4 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 17:13	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 14:09	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 14:09	CBW	TAL SPK
Total/NA	Prep	8290			898.7 mL	20 uL	154275	03/10/17 08:24	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154964	03/14/17 09:47	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 12:06	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:46	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:33	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 12:52	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:18	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:46	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411595	03/01/17 21:04	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: MW-9A:022217

Date Collected: 02/22/17 13:21
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 17:55	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 17:55	MRS	TAL SPK
Total/NA	Prep	3520C			1035.6 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 23:33	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 14:48	NMI	TAL SPK
Total/NA	Prep	3510C			256 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	03/01/17 00:36	DCV	TAL SEA
Total/NA	Prep	3510C			255.6 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 22:20	NMI	TAL SPK
Total/NA	Prep	3510C			1034.3 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 07:17	AMB1	TAL DEN
Total/NA	Prep	8151A			1031.4 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/07/17 00:30	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			245.4 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 17:30	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 14:21	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 14:21	CBW	TAL SPK
Total/NA	Prep	8290			1030.7 mL	20 uL	154275	03/10/17 11:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154964	03/14/17 10:33	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 12:10	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:50	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:36	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 12:54	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:19	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:47	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411595	03/01/17 21:21	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Client Sample ID: MW-12A:022217
Date Collected: 02/22/17 16:19
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 18:17	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 18:17	MRS	TAL SPK
Total/NA	Prep	3520C			1025.2 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/03/17 23:57	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 15:37	NMI	TAL SPK
Total/NA	Prep	3510C			250.7 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	03/01/17 00:55	DCV	TAL SEA
Total/NA	Prep	3510C			248.5 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 22:41	NMI	TAL SPK
Total/NA	Prep	3510C			1031.1 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 07:48	AMB1	TAL DEN
Total/NA	Prep	8151A			1032.4 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/07/17 01:16	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			236.1 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 17:47	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 14:33	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 14:33	CBW	TAL SPK
Total/NA	Prep	8290			1032.6 mL	20 uL	154275	03/10/17 11:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154964	03/14/17 11:19	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 12:15	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:55	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:38	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 13:01	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:20	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:20	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:48	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411595	03/01/17 21:38	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Client Sample ID: Dup:022217

Date Collected: 02/22/17 08:00
Date Received: 02/23/17 11:00

Lab Sample ID: 590-5559-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 19:00	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 19:00	MRS	TAL SPK
Total/NA	Prep	3520C			1031.5 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/04/17 00:22	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 16:01	NMI	TAL SPK
Total/NA	Prep	3510C			251.8 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	03/01/17 01:14	DCV	TAL SEA
Total/NA	Prep	3510C			261.4 mL	2 mL	10839	02/23/17 12:49	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	10828	02/23/17 23:22	NMI	TAL SPK
Total/NA	Prep	3510C			1027.7 mL	2 mL	363945	03/01/17 17:19	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	364803	03/09/17 08:20	AMB1	TAL DEN
Total/NA	Prep	8151A			1028.6 mL	10 mL	363686	02/28/17 10:10	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			364437	03/07/17 01:39	DAW	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			237.1 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 18:04	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10831	02/23/17 14:45	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10832	02/23/17 14:45	CBW	TAL SPK
Total/NA	Prep	8290			1029.2 mL	20 uL	154275	03/10/17 11:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154964	03/14/17 12:05	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 12:19	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 16:59	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:40	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 13:03	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:31	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:21	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:49	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411084	02/28/17 16:50	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411595	03/01/17 21:54	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10840	02/23/17 11:50	REA	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-5559 Chain of Custody

estAmerica
LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / MJP	Lab PM: Arrington, Randee E	No: 2241-784.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 2
Company: GeoEngineers Inc			Job #:
Address: 523 East Second Ave	Due Date Requested: Std.		
City: Spokane	TAT Requested (days): Std.		
State, Zip: WA, 99202			
Phone: 4066239 509-363-3125	PO #: Purchase Order not required		
Email: jmlee@geoengineers.com	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site: Marshall Landfill	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	5310C - Total Organic Carbon (TOC)	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
MW-7D: 022217	2/22/17	1030	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	
MW-7B: 022217		1155		Water																	
MW-5A: 022217		1024		Water																	
MW-5B: 022217		1144		Water																	
MW-15: 022217		1325		Water																	
MW-15A: 022217		1440		Water																	
MW-9A: 022217		1321		Water																	
MW-12A: 022217		1619		Water																	
dup: 022217		0800		Water																	
				Water																	
				Water																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 2/23/2017 11:00	Company: GEI	Received by: Sheila Kraly	Date/Time: 2/23/17 11:00	Company: TA Spok		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.2°C, 2.4°C, 2.3°C, 1.8°C, 3.0°C IR0041

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML / MJP	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 2 of 2
Company: GeoEngineers Inc				Job #
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
MW-7D: 022217	2/22/17	1030	G	Water	N		X	X	X	3	
MW-7B: 022217		1155		Water							
MW-5A: 022217		1024		Water							
MW-5B: 022217		1144		Water							
MW-15: 022217		1325		Water							
MW-15A: 022217		1440		Water							
MW-9A: 022217		1321		Water							
MW-12A: 022217		1619		Water							
dup: 022217		0800		Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	2/23/2017 11:00	GEI	Sheila Frost	2/23/17 11:00	TA SPOK
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.2°C, 2.4°C, 2.3°C, 1.8°C, 3.0°C TROCK

3/21/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2499.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 4955 Yarrow Street,	Due Date Requested: 3/7/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP Herbicide (Aqueous)	8141B/3510C Standard 8141 list	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-7D:022217 (590-5559-1)	2/22/17	10:30 Pacific		Water			X	X	4	
MW-7B:022217 (590-5559-2)	2/22/17	11:55 Pacific		Water			X	X	4	
MW-15:022217 (590-5559-5)	2/22/17	13:25 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Hall	2/23/17 1550	TAL SPK	Reed Pratt	2-24-17 1010	TAL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: ~~2-24-17~~ 0.4, 0.6, 0.1, 0.6 IR#70.6 Transfer RP 2-24-17

3/21/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2493.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 4955 Yarrow Street,	Due Date Requested: 3/7/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-5A:022217 (590-5559-3)	2/22/17	10:24 Pacific		Water			X	X	4	
MW-5B:022217 (590-5559-4)	2/22/17	11:44 Pacific		Water			X	X	4	
MW-15A:022217 (590-5559-6)	2/22/17	14:40 Pacific		Water			X	X	4	
MW-9A:022217 (590-5559-7)	2/22/17	13:21 Pacific		Water			X	X	4	
MW-12A:022217 (590-5559-8)	2/22/17	16:19 Pacific		Water			X	X	3	
Dup:022217 (590-5559-9)	2/22/17	08:00 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Krack	2/23/17 12:20	TA Spok	Rec'd PM	2-24-17 1010	TAL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2494.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/13/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-5A:022217 (590-5559-3)	2/22/17	10:24 Pacific		Water			X	2	
MW-5B:022217 (590-5559-4)	2/22/17	11:44 Pacific		Water			X	2	
MW-15A:022217 (590-5559-6)	2/22/17	14:40 Pacific		Water			X	2	
MW-9A:022217 (590-5559-7)	2/22/17	13:21 Pacific		Water			X	2	
MW-12A:022217 (590-5559-8)	2/22/17	16:19 Pacific		Water			X	2	
Dup:022217 (590-5559-9)	2/22/17	08:00 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Kratz	2/23/17 12:25	TA Spok		2-24-17 950	TA Spok
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.4, 2.9

3/21/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2500.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/13/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7D:022217 (590-5559-1)	2/22/17	10:30 Pacific		Water			X	2	
MW-7B:022217 (590-5559-2)	2/22/17	11:55 Pacific		Water			X	2	
MW-15:022217 (590-5559-5)	2/22/17	13:25 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Brad	2/23/17 1600	TA Spok		2-24-17 950	TA Spok
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.9

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

W403,W417,TOC6

COOLER RECEIPT FORM

590-5559 Chain of Custody

Cooler Received/Opened On 2/24/2017 @ 0950

Time Samples Removed From Cooler 1341 Time Samples Placed In Storage 1518 (2 Hour Window)

1. Tracking # 5090 (last 4 digits, FedEx) Courier: ___FedEx___

IR Gun ID__17960353_ pH Strip Lot__HC693124_____ Chlorine Strip Lot__081116K_____

2. Temperature of rep. sample or temp blank when opened: 0.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 front

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) HRG

7. Were custody seals on containers: YES (NO) and Intact YES...NO..(NA)

Were these signed and dated correctly? YES...NO..(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES..(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO..(NA)

14. Was there a Trip Blank in this cooler? YES..(NO)..NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) AT

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES..(NO)..NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) SW

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)..NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) SW

I certify that I attached a label with the unique LIMS number to each container (intial) SW

21. Were there Non-Conformance issues at login? YES..(NO) Was a NCM generated? YES..(NO)..#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12 15 15

3/21/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-5559

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

3/21/2017

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-2496.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 3/7/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	350.1/Distill_Ammonia Ammonia	335.4/Distill_CN Total Cyanide									Total Number of containers	Special Instructions/Note:
			Preservation Code:																	
MW-7D:022217 (590-5559-1)	2/22/17	10:30 Pacific		Water			X	X	X	X									3	
MW-7B:022217 (590-5559-2)	2/22/17	11:55 Pacific		Water			X	X	X	X									3	
MW-5A:022217 (590-5559-3)	2/22/17	10:24 Pacific		Water			X	X	X	X									3	
MW-5B:022217 (590-5559-4)	2/22/17	11:44 Pacific		Water			X	X	X	X									3	
MW-15:022217 (590-5559-5)	2/22/17	13:25 Pacific		Water			X	X	X	X									3	
MW-15A:022217 (590-5559-6)	2/22/17	14:40 Pacific		Water			X	X	X	X									3	
MW-9A:022217 (590-5559-7)	2/22/17	13:21 Pacific		Water			X	X	X	X									3	
MW-12A:022217 (590-5559-8)	2/22/17	16:19 Pacific		Water			X	X	X	X									3	
Dup:022217 (590-5559-9)	2/22/17	08:00 Pacific		Water			X	X	X	X									3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Sheila Kraly	Date/Time: 2/23/17 1415	Company TA SPK	Received by:	Date/Time: 2/24/17 0850	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2495.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 5755 8th Street East,	Due Date Requested: 3/7/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-7D:022217 (590-5559-1)	2/22/17	10:30 Pacific		Water			X	X	X	X	X	X	4	
MW-7B:022217 (590-5559-2)	2/22/17	11:05 Pacific		Water			X	X	X	X	X	X	3	
MW-5A:022217 (590-5559-3)	2/22/17	10:24 Pacific		Water			X	X	X	X	X	X	6	
MW-5B:022217 (590-5559-4)	2/22/17	11:44 Pacific		Water			X	X	X	X	X	X	6	
MW-15:022217 (590-5559-5)	2/22/17	13:25 Pacific		Water			X	X	X	X	X	X	4	
MW-15A:022217 (590-5559-6)	2/22/17	14:40 Pacific		Water			X	X	X	X	X	X	6	
MW-9A:022217 (590-5559-7)	2/22/17	13:21 Pacific		Water			X	X	X	X	X	X	6	
MW-12A:022217 (590-5559-8)	2/22/17	16:19 Pacific		Water			X	X	X	X	X	X	6	
Dup:022217 (590-5559-9)	2/22/17	08:00 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sheila Kraft	2/23/17 1240	TA-Spok	W. Bruce McDermott	2/24/17 0925	TA-Sea
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

cooler 3 IR5 0.2/0.4 w/cs cooler 2 IR5 0.6/0.8 w/cs cooler 1 IR5 2.1/2.3 w/cs

3/21/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2498.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5559-1
Address: 5755 8th Street East,	Due Date Requested: 3/7/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D/3520C Standard Reporting List	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-7D:022217 (590-5559-1)	2/22/17	10:30 Pacific		Water			X	X	X	X	X	X	2	
MW-7B:022217 (590-5559-2)	2/22/17	11:55 Pacific		Water			X	X	X	X	X	X	2	
MW-15:022217 (590-5559-5)	2/22/17	13:25 Pacific		Water			X	X	X	X	X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Shelli Knoll	2/23/17 1520	TA-Spok	Mi-Ponci McDermott	2/24/17 0925	TA-Seq
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

IR5 0.8/1.0 W/CS

3/21/2017

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5559-1

Login Number: 5559
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5559-1

Login Number: 5559
List Number: 5
Creator: True, Joshua A

List Source: TestAmerica Denver
List Creation: 02/24/17 03:49 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5559-1

Login Number: 5559
List Number: 4
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 02/24/17 03:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5559-1

Login Number: 5559
List Number: 6
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 02/25/17 03:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5559-1

Login Number: 5559
List Number: 2
Creator: Ponce-McDermott, Monica

List Source: TestAmerica Seattle
List Creation: 02/24/17 11:20 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR5 0.8/1.0 w/cs
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5559-1

Login Number: 5559
List Number: 3
Creator: Ponce-McDermott, Monica

List Source: TestAmerica Seattle
List Creation: 02/24/17 11:44 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR5 0.2/0.4 w/cs 0.6/0.8 w/cs 2.1/2.3 w/cs
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5559-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5559-1	MW-7D:022217	87	83	88	81	99	82	89	86
590-5559-2	MW-7B:022217	82	81	87	82	105	83	91	91
590-5559-3	MW-5A:022217	90	88	98	91	114	86	92	94
590-5559-4	MW-5:022217	85	83	89	84	106	86	93	93
590-5559-5	MW-15:022217	81	75	85	79	107	89	97	94
590-5559-6	MW-15A:022217	76	73	78	73	98	76	86	87
590-5559-7	MW-9A:022217	74	69	76	71	97	74	81	83
590-5559-8	MW-12A:022217	85	81	89	85	110	83	91	92
590-5559-9	Dup:022217	86	87	98	90	105	83	95	96
LCS 320-154030/2-A	Lab Control Sample	92	86	96	88	99	84	89	86
LCS 320-154275/2-A	Lab Control Sample	95	89	101	97	104	84	91	92
LCSD 320-154030/3-A	Lab Control Sample Dup	85	84	91	84	99	83	91	87
LCSD 320-154275/3-A	Lab Control Sample Dup	85	80	85	81	95	75	89	87
MB 320-154030/1-A	Method Blank	84	79	85	77	95	77	83	81
MB 320-154275/1-A	Method Blank	83	81	83	78	101	77	82	86

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5559-1	MW-7D:022217	94
590-5559-2	MW-7B:022217	87
590-5559-3	MW-5A:022217	86
590-5559-4	MW-5:022217	90
590-5559-5	MW-15:022217	92
590-5559-6	MW-15A:022217	80
590-5559-7	MW-9A:022217	78
590-5559-8	MW-12A:022217	88
590-5559-9	Dup:022217	89
LCS 320-154030/2-A	Lab Control Sample	92
LCS 320-154275/2-A	Lab Control Sample	88
LCSD 320-154030/3-A	Lab Control Sample Dup	93
LCSD 320-154275/3-A	Lab Control Sample Dup	85
MB 320-154030/1-A	Method Blank	85
MB 320-154275/1-A	Method Blank	77

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5571-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
3/14/2017 10:31:33 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5571-1	LFB-8:022417	Air	02/24/17 12:45	02/24/17 16:55
590-5571-2	LFB-9:022417	Air	02/24/17 13:00	02/24/17 16:55
590-5571-3	LFB-11:022417	Air	02/24/17 13:20	02/24/17 16:55
590-5571-4	LFB-10:022417	Air	02/24/17 13:40	02/24/17 16:55
590-5571-5	LFB-3:022417	Air	02/24/17 14:00	02/24/17 16:55
590-5571-6	LFB-4:022417	Air	02/24/17 14:20	02/24/17 16:55
590-5571-7	LFB-15:022417	Air	02/24/17 14:40	02/24/17 16:55
590-5571-8	LFB-16:022417	Air	02/24/17 15:00	02/24/17 16:55
590-5571-9	LFB-17:022417	Air	02/24/17 15:20	02/24/17 16:55
590-5571-10	LFB-5:022417	Air	02/24/17 15:40	02/24/17 16:55

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-8:022417
Date Collected: 02/24/17 12:45
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.9		ppb v/v			03/03/17 20:16	9.7
1,1,2,2-Tetrachloroethane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,1,2-Trichloroethane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,1-Dichloroethane	**3.6**		2.9		ppb v/v			03/03/17 20:16	9.7
1,1-Dichloroethene	ND		7.8		ppb v/v			03/03/17 20:16	9.7
1,2,4-Trichlorobenzene	ND		19		ppb v/v			03/03/17 20:16	9.7
1,2,4-Trimethylbenzene	ND		7.8		ppb v/v			03/03/17 20:16	9.7
1,2-Dibromoethane (EDB)	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Allyl chloride	ND		7.8		ppb v/v			03/03/17 20:16	9.7
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**7.5**		3.9		ppb v/v			03/03/17 20:16	9.7
1,2-Dichlorobenzene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,2-Dichloroethane	ND		7.8		ppb v/v			03/03/17 20:16	9.7
1,2-Dichloropropane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,3,5-Trimethylbenzene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,3-Dichlorobenzene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,4-Dichlorobenzene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
2-Butanone (MEK)	ND		7.8		ppb v/v			03/03/17 20:16	9.7
2-Hexanone	ND		3.9		ppb v/v			03/03/17 20:16	9.7
1,3-Butadiene	ND		7.8		ppb v/v			03/03/17 20:16	9.7
4-Ethyltoluene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
4-Methyl-2-pentanone (MIBK)	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Acetone	ND		49		ppb v/v			03/03/17 20:16	9.7
Benzene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Benzyl chloride	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Bromodichloromethane	ND		2.9		ppb v/v			03/03/17 20:16	9.7
Bromoform	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Bromomethane	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Carbon disulfide	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Carbon tetrachloride	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Chlorobenzene	ND		2.9		ppb v/v			03/03/17 20:16	9.7
Chloroethane	**24**		7.8		ppb v/v			03/03/17 20:16	9.7
Chloroform	ND		2.9		ppb v/v			03/03/17 20:16	9.7
Chloromethane	ND		7.8		ppb v/v			03/03/17 20:16	9.7
cis-1,2-Dichloroethene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
cis-1,3-Dichloropropene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Dibromochloromethane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Dichlorodifluoromethane	**50**		3.9		ppb v/v			03/03/17 20:16	9.7
Ethylbenzene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Hexachlorobutadiene	ND		19		ppb v/v			03/03/17 20:16	9.7
m,p-Xylene	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Methylene Chloride	ND		3.9		ppb v/v			03/03/17 20:16	9.7
o-Xylene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Styrene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Tetrachloroethene	**9.3**		3.9		ppb v/v			03/03/17 20:16	9.7
Toluene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
2-Chlorotoluene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
trans-1,2-Dichloroethene	ND		3.9		ppb v/v			03/03/17 20:16	9.7

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-8:022417
Date Collected: 02/24/17 12:45
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Cyclohexane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Trichloroethene	**12**		3.9		ppb v/v			03/03/17 20:16	9.7
Trichlorofluoromethane	**11**		3.9		ppb v/v			03/03/17 20:16	9.7
Vinyl acetate	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Vinyl chloride	**9.7**		3.9		ppb v/v			03/03/17 20:16	9.7
1,4-Dioxane	ND		7.8		ppb v/v			03/03/17 20:16	9.7
n-Heptane	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Hexane	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Isopropylbenzene	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Methyl-t-Butyl Ether (MTBE)	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Methyl methacrylate	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Naphthalene	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Propylene	**310**		3.9		ppb v/v			03/03/17 20:16	9.7
Tetrahydrofuran	ND		7.8		ppb v/v			03/03/17 20:16	9.7
2,2,4-Trimethylpentane	ND		3.9		ppb v/v			03/03/17 20:16	9.7
Vinyl bromide	ND		7.8		ppb v/v			03/03/17 20:16	9.7
Ethanol	ND		9.7		ppb v/v			03/03/17 20:16	9.7
2-Propanol	ND		19		ppb v/v			03/03/17 20:16	9.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.016		mg/m3			03/03/17 20:16	9.7
1,1,2,2-Tetrachloroethane	ND		0.027		mg/m3			03/03/17 20:16	9.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.030		mg/m3			03/03/17 20:16	9.7
1,1,2-Trichloroethane	ND		0.021		mg/m3			03/03/17 20:16	9.7
1,1-Dichloroethane	**0.015**		0.012		mg/m3			03/03/17 20:16	9.7
1,1-Dichloroethene	ND		0.031		mg/m3			03/03/17 20:16	9.7
1,2,4-Trichlorobenzene	ND		0.14		mg/m3			03/03/17 20:16	9.7
1,2,4-Trimethylbenzene	ND		0.038		mg/m3			03/03/17 20:16	9.7
1,2-Dibromoethane (EDB)	ND		0.060		mg/m3			03/03/17 20:16	9.7
Allyl chloride	ND		0.024		mg/m3			03/03/17 20:16	9.7
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.052**		0.027		mg/m3			03/03/17 20:16	9.7
1,2-Dichlorobenzene	ND		0.023		mg/m3			03/03/17 20:16	9.7
1,2-Dichloroethane	ND		0.031		mg/m3			03/03/17 20:16	9.7
1,2-Dichloropropane	ND		0.018		mg/m3			03/03/17 20:16	9.7
1,3,5-Trimethylbenzene	ND		0.019		mg/m3			03/03/17 20:16	9.7
1,3-Dichlorobenzene	ND		0.023		mg/m3			03/03/17 20:16	9.7
1,4-Dichlorobenzene	ND		0.023		mg/m3			03/03/17 20:16	9.7
2-Butanone (MEK)	ND		0.023		mg/m3			03/03/17 20:16	9.7
2-Hexanone	ND		0.016		mg/m3			03/03/17 20:16	9.7
1,3-Butadiene	ND		0.017		mg/m3			03/03/17 20:16	9.7
4-Ethyltoluene	ND		0.019		mg/m3			03/03/17 20:16	9.7
4-Methyl-2-pentanone (MIBK)	ND		0.016		mg/m3			03/03/17 20:16	9.7
Acetone	ND		0.12		mg/m3			03/03/17 20:16	9.7
Benzene	ND		0.012		mg/m3			03/03/17 20:16	9.7
Benzyl chloride	ND		0.040		mg/m3			03/03/17 20:16	9.7
Bromodichloromethane	ND		0.019		mg/m3			03/03/17 20:16	9.7
Bromoform	ND		0.040		mg/m3			03/03/17 20:16	9.7
Bromomethane	ND		0.030		mg/m3			03/03/17 20:16	9.7

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-8:022417
Date Collected: 02/24/17 12:45
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-1
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		0.024		mg/m3			03/03/17 20:16	9.7
Carbon tetrachloride	ND		0.049		mg/m3			03/03/17 20:16	9.7
Chlorobenzene	ND		0.013		mg/m3			03/03/17 20:16	9.7
Chloroethane	**0.062**		0.020		mg/m3			03/03/17 20:16	9.7
Chloroform	ND		0.014		mg/m3			03/03/17 20:16	9.7
Chloromethane	ND		0.016		mg/m3			03/03/17 20:16	9.7
cis-1,2-Dichloroethene	ND		0.015		mg/m3			03/03/17 20:16	9.7
cis-1,3-Dichloropropene	ND		0.018		mg/m3			03/03/17 20:16	9.7
Dibromochloromethane	ND		0.033		mg/m3			03/03/17 20:16	9.7
Dichlorodifluoromethane	**0.24**		0.019		mg/m3			03/03/17 20:16	9.7
Ethylbenzene	ND		0.017		mg/m3			03/03/17 20:16	9.7
Hexachlorobutadiene	ND		0.21		mg/m3			03/03/17 20:16	9.7
m,p-Xylene	ND		0.034		mg/m3			03/03/17 20:16	9.7
Methylene Chloride	ND		0.013		mg/m3			03/03/17 20:16	9.7
o-Xylene	ND		0.017		mg/m3			03/03/17 20:16	9.7
Styrene	ND		0.017		mg/m3			03/03/17 20:16	9.7
Tetrachloroethene	**0.063**		0.026		mg/m3			03/03/17 20:16	9.7
Toluene	ND		0.015		mg/m3			03/03/17 20:16	9.7
2-Chlorotoluene	ND		0.020		mg/m3			03/03/17 20:16	9.7
trans-1,2-Dichloroethene	ND		0.015		mg/m3			03/03/17 20:16	9.7
trans-1,3-Dichloropropene	ND		0.018		mg/m3			03/03/17 20:16	9.7
Cyclohexane	ND		0.013		mg/m3			03/03/17 20:16	9.7
Trichloroethene	**0.065**		0.021		mg/m3			03/03/17 20:16	9.7
Trichlorofluoromethane	**0.060**		0.022		mg/m3			03/03/17 20:16	9.7
Vinyl acetate	ND		0.027		mg/m3			03/03/17 20:16	9.7
Vinyl chloride	**0.025**		0.0099		mg/m3			03/03/17 20:16	9.7
1,4-Dioxane	ND		0.028		mg/m3			03/03/17 20:16	9.7
n-Heptane	ND		0.032		mg/m3			03/03/17 20:16	9.7
Hexane	ND		0.027		mg/m3			03/03/17 20:16	9.7
Isopropylbenzene	ND		0.038		mg/m3			03/03/17 20:16	9.7
Methyl-t-Butyl Ether (MTBE)	ND		0.028		mg/m3			03/03/17 20:16	9.7
Methyl methacrylate	ND		0.032		mg/m3			03/03/17 20:16	9.7
Naphthalene	ND		0.041		mg/m3			03/03/17 20:16	9.7
Propylene	**0.53**		0.0067		mg/m3			03/03/17 20:16	9.7
Tetrahydrofuran	ND		0.023		mg/m3			03/03/17 20:16	9.7
2,2,4-Trimethylpentane	ND		0.018		mg/m3			03/03/17 20:16	9.7
Vinyl bromide	ND		0.034		mg/m3			03/03/17 20:16	9.7
Ethanol	ND		0.018		mg/m3			03/03/17 20:16	9.7
2-Propanol	ND		0.048		mg/m3			03/03/17 20:16	9.7

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*		*03/03/17 20:16*	*9.7*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*03/03/17 20:16*	*9.7*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/03/17 20:16*	*9.7*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		970		ppb v/v			03/09/17 21:33	9.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		4.0		mg/m3			03/09/17 21:33	9.7

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*03/09/17 21:33*	*9.7*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/09/17 21:33*	*9.7*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/09/17 21:33*	*9.7*

Client Sample ID: LFB-9:022417

Lab Sample ID: 590-5571-2

Date Collected: 02/24/17 13:00

Matrix: Air

Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.1		ppb v/v			03/07/17 22:06	3.83
1,1,2,2-Tetrachloroethane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,1,2-Trichloroethane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,1-Dichloroethane	ND		1.1		ppb v/v			03/07/17 22:06	3.83
1,1-Dichloroethene	ND		3.1		ppb v/v			03/07/17 22:06	3.83
1,2,4-Trichlorobenzene	ND		7.7		ppb v/v			03/07/17 22:06	3.83
1,2,4-Trimethylbenzene	ND		3.1		ppb v/v			03/07/17 22:06	3.83
1,2-Dibromoethane (EDB)	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Allyl chloride	ND		3.1		ppb v/v			03/07/17 22:06	3.83
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**3.5**		1.5		ppb v/v			03/07/17 22:06	3.83
1,2-Dichlorobenzene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,2-Dichloroethane	ND		3.1		ppb v/v			03/07/17 22:06	3.83
1,2-Dichloropropane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,3,5-Trimethylbenzene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,3-Dichlorobenzene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,4-Dichlorobenzene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
2-Butanone (MEK)	ND		3.1		ppb v/v			03/07/17 22:06	3.83
2-Hexanone	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,3-Butadiene	ND		3.1		ppb v/v			03/07/17 22:06	3.83
4-Ethyltoluene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
4-Methyl-2-pentanone (MIBK)	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Acetone	ND		19		ppb v/v			03/07/17 22:06	3.83
Benzene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Benzyl chloride	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Bromodichloromethane	ND		1.1		ppb v/v			03/07/17 22:06	3.83
Bromoform	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Bromomethane	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Carbon disulfide	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Carbon tetrachloride	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Chlorobenzene	ND		1.1		ppb v/v			03/07/17 22:06	3.83
Chloroethane	**5.0**		3.1		ppb v/v			03/07/17 22:06	3.83
Chloroform	ND		1.1		ppb v/v			03/07/17 22:06	3.83
Chloromethane	ND		3.1		ppb v/v			03/07/17 22:06	3.83
cis-1,2-Dichloroethene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
cis-1,3-Dichloropropene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Dibromochloromethane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Dichlorodifluoromethane	**21**		1.5		ppb v/v			03/07/17 22:06	3.83
Ethylbenzene	**6.9**		1.5		ppb v/v			03/07/17 22:06	3.83
Hexachlorobutadiene	ND		7.7		ppb v/v			03/07/17 22:06	3.83
m,p-Xylene	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Methylene Chloride	ND		1.5		ppb v/v			03/07/17 22:06	3.83
o-Xylene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Styrene	ND		1.5		ppb v/v			03/07/17 22:06	3.83

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-9:022417
Date Collected: 02/24/17 13:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**4.9**		1.5		ppb v/v			03/07/17 22:06	3.83
Toluene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
2-Chlorotoluene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
trans-1,2-Dichloroethene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
trans-1,3-Dichloropropene	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Cyclohexane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Trichloroethene	**6.2**		1.5		ppb v/v			03/07/17 22:06	3.83
Trichlorofluoromethane	**120**		1.5		ppb v/v			03/07/17 22:06	3.83
Vinyl acetate	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Vinyl chloride	ND		1.5		ppb v/v			03/07/17 22:06	3.83
1,4-Dioxane	ND		3.1		ppb v/v			03/07/17 22:06	3.83
n-Heptane	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Hexane	**7.6**		3.1		ppb v/v			03/07/17 22:06	3.83
Isopropylbenzene	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Methyl-t-Butyl Ether (MTBE)	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Methyl methacrylate	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Naphthalene	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Propylene	**10**		1.5		ppb v/v			03/07/17 22:06	3.83
Tetrahydrofuran	ND		3.1		ppb v/v			03/07/17 22:06	3.83
2,2,4-Trimethylpentane	ND		1.5		ppb v/v			03/07/17 22:06	3.83
Vinyl bromide	ND		3.1		ppb v/v			03/07/17 22:06	3.83
Ethanol	ND		3.8		ppb v/v			03/07/17 22:06	3.83
2-Propanol	ND		7.7		ppb v/v			03/07/17 22:06	3.83

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0063		mg/m3			03/07/17 22:06	3.83
1,1,2,2-Tetrachloroethane	ND		0.011		mg/m3			03/07/17 22:06	3.83
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.012		mg/m3			03/07/17 22:06	3.83
1,1,2-Trichloroethane	ND		0.0084		mg/m3			03/07/17 22:06	3.83
1,1-Dichloroethane	ND		0.0047		mg/m3			03/07/17 22:06	3.83
1,1-Dichloroethene	ND		0.012		mg/m3			03/07/17 22:06	3.83
1,2,4-Trichlorobenzene	ND		0.057		mg/m3			03/07/17 22:06	3.83
1,2,4-Trimethylbenzene	ND		0.015		mg/m3			03/07/17 22:06	3.83
1,2-Dibromoethane (EDB)	ND		0.024		mg/m3			03/07/17 22:06	3.83
Allyl chloride	ND		0.0096		mg/m3			03/07/17 22:06	3.83
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.025**		0.011		mg/m3			03/07/17 22:06	3.83
1,2-Dichlorobenzene	ND		0.0092		mg/m3			03/07/17 22:06	3.83
1,2-Dichloroethane	ND		0.012		mg/m3			03/07/17 22:06	3.83
1,2-Dichloropropane	ND		0.0071		mg/m3			03/07/17 22:06	3.83
1,3,5-Trimethylbenzene	ND		0.0075		mg/m3			03/07/17 22:06	3.83
1,3-Dichlorobenzene	ND		0.0092		mg/m3			03/07/17 22:06	3.83
1,4-Dichlorobenzene	ND		0.0092		mg/m3			03/07/17 22:06	3.83
2-Butanone (MEK)	ND		0.0090		mg/m3			03/07/17 22:06	3.83
2-Hexanone	ND		0.0063		mg/m3			03/07/17 22:06	3.83
1,3-Butadiene	ND		0.0068		mg/m3			03/07/17 22:06	3.83
4-Ethyltoluene	ND		0.0075		mg/m3			03/07/17 22:06	3.83
4-Methyl-2-pentanone (MIBK)	ND		0.0063		mg/m3			03/07/17 22:06	3.83
Acetone	ND		0.045		mg/m3			03/07/17 22:06	3.83
Benzene	ND		0.0049		mg/m3			03/07/17 22:06	3.83

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-9:022417
Date Collected: 02/24/17 13:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-2
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl chloride	ND		0.016		mg/m3			03/07/17 22:06	3.83
Bromodichloromethane	ND		0.0077		mg/m3			03/07/17 22:06	3.83
Bromoform	ND		0.016		mg/m3			03/07/17 22:06	3.83
Bromomethane	ND		0.012		mg/m3			03/07/17 22:06	3.83
Carbon disulfide	ND		0.0095		mg/m3			03/07/17 22:06	3.83
Carbon tetrachloride	ND		0.019		mg/m3			03/07/17 22:06	3.83
Chlorobenzene	ND		0.0053		mg/m3			03/07/17 22:06	3.83
Chloroethane	**0.013**		0.0081		mg/m3			03/07/17 22:06	3.83
Chloroform	ND		0.0056		mg/m3			03/07/17 22:06	3.83
Chloromethane	ND		0.0063		mg/m3			03/07/17 22:06	3.83
cis-1,2-Dichloroethene	ND		0.0061		mg/m3			03/07/17 22:06	3.83
cis-1,3-Dichloropropene	ND		0.0070		mg/m3			03/07/17 22:06	3.83
Dibromochloromethane	ND		0.013		mg/m3			03/07/17 22:06	3.83
Dichlorodifluoromethane	**0.11**		0.0076		mg/m3			03/07/17 22:06	3.83
Ethylbenzene	**0.030**		0.0067		mg/m3			03/07/17 22:06	3.83
Hexachlorobutadiene	ND		0.082		mg/m3			03/07/17 22:06	3.83
m,p-Xylene	ND		0.013		mg/m3			03/07/17 22:06	3.83
Methylene Chloride	ND		0.0053		mg/m3			03/07/17 22:06	3.83
o-Xylene	ND		0.0067		mg/m3			03/07/17 22:06	3.83
Styrene	ND		0.0065		mg/m3			03/07/17 22:06	3.83
Tetrachloroethene	**0.033**		0.010		mg/m3			03/07/17 22:06	3.83
Toluene	ND		0.0058		mg/m3			03/07/17 22:06	3.83
2-Chlorotoluene	ND		0.0079		mg/m3			03/07/17 22:06	3.83
trans-1,2-Dichloroethene	ND		0.0061		mg/m3			03/07/17 22:06	3.83
trans-1,3-Dichloropropene	ND		0.0070		mg/m3			03/07/17 22:06	3.83
Cyclohexane	ND		0.0053		mg/m3			03/07/17 22:06	3.83
Trichloroethene	**0.033**		0.0082		mg/m3			03/07/17 22:06	3.83
Trichlorofluoromethane	**0.70**		0.0086		mg/m3			03/07/17 22:06	3.83
Vinyl acetate	ND		0.011		mg/m3			03/07/17 22:06	3.83
Vinyl chloride	ND		0.0039		mg/m3			03/07/17 22:06	3.83
1,4-Dioxane	ND		0.011		mg/m3			03/07/17 22:06	3.83
n-Heptane	ND		0.013		mg/m3			03/07/17 22:06	3.83
Hexane	**0.027**		0.011		mg/m3			03/07/17 22:06	3.83
Isopropylbenzene	ND		0.015		mg/m3			03/07/17 22:06	3.83
Methyl-t-Butyl Ether (MTBE)	ND		0.011		mg/m3			03/07/17 22:06	3.83
Methyl methacrylate	ND		0.013		mg/m3			03/07/17 22:06	3.83
Naphthalene	ND		0.016		mg/m3			03/07/17 22:06	3.83
Propylene	**0.017**		0.0026		mg/m3			03/07/17 22:06	3.83
Tetrahydrofuran	ND		0.0090		mg/m3			03/07/17 22:06	3.83
2,2,4-Trimethylpentane	ND		0.0072		mg/m3			03/07/17 22:06	3.83
Vinyl bromide	ND		0.013		mg/m3			03/07/17 22:06	3.83
Ethanol	ND		0.0072		mg/m3			03/07/17 22:06	3.83
2-Propanol	ND		0.019		mg/m3			03/07/17 22:06	3.83

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*03/07/17 22:06*	*3.83*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*03/07/17 22:06*	*3.83*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/07/17 22:06*	*3.83*

Client Sample ID: LFB-9:022417

Date Collected: 02/24/17 13:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-2

Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**490**		380		ppb v/v			03/09/17 22:16	3.83

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**2.0**		1.6		mg/m3			03/09/17 22:16	3.83

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*03/09/17 22:16*	*3.83*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*03/09/17 22:16*	*3.83*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/09/17 22:16*	*3.83*

Client Sample ID: LFB-11:022417

Date Collected: 02/24/17 13:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-3

Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		7.0		ppb v/v			03/03/17 21:58	23.4
1,1,2,2-Tetrachloroethane	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,1,2-Trichloroethane	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,1-Dichloroethane	**8.0**		7.0		ppb v/v			03/03/17 21:58	23.4
1,1-Dichloroethene	ND		19		ppb v/v			03/03/17 21:58	23.4
1,2,4-Trichlorobenzene	ND		47		ppb v/v			03/03/17 21:58	23.4
1,2,4-Trimethylbenzene	**340**		19		ppb v/v			03/03/17 21:58	23.4
1,2-Dibromoethane (EDB)	ND		19		ppb v/v			03/03/17 21:58	23.4
Allyl chloride	ND		19		ppb v/v			03/03/17 21:58	23.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**23**		9.4		ppb v/v			03/03/17 21:58	23.4
1,2-Dichlorobenzene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,2-Dichloroethane	ND		19		ppb v/v			03/03/17 21:58	23.4
1,2-Dichloropropane	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,3,5-Trimethylbenzene	**62**		9.4		ppb v/v			03/03/17 21:58	23.4
1,3-Dichlorobenzene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,4-Dichlorobenzene	**130**		9.4		ppb v/v			03/03/17 21:58	23.4
2-Butanone (MEK)	ND		19		ppb v/v			03/03/17 21:58	23.4
2-Hexanone	ND		9.4		ppb v/v			03/03/17 21:58	23.4
1,3-Butadiene	ND		19		ppb v/v			03/03/17 21:58	23.4
4-Ethyltoluene	**42**		9.4		ppb v/v			03/03/17 21:58	23.4
4-Methyl-2-pentanone (MIBK)	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Acetone	ND		120		ppb v/v			03/03/17 21:58	23.4
Benzene	**140**		9.4		ppb v/v			03/03/17 21:58	23.4
Benzyl chloride	ND		19		ppb v/v			03/03/17 21:58	23.4
Bromodichloromethane	ND		7.0		ppb v/v			03/03/17 21:58	23.4
Bromoform	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Bromomethane	ND		19		ppb v/v			03/03/17 21:58	23.4
Carbon disulfide	ND		19		ppb v/v			03/03/17 21:58	23.4
Carbon tetrachloride	ND		19		ppb v/v			03/03/17 21:58	23.4
Chlorobenzene	**37**		7.0		ppb v/v			03/03/17 21:58	23.4
Chloroethane	**990**		19		ppb v/v			03/03/17 21:58	23.4

Client Sample ID: LFB-11:022417
Date Collected: 02/24/17 13:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		7.0		ppb v/v			03/03/17 21:58	23.4
Chloromethane	ND		19		ppb v/v			03/03/17 21:58	23.4
cis-1,2-Dichloroethene	**66**		9.4		ppb v/v			03/03/17 21:58	23.4
cis-1,3-Dichloropropene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Dibromochloromethane	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Dichlorodifluoromethane	**71**		9.4		ppb v/v			03/03/17 21:58	23.4
Hexachlorobutadiene	ND		47		ppb v/v			03/03/17 21:58	23.4
m,p-Xylene	**250**		19		ppb v/v			03/03/17 21:58	23.4
Methylene Chloride	ND		9.4		ppb v/v			03/03/17 21:58	23.4
o-Xylene	**120**		9.4		ppb v/v			03/03/17 21:58	23.4
Styrene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Tetrachloroethene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Toluene	**65**		9.4		ppb v/v			03/03/17 21:58	23.4
2-Chlorotoluene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
trans-1,2-Dichloroethene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
trans-1,3-Dichloropropene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Cyclohexane	**110**		9.4		ppb v/v			03/03/17 21:58	23.4
Trichloroethene	ND		9.4		ppb v/v			03/03/17 21:58	23.4
Trichlorofluoromethane	**110**		9.4		ppb v/v			03/03/17 21:58	23.4
Vinyl acetate	ND		19		ppb v/v			03/03/17 21:58	23.4
Vinyl chloride	**17**		9.4		ppb v/v			03/03/17 21:58	23.4
1,4-Dioxane	ND		19		ppb v/v			03/03/17 21:58	23.4
n-Heptane	**760**		19		ppb v/v			03/03/17 21:58	23.4
Isopropylbenzene	**200**		19		ppb v/v			03/03/17 21:58	23.4
Methyl-t-Butyl Ether (MTBE)	ND		19		ppb v/v			03/03/17 21:58	23.4
Methyl methacrylate	ND		19		ppb v/v			03/03/17 21:58	23.4
Naphthalene	**24**		19		ppb v/v			03/03/17 21:58	23.4
Tetrahydrofuran	**160**		19		ppb v/v			03/03/17 21:58	23.4
2,2,4-Trimethylpentane	**14**		9.4		ppb v/v			03/03/17 21:58	23.4
Vinyl bromide	ND		19		ppb v/v			03/03/17 21:58	23.4
Ethanol	ND		23		ppb v/v			03/03/17 21:58	23.4
2-Propanol	ND		47		ppb v/v			03/03/17 21:58	23.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.038		mg/m3			03/03/17 21:58	23.4
1,1,2,2-Tetrachloroethane	ND		0.064		mg/m3			03/03/17 21:58	23.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.072		mg/m3			03/03/17 21:58	23.4
1,1,2-Trichloroethane	ND		0.051		mg/m3			03/03/17 21:58	23.4
1,1-Dichloroethane	**0.032**		0.028		mg/m3			03/03/17 21:58	23.4
1,1-Dichloroethene	ND		0.074		mg/m3			03/03/17 21:58	23.4
1,2,4-Trichlorobenzene	ND		0.35		mg/m3			03/03/17 21:58	23.4
1,2,4-Trimethylbenzene	**1.7**		0.092		mg/m3			03/03/17 21:58	23.4
1,2-Dibromoethane (EDB)	ND		0.14		mg/m3			03/03/17 21:58	23.4
Allyl chloride	ND		0.059		mg/m3			03/03/17 21:58	23.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.16**		0.065		mg/m3			03/03/17 21:58	23.4
1,2-Dichlorobenzene	ND		0.056		mg/m3			03/03/17 21:58	23.4
1,2-Dichloroethane	ND		0.076		mg/m3			03/03/17 21:58	23.4
1,2-Dichloropropane	ND		0.043		mg/m3			03/03/17 21:58	23.4
1,3,5-Trimethylbenzene	**0.31**		0.046		mg/m3			03/03/17 21:58	23.4

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-11:022417
Date Collected: 02/24/17 13:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-3
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.056		mg/m3			03/03/17 21:58	23.4
1,4-Dichlorobenzene	**0.79**		0.056		mg/m3			03/03/17 21:58	23.4
2-Butanone (MEK)	ND		0.055		mg/m3			03/03/17 21:58	23.4
2-Hexanone	ND		0.038		mg/m3			03/03/17 21:58	23.4
1,3-Butadiene	ND		0.041		mg/m3			03/03/17 21:58	23.4
4-Ethyltoluene	**0.21**		0.046		mg/m3			03/03/17 21:58	23.4
4-Methyl-2-pentanone (MIBK)	ND		0.038		mg/m3			03/03/17 21:58	23.4
Acetone	ND		0.28		mg/m3			03/03/17 21:58	23.4
Benzene	**0.43**		0.030		mg/m3			03/03/17 21:58	23.4
Benzyl chloride	ND		0.097		mg/m3			03/03/17 21:58	23.4
Bromodichloromethane	ND		0.047		mg/m3			03/03/17 21:58	23.4
Bromoform	ND		0.097		mg/m3			03/03/17 21:58	23.4
Bromomethane	ND		0.073		mg/m3			03/03/17 21:58	23.4
Carbon disulfide	ND		0.058		mg/m3			03/03/17 21:58	23.4
Carbon tetrachloride	ND		0.12		mg/m3			03/03/17 21:58	23.4
Chlorobenzene	**0.17**		0.032		mg/m3			03/03/17 21:58	23.4
Chloroethane	**2.6**		0.049		mg/m3			03/03/17 21:58	23.4
Chloroform	ND		0.034		mg/m3			03/03/17 21:58	23.4
Chloromethane	ND		0.039		mg/m3			03/03/17 21:58	23.4
cis-1,2-Dichloroethene	**0.26**		0.037		mg/m3			03/03/17 21:58	23.4
cis-1,3-Dichloropropene	ND		0.042		mg/m3			03/03/17 21:58	23.4
Dibromochloromethane	ND		0.080		mg/m3			03/03/17 21:58	23.4
Dichlorodifluoromethane	**0.35**		0.046		mg/m3			03/03/17 21:58	23.4
Hexachlorobutadiene	ND		0.50		mg/m3			03/03/17 21:58	23.4
m,p-Xylene	**1.1**		0.081		mg/m3			03/03/17 21:58	23.4
Methylene Chloride	ND		0.033		mg/m3			03/03/17 21:58	23.4
o-Xylene	**0.52**		0.041		mg/m3			03/03/17 21:58	23.4
Styrene	ND		0.040		mg/m3			03/03/17 21:58	23.4
Tetrachloroethene	ND		0.063		mg/m3			03/03/17 21:58	23.4
Toluene	**0.24**		0.035		mg/m3			03/03/17 21:58	23.4
2-Chlorotoluene	ND		0.048		mg/m3			03/03/17 21:58	23.4
trans-1,2-Dichloroethene	ND		0.037		mg/m3			03/03/17 21:58	23.4
trans-1,3-Dichloropropene	ND		0.042		mg/m3			03/03/17 21:58	23.4
Cyclohexane	**0.37**		0.032		mg/m3			03/03/17 21:58	23.4
Trichloroethene	ND		0.050		mg/m3			03/03/17 21:58	23.4
Trichlorofluoromethane	**0.62**		0.053		mg/m3			03/03/17 21:58	23.4
Vinyl acetate	ND		0.066		mg/m3			03/03/17 21:58	23.4
Vinyl chloride	**0.044**		0.024		mg/m3			03/03/17 21:58	23.4
1,4-Dioxane	ND		0.067		mg/m3			03/03/17 21:58	23.4
n-Heptane	**3.1**		0.077		mg/m3			03/03/17 21:58	23.4
Isopropylbenzene	**0.99**		0.092		mg/m3			03/03/17 21:58	23.4
Methyl-t-Butyl Ether (MTBE)	ND		0.067		mg/m3			03/03/17 21:58	23.4
Methyl methacrylate	ND		0.077		mg/m3			03/03/17 21:58	23.4
Naphthalene	**0.13**		0.098		mg/m3			03/03/17 21:58	23.4
Tetrahydrofuran	**0.47**		0.055		mg/m3			03/03/17 21:58	23.4
2,2,4-Trimethylpentane	**0.066**		0.044		mg/m3			03/03/17 21:58	23.4
Vinyl bromide	ND		0.082		mg/m3			03/03/17 21:58	23.4
Ethanol	ND		0.044		mg/m3			03/03/17 21:58	23.4
2-Propanol	ND		0.12		mg/m3			03/03/17 21:58	23.4

Client Sample ID: LFB-11:022417

Date Collected: 02/24/17 13:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-3

Matrix: Air

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*03/03/17 21:58*	*23.4*
4-Bromofluorobenzene (Surr)	*141*	*X*	*70 - 130*		*03/03/17 21:58*	*23.4*
Toluene-d8 (Surr)	*108*		*70 - 130*		*03/03/17 21:58*	*23.4*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**1600**		23		ppb v/v			03/07/17 22:57	57.7
Hexane	**1900**		46		ppb v/v			03/07/17 22:57	57.7
Propylene	**1600**		23		ppb v/v			03/07/17 22:57	57.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**6.7**		0.10		mg/m3			03/07/17 22:57	57.7
Hexane	**6.6**		0.16		mg/m3			03/07/17 22:57	57.7
Propylene	**2.7**		0.040		mg/m3			03/07/17 22:57	57.7

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/07/17 22:57*	*57.7*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*		*03/07/17 22:57*	*57.7*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/07/17 22:57*	*57.7*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RADL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**89000**		5800		ppb v/v			03/09/17 23:00	57.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**360**		24		mg/m3			03/09/17 23:00	57.7

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*03/09/17 23:00*	*57.7*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*03/09/17 23:00*	*57.7*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/09/17 23:00*	*57.7*

Client Sample ID: LFB-10:022417

Date Collected: 02/24/17 13:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-4

Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.92**		0.30		ppb v/v			03/07/17 23:53	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			03/07/17 23:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.72**		0.40		ppb v/v			03/07/17 23:53	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			03/07/17 23:53	1
1,1-Dichloroethane	ND		0.30		ppb v/v			03/07/17 23:53	1
1,1-Dichloroethene	ND		0.80		ppb v/v			03/07/17 23:53	1
1,2,4-Trichlorobenzene	ND		2.0		ppb v/v			03/07/17 23:53	1
1,2,4-Trimethylbenzene	**1.3**		0.80		ppb v/v			03/07/17 23:53	1
1,2-Dibromoethane (EDB)	ND		0.80		ppb v/v			03/07/17 23:53	1
Allyl chloride	ND		0.80		ppb v/v			03/07/17 23:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**2.7**		0.40		ppb v/v			03/07/17 23:53	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			03/07/17 23:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-10:022417
Date Collected: 02/24/17 13:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.80		ppb v/v			03/07/17 23:53	1
1,2-Dichloropropane	ND		0.40		ppb v/v			03/07/17 23:53	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			03/07/17 23:53	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			03/07/17 23:53	1
1,4-Dichlorobenzene	**0.64**		0.40		ppb v/v			03/07/17 23:53	1
2-Butanone (MEK)	ND		0.80		ppb v/v			03/07/17 23:53	1
2-Hexanone	ND		0.40		ppb v/v			03/07/17 23:53	1
1,3-Butadiene	ND		0.80		ppb v/v			03/07/17 23:53	1
4-Ethyltoluene	ND		0.40		ppb v/v			03/07/17 23:53	1
4-Methyl-2-pentanone (MIBK)	ND		0.40		ppb v/v			03/07/17 23:53	1
Acetone	ND		5.0		ppb v/v			03/07/17 23:53	1
Benzene	**1.2**		0.40		ppb v/v			03/07/17 23:53	1
Benzyl chloride	ND		0.80		ppb v/v			03/07/17 23:53	1
Bromodichloromethane	ND		0.30		ppb v/v			03/07/17 23:53	1
Bromoform	ND		0.40		ppb v/v			03/07/17 23:53	1
Bromomethane	ND		0.80		ppb v/v			03/07/17 23:53	1
Carbon disulfide	ND		0.80		ppb v/v			03/07/17 23:53	1
Carbon tetrachloride	ND		0.80		ppb v/v			03/07/17 23:53	1
Chlorobenzene	ND		0.30		ppb v/v			03/07/17 23:53	1
Chloroethane	**4.5**		0.80		ppb v/v			03/07/17 23:53	1
Chloroform	ND		0.30		ppb v/v			03/07/17 23:53	1
Chloromethane	ND		0.80		ppb v/v			03/07/17 23:53	1
cis-1,2-Dichloroethene	ND		0.40		ppb v/v			03/07/17 23:53	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			03/07/17 23:53	1
Dibromochloromethane	ND		0.40		ppb v/v			03/07/17 23:53	1
Dichlorodifluoromethane	**12**		0.40		ppb v/v			03/07/17 23:53	1
Ethylbenzene	**7.5**		0.40		ppb v/v			03/07/17 23:53	1
Hexachlorobutadiene	ND		2.0		ppb v/v			03/07/17 23:53	1
m,p-Xylene	**1.2**		0.80		ppb v/v			03/07/17 23:53	1
Methylene Chloride	ND		0.40		ppb v/v			03/07/17 23:53	1
o-Xylene	**0.55**		0.40		ppb v/v			03/07/17 23:53	1
Styrene	ND		0.40		ppb v/v			03/07/17 23:53	1
Tetrachloroethene	**17**		0.40		ppb v/v			03/07/17 23:53	1
Toluene	ND		0.40		ppb v/v			03/07/17 23:53	1
2-Chlorotoluene	ND		0.40		ppb v/v			03/07/17 23:53	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			03/07/17 23:53	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			03/07/17 23:53	1
Cyclohexane	**0.46**		0.40		ppb v/v			03/07/17 23:53	1
Trichloroethene	**0.93**		0.40		ppb v/v			03/07/17 23:53	1
Trichlorofluoromethane	**18**		0.40		ppb v/v			03/07/17 23:53	1
Vinyl acetate	ND		0.80		ppb v/v			03/07/17 23:53	1
Vinyl chloride	ND		0.40		ppb v/v			03/07/17 23:53	1
1,4-Dioxane	ND		0.80		ppb v/v			03/07/17 23:53	1
n-Heptane	**3.0**		0.80		ppb v/v			03/07/17 23:53	1
Hexane	**7.4**		0.80		ppb v/v			03/07/17 23:53	1
Isopropylbenzene	**0.84**		0.80		ppb v/v			03/07/17 23:53	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80		ppb v/v			03/07/17 23:53	1
Methyl methacrylate	ND		0.80		ppb v/v			03/07/17 23:53	1
Naphthalene	**1.7**		0.80		ppb v/v			03/07/17 23:53	1

Client Sample ID: LFB-10:022417
Date Collected: 02/24/17 13:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propylene	**8.0**		0.40		ppb v/v			03/07/17 23:53	1
Tetrahydrofuran	**0.84**		0.80		ppb v/v			03/07/17 23:53	1
2,2,4-Trimethylpentane	ND		0.40		ppb v/v			03/07/17 23:53	1
Vinyl bromide	ND		0.80		ppb v/v			03/07/17 23:53	1
Ethanol	ND		1.0		ppb v/v			03/07/17 23:53	1
2-Propanol	ND		2.0		ppb v/v			03/07/17 23:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.0050**		0.0016		mg/m3			03/07/17 23:53	1
1,1,2,2-Tetrachloroethane	ND		0.0027		mg/m3			03/07/17 23:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.0055**		0.0031		mg/m3			03/07/17 23:53	1
1,1,2-Trichloroethane	ND		0.0022		mg/m3			03/07/17 23:53	1
1,1-Dichloroethane	ND		0.0012		mg/m3			03/07/17 23:53	1
1,1-Dichloroethene	ND		0.0032		mg/m3			03/07/17 23:53	1
1,2,4-Trichlorobenzene	ND		0.015		mg/m3			03/07/17 23:53	1
1,2,4-Trimethylbenzene	**0.0066**		0.0039		mg/m3			03/07/17 23:53	1
1,2-Dibromoethane (EDB)	ND		0.0061		mg/m3			03/07/17 23:53	1
Allyl chloride	ND		0.0025		mg/m3			03/07/17 23:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.019**		0.0028		mg/m3			03/07/17 23:53	1
1,2-Dichlorobenzene	ND		0.0024		mg/m3			03/07/17 23:53	1
1,2-Dichloroethane	ND		0.0032		mg/m3			03/07/17 23:53	1
1,2-Dichloropropane	ND		0.0018		mg/m3			03/07/17 23:53	1
1,3,5-Trimethylbenzene	ND		0.0020		mg/m3			03/07/17 23:53	1
1,3-Dichlorobenzene	ND		0.0024		mg/m3			03/07/17 23:53	1
1,4-Dichlorobenzene	**0.0038**		0.0024		mg/m3			03/07/17 23:53	1
2-Butanone (MEK)	ND		0.0024		mg/m3			03/07/17 23:53	1
2-Hexanone	ND		0.0016		mg/m3			03/07/17 23:53	1
1,3-Butadiene	ND		0.0018		mg/m3			03/07/17 23:53	1
4-Ethyltoluene	ND		0.0020		mg/m3			03/07/17 23:53	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016		mg/m3			03/07/17 23:53	1
Acetone	ND		0.012		mg/m3			03/07/17 23:53	1
Benzene	**0.0039**		0.0013		mg/m3			03/07/17 23:53	1
Benzyl chloride	ND		0.0041		mg/m3			03/07/17 23:53	1
Bromodichloromethane	ND		0.0020		mg/m3			03/07/17 23:53	1
Bromoform	ND		0.0041		mg/m3			03/07/17 23:53	1
Bromomethane	ND		0.0031		mg/m3			03/07/17 23:53	1
Carbon disulfide	ND		0.0025		mg/m3			03/07/17 23:53	1
Carbon tetrachloride	ND		0.0050		mg/m3			03/07/17 23:53	1
Chlorobenzene	ND		0.0014		mg/m3			03/07/17 23:53	1
Chloroethane	**0.012**		0.0021		mg/m3			03/07/17 23:53	1
Chloroform	ND		0.0015		mg/m3			03/07/17 23:53	1
Chloromethane	ND		0.0017		mg/m3			03/07/17 23:53	1
cis-1,2-Dichloroethene	ND		0.0016		mg/m3			03/07/17 23:53	1
cis-1,3-Dichloropropene	ND		0.0018		mg/m3			03/07/17 23:53	1
Dibromochloromethane	ND		0.0034		mg/m3			03/07/17 23:53	1
Dichlorodifluoromethane	**0.057**		0.0020		mg/m3			03/07/17 23:53	1
Ethylbenzene	**0.033**		0.0017		mg/m3			03/07/17 23:53	1
Hexachlorobutadiene	ND		0.021		mg/m3			03/07/17 23:53	1
m,p-Xylene	**0.0052**		0.0035		mg/m3			03/07/17 23:53	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-10:022417
Date Collected: 02/24/17 13:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-4
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.0014		mg/m3			03/07/17 23:53	1
o-Xylene	**0.0024**		0.0017		mg/m3			03/07/17 23:53	1
Styrene	ND		0.0017		mg/m3			03/07/17 23:53	1
Tetrachloroethene	**0.12**		0.0027		mg/m3			03/07/17 23:53	1
Toluene	ND		0.0015		mg/m3			03/07/17 23:53	1
2-Chlorotoluene	ND		0.0021		mg/m3			03/07/17 23:53	1
trans-1,2-Dichloroethene	ND		0.0016		mg/m3			03/07/17 23:53	1
trans-1,3-Dichloropropene	ND		0.0018		mg/m3			03/07/17 23:53	1
Cyclohexane	**0.0016**		0.0014		mg/m3			03/07/17 23:53	1
Trichloroethene	**0.0050**		0.0021		mg/m3			03/07/17 23:53	1
Trichlorofluoromethane	**0.10**		0.0022		mg/m3			03/07/17 23:53	1
Vinyl acetate	ND		0.0028		mg/m3			03/07/17 23:53	1
Vinyl chloride	ND		0.0010		mg/m3			03/07/17 23:53	1
1,4-Dioxane	ND		0.0029		mg/m3			03/07/17 23:53	1
n-Heptane	**0.012**		0.0033		mg/m3			03/07/17 23:53	1
Hexane	**0.026**		0.0028		mg/m3			03/07/17 23:53	1
Isopropylbenzene	**0.0041**		0.0039		mg/m3			03/07/17 23:53	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029		mg/m3			03/07/17 23:53	1
Methyl methacrylate	ND		0.0033		mg/m3			03/07/17 23:53	1
Naphthalene	**0.0089**		0.0042		mg/m3			03/07/17 23:53	1
Propylene	**0.014**		0.00069		mg/m3			03/07/17 23:53	1
Tetrahydrofuran	**0.0025**		0.0024		mg/m3			03/07/17 23:53	1
2,2,4-Trimethylpentane	ND		0.0019		mg/m3			03/07/17 23:53	1
Vinyl bromide	ND		0.0035		mg/m3			03/07/17 23:53	1
Ethanol	ND		0.0019		mg/m3			03/07/17 23:53	1
2-Propanol	ND		0.0049		mg/m3			03/07/17 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 130*		*03/07/17 23:53*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/07/17 23:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/07/17 23:53*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**370**		100		ppb v/v			03/10/17 00:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**1.5**		0.41		mg/m3			03/10/17 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*03/10/17 00:00*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*03/10/17 00:00*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/10/17 00:00*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-3:022417
Date Collected: 02/24/17 14:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.1		ppb v/v			03/03/17 23:43	20.4
1,1,2,2-Tetrachloroethane	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,1,2-Trichloroethane	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,1-Dichloroethane	ND		6.1		ppb v/v			03/03/17 23:43	20.4
1,1-Dichloroethene	ND		16		ppb v/v			03/03/17 23:43	20.4
1,2,4-Trichlorobenzene	ND		41		ppb v/v			03/03/17 23:43	20.4
1,2,4-Trimethylbenzene	**47**		16		ppb v/v			03/03/17 23:43	20.4
1,2-Dibromoethane (EDB)	ND		16		ppb v/v			03/03/17 23:43	20.4
Allyl chloride	ND		16		ppb v/v			03/03/17 23:43	20.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**20**		8.2		ppb v/v			03/03/17 23:43	20.4
1,2-Dichlorobenzene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,2-Dichloroethane	ND		16		ppb v/v			03/03/17 23:43	20.4
1,2-Dichloropropane	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,3,5-Trimethylbenzene	**27**		8.2		ppb v/v			03/03/17 23:43	20.4
1,3-Dichlorobenzene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,4-Dichlorobenzene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
2-Butanone (MEK)	ND		16		ppb v/v			03/03/17 23:43	20.4
2-Hexanone	ND		8.2		ppb v/v			03/03/17 23:43	20.4
1,3-Butadiene	ND		16		ppb v/v			03/03/17 23:43	20.4
4-Ethyltoluene	**16**		8.2		ppb v/v			03/03/17 23:43	20.4
4-Methyl-2-pentanone (MIBK)	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Acetone	ND		100		ppb v/v			03/03/17 23:43	20.4
Benzene	**66**		8.2		ppb v/v			03/03/17 23:43	20.4
Benzyl chloride	ND		16		ppb v/v			03/03/17 23:43	20.4
Bromodichloromethane	ND		6.1		ppb v/v			03/03/17 23:43	20.4
Bromoform	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Bromomethane	ND		16		ppb v/v			03/03/17 23:43	20.4
Carbon disulfide	**740**		16		ppb v/v			03/03/17 23:43	20.4
Carbon tetrachloride	ND		16		ppb v/v			03/03/17 23:43	20.4
Chlorobenzene	**82**		6.1		ppb v/v			03/03/17 23:43	20.4
Chloroethane	ND		16		ppb v/v			03/03/17 23:43	20.4
Chloroform	ND		6.1		ppb v/v			03/03/17 23:43	20.4
Chloromethane	**45**		16		ppb v/v			03/03/17 23:43	20.4
cis-1,2-Dichloroethene	**18**		8.2		ppb v/v			03/03/17 23:43	20.4
cis-1,3-Dichloropropene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Dibromochloromethane	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Dichlorodifluoromethane	**49**		8.2		ppb v/v			03/03/17 23:43	20.4
Ethylbenzene	**100**		8.2		ppb v/v			03/03/17 23:43	20.4
Hexachlorobutadiene	ND		41		ppb v/v			03/03/17 23:43	20.4
m,p-Xylene	**74**		16		ppb v/v			03/03/17 23:43	20.4
Methylene Chloride	ND		8.2		ppb v/v			03/03/17 23:43	20.4
o-Xylene	**51**		8.2		ppb v/v			03/03/17 23:43	20.4
Styrene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Tetrachloroethene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Toluene	**39**		8.2		ppb v/v			03/03/17 23:43	20.4
2-Chlorotoluene	**48**		8.2		ppb v/v			03/03/17 23:43	20.4
trans-1,2-Dichloroethene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
trans-1,3-Dichloropropene	ND		8.2		ppb v/v			03/03/17 23:43	20.4

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-3:022417
Date Collected: 02/24/17 14:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	**12**		8.2		ppb v/v			03/03/17 23:43	20.4
Trichloroethene	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Trichlorofluoromethane	ND		8.2		ppb v/v			03/03/17 23:43	20.4
Vinyl acetate	ND		16		ppb v/v			03/03/17 23:43	20.4
Vinyl chloride	**460**		8.2		ppb v/v			03/03/17 23:43	20.4
1,4-Dioxane	ND		16		ppb v/v			03/03/17 23:43	20.4
n-Heptane	**68**		16		ppb v/v			03/03/17 23:43	20.4
Hexane	**79**		16		ppb v/v			03/03/17 23:43	20.4
Isopropylbenzene	**53**		16		ppb v/v			03/03/17 23:43	20.4
Methyl-t-Butyl Ether (MTBE)	ND		16		ppb v/v			03/03/17 23:43	20.4
Methyl methacrylate	ND		16		ppb v/v			03/03/17 23:43	20.4
Naphthalene	ND		16		ppb v/v			03/03/17 23:43	20.4
Propylene	**480**		8.2		ppb v/v			03/03/17 23:43	20.4
Tetrahydrofuran	**56**		16		ppb v/v			03/03/17 23:43	20.4
2,2,4-Trimethylpentane	**12**		8.2		ppb v/v			03/03/17 23:43	20.4
Vinyl bromide	ND		16		ppb v/v			03/03/17 23:43	20.4
Ethanol	ND		20		ppb v/v			03/03/17 23:43	20.4
2-Propanol	ND		41		ppb v/v			03/03/17 23:43	20.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.033		mg/m3			03/03/17 23:43	20.4
1,1,2,2-Tetrachloroethane	ND		0.056		mg/m3			03/03/17 23:43	20.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.063		mg/m3			03/03/17 23:43	20.4
1,1,2-Trichloroethane	ND		0.045		mg/m3			03/03/17 23:43	20.4
1,1-Dichloroethane	ND		0.025		mg/m3			03/03/17 23:43	20.4
1,1-Dichloroethene	ND		0.065		mg/m3			03/03/17 23:43	20.4
1,2,4-Trichlorobenzene	ND		0.30		mg/m3			03/03/17 23:43	20.4
1,2,4-Trimethylbenzene	**0.23**		0.080		mg/m3			03/03/17 23:43	20.4
1,2-Dibromoethane (EDB)	ND		0.13		mg/m3			03/03/17 23:43	20.4
Allyl chloride	ND		0.051		mg/m3			03/03/17 23:43	20.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.14**		0.057		mg/m3			03/03/17 23:43	20.4
1,2-Dichlorobenzene	ND		0.049		mg/m3			03/03/17 23:43	20.4
1,2-Dichloroethane	ND		0.066		mg/m3			03/03/17 23:43	20.4
1,2-Dichloropropane	ND		0.038		mg/m3			03/03/17 23:43	20.4
1,3,5-Trimethylbenzene	**0.13**		0.040		mg/m3			03/03/17 23:43	20.4
1,3-Dichlorobenzene	ND		0.049		mg/m3			03/03/17 23:43	20.4
1,4-Dichlorobenzene	ND		0.049		mg/m3			03/03/17 23:43	20.4
2-Butanone (MEK)	ND		0.048		mg/m3			03/03/17 23:43	20.4
2-Hexanone	ND		0.033		mg/m3			03/03/17 23:43	20.4
1,3-Butadiene	ND		0.036		mg/m3			03/03/17 23:43	20.4
4-Ethyltoluene	**0.078**		0.040		mg/m3			03/03/17 23:43	20.4
4-Methyl-2-pentanone (MIBK)	ND		0.033		mg/m3			03/03/17 23:43	20.4
Acetone	ND		0.24		mg/m3			03/03/17 23:43	20.4
Benzene	**0.21**		0.026		mg/m3			03/03/17 23:43	20.4
Benzyl chloride	ND		0.084		mg/m3			03/03/17 23:43	20.4
Bromodichloromethane	ND		0.041		mg/m3			03/03/17 23:43	20.4
Bromoform	ND		0.084		mg/m3			03/03/17 23:43	20.4
Bromomethane	ND		0.063		mg/m3			03/03/17 23:43	20.4
Carbon disulfide	**2.3**		0.051		mg/m3			03/03/17 23:43	20.4

Client Sample ID: LFB-3:022417
Date Collected: 02/24/17 14:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-5
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.10		mg/m3			03/03/17 23:43	20.4
Chlorobenzene	**0.38**		0.028		mg/m3			03/03/17 23:43	20.4
Chloroethane	ND		0.043		mg/m3			03/03/17 23:43	20.4
Chloroform	ND		0.030		mg/m3			03/03/17 23:43	20.4
Chloromethane	**0.093**		0.034		mg/m3			03/03/17 23:43	20.4
cis-1,2-Dichloroethene	**0.072**		0.032		mg/m3			03/03/17 23:43	20.4
cis-1,3-Dichloropropene	ND		0.037		mg/m3			03/03/17 23:43	20.4
Dibromochloromethane	ND		0.070		mg/m3			03/03/17 23:43	20.4
Dichlorodifluoromethane	**0.24**		0.040		mg/m3			03/03/17 23:43	20.4
Ethylbenzene	**0.43**		0.035		mg/m3			03/03/17 23:43	20.4
Hexachlorobutadiene	ND		0.44		mg/m3			03/03/17 23:43	20.4
m,p-Xylene	**0.32**		0.071		mg/m3			03/03/17 23:43	20.4
Methylene Chloride	ND		0.028		mg/m3			03/03/17 23:43	20.4
o-Xylene	**0.22**		0.035		mg/m3			03/03/17 23:43	20.4
Styrene	ND		0.035		mg/m3			03/03/17 23:43	20.4
Tetrachloroethene	ND		0.055		mg/m3			03/03/17 23:43	20.4
Toluene	**0.15**		0.031		mg/m3			03/03/17 23:43	20.4
2-Chlorotoluene	**0.25**		0.042		mg/m3			03/03/17 23:43	20.4
trans-1,2-Dichloroethene	ND		0.032		mg/m3			03/03/17 23:43	20.4
trans-1,3-Dichloropropene	ND		0.037		mg/m3			03/03/17 23:43	20.4
Cyclohexane	**0.040**		0.028		mg/m3			03/03/17 23:43	20.4
Trichloroethene	ND		0.044		mg/m3			03/03/17 23:43	20.4
Trichlorofluoromethane	ND		0.046		mg/m3			03/03/17 23:43	20.4
Vinyl acetate	ND		0.057		mg/m3			03/03/17 23:43	20.4
Vinyl chloride	**1.2**		0.021		mg/m3			03/03/17 23:43	20.4
1,4-Dioxane	ND		0.059		mg/m3			03/03/17 23:43	20.4
n-Heptane	**0.28**		0.067		mg/m3			03/03/17 23:43	20.4
Hexane	**0.28**		0.058		mg/m3			03/03/17 23:43	20.4
Isopropylbenzene	**0.26**		0.080		mg/m3			03/03/17 23:43	20.4
Methyl-t-Butyl Ether (MTBE)	ND		0.059		mg/m3			03/03/17 23:43	20.4
Methyl methacrylate	ND		0.067		mg/m3			03/03/17 23:43	20.4
Naphthalene	ND		0.086		mg/m3			03/03/17 23:43	20.4
Propylene	**0.83**		0.014		mg/m3			03/03/17 23:43	20.4
Tetrahydrofuran	**0.17**		0.048		mg/m3			03/03/17 23:43	20.4
2,2,4-Trimethylpentane	**0.055**		0.038		mg/m3			03/03/17 23:43	20.4
Vinyl bromide	ND		0.071		mg/m3			03/03/17 23:43	20.4
Ethanol	ND		0.038		mg/m3			03/03/17 23:43	20.4
2-Propanol	ND		0.10		mg/m3			03/03/17 23:43	20.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*03/03/17 23:43*	*20.4*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*		*03/03/17 23:43*	*20.4*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/03/17 23:43*	*20.4*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**46000**		2000		ppb v/v			03/10/17 00:44	20.4

Client Sample ID: LFB-3:022417

Lab Sample ID: 590-5571-5

Date Collected: 02/24/17 14:00

Matrix: Air

Date Received: 02/24/17 16:55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**190**		8.3		mg/m3			03/10/17 00:44	20.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*03/10/17 00:44*	*20.4*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*		*03/10/17 00:44*	*20.4*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/10/17 00:44*	*20.4*

Client Sample ID: LFB-4:022417

Lab Sample ID: 590-5571-6

Date Collected: 02/24/17 14:20

Matrix: Air

Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		7.7		ppb v/v			03/04/17 00:35	25.7
1,1,2,2-Tetrachloroethane	ND		10		ppb v/v			03/04/17 00:35	25.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ppb v/v			03/04/17 00:35	25.7
1,1,2-Trichloroethane	ND		10		ppb v/v			03/04/17 00:35	25.7
1,1-Dichloroethane	ND		7.7		ppb v/v			03/04/17 00:35	25.7
1,1-Dichloroethene	ND		21		ppb v/v			03/04/17 00:35	25.7
1,2,4-Trichlorobenzene	ND		51		ppb v/v			03/04/17 00:35	25.7
1,2,4-Trimethylbenzene	**53**		21		ppb v/v			03/04/17 00:35	25.7
1,2-Dibromoethane (EDB)	ND		21		ppb v/v			03/04/17 00:35	25.7
Allyl chloride	ND		21		ppb v/v			03/04/17 00:35	25.7
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**100**		10		ppb v/v			03/04/17 00:35	25.7
1,2-Dichlorobenzene	ND		10		ppb v/v			03/04/17 00:35	25.7
1,2-Dichloroethane	ND		21		ppb v/v			03/04/17 00:35	25.7
1,2-Dichloropropane	ND		10		ppb v/v			03/04/17 00:35	25.7
1,3,5-Trimethylbenzene	**22**		10		ppb v/v			03/04/17 00:35	25.7
1,3-Dichlorobenzene	ND		10		ppb v/v			03/04/17 00:35	25.7
1,4-Dichlorobenzene	**75**		10		ppb v/v			03/04/17 00:35	25.7
2-Butanone (MEK)	ND		21		ppb v/v			03/04/17 00:35	25.7
2-Hexanone	ND		10		ppb v/v			03/04/17 00:35	25.7
1,3-Butadiene	ND		21		ppb v/v			03/04/17 00:35	25.7
4-Ethyltoluene	**12**		10		ppb v/v			03/04/17 00:35	25.7
4-Methyl-2-pentanone (MIBK)	ND		10		ppb v/v			03/04/17 00:35	25.7
Acetone	ND		130		ppb v/v			03/04/17 00:35	25.7
Benzene	**44**		10		ppb v/v			03/04/17 00:35	25.7
Benzyl chloride	ND		21		ppb v/v			03/04/17 00:35	25.7
Bromodichloromethane	ND		7.7		ppb v/v			03/04/17 00:35	25.7
Bromoform	ND		10		ppb v/v			03/04/17 00:35	25.7
Bromomethane	ND		21		ppb v/v			03/04/17 00:35	25.7
Carbon disulfide	ND		21		ppb v/v			03/04/17 00:35	25.7
Carbon tetrachloride	ND		21		ppb v/v			03/04/17 00:35	25.7
Chlorobenzene	**56**		7.7		ppb v/v			03/04/17 00:35	25.7
Chloroethane	ND		21		ppb v/v			03/04/17 00:35	25.7
Chloroform	ND		7.7		ppb v/v			03/04/17 00:35	25.7
Chloromethane	**25**		21		ppb v/v			03/04/17 00:35	25.7
cis-1,2-Dichloroethene	**20**		10		ppb v/v			03/04/17 00:35	25.7
cis-1,3-Dichloropropene	ND		10		ppb v/v			03/04/17 00:35	25.7

Client Sample ID: LFB-4:022417
Date Collected: 02/24/17 14:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		10		ppb v/v			03/04/17 00:35	25.7
Dichlorodifluoromethane	**120**		10		ppb v/v			03/04/17 00:35	25.7
Ethylbenzene	**800**		10		ppb v/v			03/04/17 00:35	25.7
Hexachlorobutadiene	ND		51		ppb v/v			03/04/17 00:35	25.7
m,p-Xylene	**360**		21		ppb v/v			03/04/17 00:35	25.7
Methylene Chloride	ND		10		ppb v/v			03/04/17 00:35	25.7
o-Xylene	**110**		10		ppb v/v			03/04/17 00:35	25.7
Styrene	ND		10		ppb v/v			03/04/17 00:35	25.7
Tetrachloroethene	ND		10		ppb v/v			03/04/17 00:35	25.7
Toluene	**23**		10		ppb v/v			03/04/17 00:35	25.7
2-Chlorotoluene	ND		10		ppb v/v			03/04/17 00:35	25.7
trans-1,2-Dichloroethene	ND		10		ppb v/v			03/04/17 00:35	25.7
trans-1,3-Dichloropropene	ND		10		ppb v/v			03/04/17 00:35	25.7
Cyclohexane	**140**		10		ppb v/v			03/04/17 00:35	25.7
Trichloroethene	**18**		10		ppb v/v			03/04/17 00:35	25.7
Trichlorofluoromethane	ND		10		ppb v/v			03/04/17 00:35	25.7
Vinyl acetate	ND		21		ppb v/v			03/04/17 00:35	25.7
Vinyl chloride	**170**		10		ppb v/v			03/04/17 00:35	25.7
1,4-Dioxane	ND		21		ppb v/v			03/04/17 00:35	25.7
n-Heptane	**100**		21		ppb v/v			03/04/17 00:35	25.7
Hexane	**240**		21		ppb v/v			03/04/17 00:35	25.7
Isopropylbenzene	**66**		21		ppb v/v			03/04/17 00:35	25.7
Methyl-t-Butyl Ether (MTBE)	ND		21		ppb v/v			03/04/17 00:35	25.7
Methyl methacrylate	ND		21		ppb v/v			03/04/17 00:35	25.7
Naphthalene	ND		21		ppb v/v			03/04/17 00:35	25.7
Propylene	**600**		10		ppb v/v			03/04/17 00:35	25.7
Tetrahydrofuran	**73**		21		ppb v/v			03/04/17 00:35	25.7
2,2,4-Trimethylpentane	ND		10		ppb v/v			03/04/17 00:35	25.7
Vinyl bromide	ND		21		ppb v/v			03/04/17 00:35	25.7
Ethanol	ND		26		ppb v/v			03/04/17 00:35	25.7
2-Propanol	ND		51		ppb v/v			03/04/17 00:35	25.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.042		mg/m3			03/04/17 00:35	25.7
1,1,2,2-Tetrachloroethane	ND		0.071		mg/m3			03/04/17 00:35	25.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.079		mg/m3			03/04/17 00:35	25.7
1,1,2-Trichloroethane	ND		0.056		mg/m3			03/04/17 00:35	25.7
1,1-Dichloroethane	ND		0.031		mg/m3			03/04/17 00:35	25.7
1,1-Dichloroethene	ND		0.082		mg/m3			03/04/17 00:35	25.7
1,2,4-Trichlorobenzene	ND		0.38		mg/m3			03/04/17 00:35	25.7
1,2,4-Trimethylbenzene	**0.26**		0.10		mg/m3			03/04/17 00:35	25.7
1,2-Dibromoethane (EDB)	ND		0.16		mg/m3			03/04/17 00:35	25.7
Allyl chloride	ND		0.064		mg/m3			03/04/17 00:35	25.7
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.73**		0.072		mg/m3			03/04/17 00:35	25.7
1,2-Dichlorobenzene	ND		0.062		mg/m3			03/04/17 00:35	25.7
1,2-Dichloroethane	ND		0.083		mg/m3			03/04/17 00:35	25.7
1,2-Dichloropropane	ND		0.048		mg/m3			03/04/17 00:35	25.7
1,3,5-Trimethylbenzene	**0.11**		0.051		mg/m3			03/04/17 00:35	25.7
1,3-Dichlorobenzene	ND		0.062		mg/m3			03/04/17 00:35	25.7

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-4:022417
Date Collected: 02/24/17 14:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-6
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	**0.45**		0.062		mg/m3			03/04/17 00:35	25.7
2-Butanone (MEK)	ND		0.061		mg/m3			03/04/17 00:35	25.7
2-Hexanone	ND		0.042		mg/m3			03/04/17 00:35	25.7
1,3-Butadiene	ND		0.045		mg/m3			03/04/17 00:35	25.7
4-Ethyltoluene	**0.057**		0.051		mg/m3			03/04/17 00:35	25.7
4-Methyl-2-pentanone (MIBK)	ND		0.042		mg/m3			03/04/17 00:35	25.7
Acetone	ND		0.31		mg/m3			03/04/17 00:35	25.7
Benzene	**0.14**		0.033		mg/m3			03/04/17 00:35	25.7
Benzyl chloride	ND		0.11		mg/m3			03/04/17 00:35	25.7
Bromodichloromethane	ND		0.052		mg/m3			03/04/17 00:35	25.7
Bromoform	ND		0.11		mg/m3			03/04/17 00:35	25.7
Bromomethane	ND		0.080		mg/m3			03/04/17 00:35	25.7
Carbon disulfide	ND		0.064		mg/m3			03/04/17 00:35	25.7
Carbon tetrachloride	ND		0.13		mg/m3			03/04/17 00:35	25.7
Chlorobenzene	**0.26**		0.035		mg/m3			03/04/17 00:35	25.7
Chloroethane	ND		0.054		mg/m3			03/04/17 00:35	25.7
Chloroform	ND		0.038		mg/m3			03/04/17 00:35	25.7
Chloromethane	**0.052**		0.042		mg/m3			03/04/17 00:35	25.7
cis-1,2-Dichloroethene	**0.080**		0.041		mg/m3			03/04/17 00:35	25.7
cis-1,3-Dichloropropene	ND		0.047		mg/m3			03/04/17 00:35	25.7
Dibromochloromethane	ND		0.088		mg/m3			03/04/17 00:35	25.7
Dichlorodifluoromethane	**0.57**		0.051		mg/m3			03/04/17 00:35	25.7
Ethylbenzene	**3.5**		0.045		mg/m3			03/04/17 00:35	25.7
Hexachlorobutadiene	ND		0.55		mg/m3			03/04/17 00:35	25.7
m,p-Xylene	**1.6**		0.089		mg/m3			03/04/17 00:35	25.7
Methylene Chloride	ND		0.036		mg/m3			03/04/17 00:35	25.7
o-Xylene	**0.47**		0.045		mg/m3			03/04/17 00:35	25.7
Styrene	ND		0.044		mg/m3			03/04/17 00:35	25.7
Tetrachloroethene	ND		0.070		mg/m3			03/04/17 00:35	25.7
Toluene	**0.086**		0.039		mg/m3			03/04/17 00:35	25.7
2-Chlorotoluene	ND		0.053		mg/m3			03/04/17 00:35	25.7
trans-1,2-Dichloroethene	ND		0.041		mg/m3			03/04/17 00:35	25.7
trans-1,3-Dichloropropene	ND		0.047		mg/m3			03/04/17 00:35	25.7
Cyclohexane	**0.48**		0.035		mg/m3			03/04/17 00:35	25.7
Trichloroethene	**0.095**		0.055		mg/m3			03/04/17 00:35	25.7
Trichlorofluoromethane	ND		0.058		mg/m3			03/04/17 00:35	25.7
Vinyl acetate	ND		0.072		mg/m3			03/04/17 00:35	25.7
Vinyl chloride	**0.44**		0.026		mg/m3			03/04/17 00:35	25.7
1,4-Dioxane	ND		0.074		mg/m3			03/04/17 00:35	25.7
n-Heptane	**0.42**		0.084		mg/m3			03/04/17 00:35	25.7
Hexane	**0.85**		0.072		mg/m3			03/04/17 00:35	25.7
Isopropylbenzene	**0.32**		0.10		mg/m3			03/04/17 00:35	25.7
Methyl-t-Butyl Ether (MTBE)	ND		0.074		mg/m3			03/04/17 00:35	25.7
Methyl methacrylate	ND		0.084		mg/m3			03/04/17 00:35	25.7
Naphthalene	ND		0.11		mg/m3			03/04/17 00:35	25.7
Propylene	**1.0**		0.018		mg/m3			03/04/17 00:35	25.7
Tetrahydrofuran	**0.21**		0.061		mg/m3			03/04/17 00:35	25.7
2,2,4-Trimethylpentane	ND		0.048		mg/m3			03/04/17 00:35	25.7
Vinyl bromide	ND		0.090		mg/m3			03/04/17 00:35	25.7

Client Sample ID: LFB-4:022417

Lab Sample ID: 590-5571-6

Date Collected: 02/24/17 14:20

Matrix: Air

Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		0.048		mg/m3			03/04/17 00:35	25.7
2-Propanol	ND		0.13		mg/m3			03/04/17 00:35	25.7

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*		*03/04/17 00:35*	*25.7*
4-Bromofluorobenzene (Surr)	*152*	*X*	*70 - 130*		*03/04/17 00:35*	*25.7*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/04/17 00:35*	*25.7*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**110000**		2600		ppb v/v			03/10/17 01:27	25.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**460**		11		mg/m3			03/10/17 01:27	25.7

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*03/10/17 01:27*	*25.7*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*		*03/10/17 01:27*	*25.7*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/10/17 01:27*	*25.7*

Client Sample ID: LFB-15:022417

Lab Sample ID: 590-5571-7

Date Collected: 02/24/17 14:40

Matrix: Air

Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.4		ppb v/v			03/04/17 01:27	4.82
1,1,2,2-Tetrachloroethane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,1,2-Trichloroethane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,1-Dichloroethane	ND		1.4		ppb v/v			03/04/17 01:27	4.82
1,1-Dichloroethene	ND		3.9		ppb v/v			03/04/17 01:27	4.82
1,2,4-Trichlorobenzene	ND		9.6		ppb v/v			03/04/17 01:27	4.82
1,2,4-Trimethylbenzene	ND		3.9		ppb v/v			03/04/17 01:27	4.82
1,2-Dibromoethane (EDB)	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Allyl chloride	ND		3.9		ppb v/v			03/04/17 01:27	4.82
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**4.5**		1.9		ppb v/v			03/04/17 01:27	4.82
1,2-Dichlorobenzene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,2-Dichloroethane	ND		3.9		ppb v/v			03/04/17 01:27	4.82
1,2-Dichloropropane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,3,5-Trimethylbenzene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,3-Dichlorobenzene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,4-Dichlorobenzene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
2-Butanone (MEK)	ND		3.9		ppb v/v			03/04/17 01:27	4.82
2-Hexanone	ND		1.9		ppb v/v			03/04/17 01:27	4.82
1,3-Butadiene	ND		3.9		ppb v/v			03/04/17 01:27	4.82
4-Ethyltoluene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
4-Methyl-2-pentanone (MIBK)	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Acetone	ND		24		ppb v/v			03/04/17 01:27	4.82

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-15:022417
Date Collected: 02/24/17 14:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Benzyl chloride	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Bromodichloromethane	ND		1.4		ppb v/v			03/04/17 01:27	4.82
Bromoform	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Bromomethane	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Carbon disulfide	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Carbon tetrachloride	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Chlorobenzene	ND		1.4		ppb v/v			03/04/17 01:27	4.82
Chloroethane	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Chloroform	ND		1.4		ppb v/v			03/04/17 01:27	4.82
Chloromethane	**11**		3.9		ppb v/v			03/04/17 01:27	4.82
cis-1,2-Dichloroethene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
cis-1,3-Dichloropropene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Dibromochloromethane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Dichlorodifluoromethane	**4.4**		1.9		ppb v/v			03/04/17 01:27	4.82
Ethylbenzene	**72**		1.9		ppb v/v			03/04/17 01:27	4.82
Hexachlorobutadiene	ND		9.6		ppb v/v			03/04/17 01:27	4.82
m,p-Xylene	**290**		3.9		ppb v/v			03/04/17 01:27	4.82
Methylene Chloride	ND		1.9		ppb v/v			03/04/17 01:27	4.82
o-Xylene	**130**		1.9		ppb v/v			03/04/17 01:27	4.82
Styrene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Tetrachloroethene	**14**		1.9		ppb v/v			03/04/17 01:27	4.82
Toluene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
2-Chlorotoluene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
trans-1,2-Dichloroethene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
trans-1,3-Dichloropropene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Cyclohexane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Trichloroethene	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Trichlorofluoromethane	**3.9**		1.9		ppb v/v			03/04/17 01:27	4.82
Vinyl acetate	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Vinyl chloride	**1.9**		1.9		ppb v/v			03/04/17 01:27	4.82
1,4-Dioxane	ND		3.9		ppb v/v			03/04/17 01:27	4.82
n-Heptane	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Hexane	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Isopropylbenzene	**4.9**		3.9		ppb v/v			03/04/17 01:27	4.82
Methyl-t-Butyl Ether (MTBE)	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Methyl methacrylate	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Naphthalene	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Propylene	**5.4**		1.9		ppb v/v			03/04/17 01:27	4.82
Tetrahydrofuran	ND		3.9		ppb v/v			03/04/17 01:27	4.82
2,2,4-Trimethylpentane	ND		1.9		ppb v/v			03/04/17 01:27	4.82
Vinyl bromide	ND		3.9		ppb v/v			03/04/17 01:27	4.82
Ethanol	ND		4.8		ppb v/v			03/04/17 01:27	4.82
2-Propanol	ND		9.6		ppb v/v			03/04/17 01:27	4.82

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0079		mg/m3			03/04/17 01:27	4.82
1,1,2,2-Tetrachloroethane	ND		0.013		mg/m3			03/04/17 01:27	4.82
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.015		mg/m3			03/04/17 01:27	4.82
1,1,2-Trichloroethane	ND		0.011		mg/m3			03/04/17 01:27	4.82

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-15:022417
Date Collected: 02/24/17 14:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-7
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.0059		mg/m3			03/04/17 01:27	4.82
1,1-Dichloroethene	ND		0.015		mg/m3			03/04/17 01:27	4.82
1,2,4-Trichlorobenzene	ND		0.072		mg/m3			03/04/17 01:27	4.82
1,2,4-Trimethylbenzene	ND		0.019		mg/m3			03/04/17 01:27	4.82
1,2-Dibromoethane (EDB)	ND		0.030		mg/m3			03/04/17 01:27	4.82
Allyl chloride	ND		0.012		mg/m3			03/04/17 01:27	4.82
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.032**		0.013		mg/m3			03/04/17 01:27	4.82
1,2-Dichlorobenzene	ND		0.012		mg/m3			03/04/17 01:27	4.82
1,2-Dichloroethane	ND		0.016		mg/m3			03/04/17 01:27	4.82
1,2-Dichloropropane	ND		0.0089		mg/m3			03/04/17 01:27	4.82
1,3,5-Trimethylbenzene	ND		0.0095		mg/m3			03/04/17 01:27	4.82
1,3-Dichlorobenzene	ND		0.012		mg/m3			03/04/17 01:27	4.82
1,4-Dichlorobenzene	ND		0.012		mg/m3			03/04/17 01:27	4.82
2-Butanone (MEK)	ND		0.011		mg/m3			03/04/17 01:27	4.82
2-Hexanone	ND		0.0079		mg/m3			03/04/17 01:27	4.82
1,3-Butadiene	ND		0.0085		mg/m3			03/04/17 01:27	4.82
4-Ethyltoluene	ND		0.0095		mg/m3			03/04/17 01:27	4.82
4-Methyl-2-pentanone (MIBK)	ND		0.0079		mg/m3			03/04/17 01:27	4.82
Acetone	ND		0.057		mg/m3			03/04/17 01:27	4.82
Benzene	ND		0.0062		mg/m3			03/04/17 01:27	4.82
Benzyl chloride	ND		0.020		mg/m3			03/04/17 01:27	4.82
Bromodichloromethane	ND		0.0097		mg/m3			03/04/17 01:27	4.82
Bromoform	ND		0.020		mg/m3			03/04/17 01:27	4.82
Bromomethane	ND		0.015		mg/m3			03/04/17 01:27	4.82
Carbon disulfide	ND		0.012		mg/m3			03/04/17 01:27	4.82
Carbon tetrachloride	ND		0.024		mg/m3			03/04/17 01:27	4.82
Chlorobenzene	ND		0.0067		mg/m3			03/04/17 01:27	4.82
Chloroethane	ND		0.010		mg/m3			03/04/17 01:27	4.82
Chloroform	ND		0.0071		mg/m3			03/04/17 01:27	4.82
Chloromethane	**0.023**		0.0080		mg/m3			03/04/17 01:27	4.82
cis-1,2-Dichloroethene	ND		0.0076		mg/m3			03/04/17 01:27	4.82
cis-1,3-Dichloropropene	ND		0.0088		mg/m3			03/04/17 01:27	4.82
Dibromochloromethane	ND		0.016		mg/m3			03/04/17 01:27	4.82
Dichlorodifluoromethane	**0.022**		0.0095		mg/m3			03/04/17 01:27	4.82
Ethylbenzene	**0.31**		0.0084		mg/m3			03/04/17 01:27	4.82
Hexachlorobutadiene	ND		0.10		mg/m3			03/04/17 01:27	4.82
m,p-Xylene	**1.3**		0.017		mg/m3			03/04/17 01:27	4.82
Methylene Chloride	ND		0.0067		mg/m3			03/04/17 01:27	4.82
o-Xylene	**0.55**		0.0084		mg/m3			03/04/17 01:27	4.82
Styrene	ND		0.0082		mg/m3			03/04/17 01:27	4.82
Tetrachloroethene	**0.095**		0.013		mg/m3			03/04/17 01:27	4.82
Toluene	ND		0.0073		mg/m3			03/04/17 01:27	4.82
2-Chlorotoluene	ND		0.010		mg/m3			03/04/17 01:27	4.82
trans-1,2-Dichloroethene	ND		0.0076		mg/m3			03/04/17 01:27	4.82
trans-1,3-Dichloropropene	ND		0.0088		mg/m3			03/04/17 01:27	4.82
Cyclohexane	ND		0.0066		mg/m3			03/04/17 01:27	4.82
Trichloroethene	ND		0.010		mg/m3			03/04/17 01:27	4.82
Trichlorofluoromethane	**0.022**		0.011		mg/m3			03/04/17 01:27	4.82
Vinyl acetate	ND		0.014		mg/m3			03/04/17 01:27	4.82

Client Sample ID: LFB-15:022417

Lab Sample ID: 590-5571-7
Date Collected: 02/24/17 14:40
Matrix: Air
Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.0049**		0.0049		mg/m3			03/04/17 01:27	4.82
1,4-Dioxane	ND		0.014		mg/m3			03/04/17 01:27	4.82
n-Heptane	ND		0.016		mg/m3			03/04/17 01:27	4.82
Hexane	ND		0.014		mg/m3			03/04/17 01:27	4.82
Isopropylbenzene	**0.024**		0.019		mg/m3			03/04/17 01:27	4.82
Methyl-t-Butyl Ether (MTBE)	ND		0.014		mg/m3			03/04/17 01:27	4.82
Methyl methacrylate	ND		0.016		mg/m3			03/04/17 01:27	4.82
Naphthalene	ND		0.020		mg/m3			03/04/17 01:27	4.82
Propylene	**0.0093**		0.0033		mg/m3			03/04/17 01:27	4.82
Tetrahydrofuran	ND		0.011		mg/m3			03/04/17 01:27	4.82
2,2,4-Trimethylpentane	ND		0.0090		mg/m3			03/04/17 01:27	4.82
Vinyl bromide	ND		0.017		mg/m3			03/04/17 01:27	4.82
Ethanol	ND		0.0091		mg/m3			03/04/17 01:27	4.82
2-Propanol	ND		0.024		mg/m3			03/04/17 01:27	4.82

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*03/04/17 01:27*	*4.82*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/04/17 01:27*	*4.82*
Toluene-d8 (Surr)	*96*		*70 - 130*		*03/04/17 01:27*	*4.82*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**1300**		480		ppb v/v			03/10/17 02:10	4.82

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**5.3**		2.0		mg/m3			03/10/17 02:10	4.82

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*03/10/17 02:10*	*4.82*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/10/17 02:10*	*4.82*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/10/17 02:10*	*4.82*

Client Sample ID: LFB-16:022417

Lab Sample ID: 590-5571-8
Date Collected: 02/24/17 15:00
Matrix: Air
Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.67		ppb v/v			03/04/17 02:22	2.24
1,1,2,2-Tetrachloroethane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,1,2-Trichloroethane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,1-Dichloroethane	ND		0.67		ppb v/v			03/04/17 02:22	2.24
1,1-Dichloroethene	ND		1.8		ppb v/v			03/04/17 02:22	2.24
1,2,4-Trichlorobenzene	ND		4.5		ppb v/v			03/04/17 02:22	2.24
1,2,4-Trimethylbenzene	ND		1.8		ppb v/v			03/04/17 02:22	2.24
1,2-Dibromoethane (EDB)	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Allyl chloride	ND		1.8		ppb v/v			03/04/17 02:22	2.24
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**2.9**		0.90		ppb v/v			03/04/17 02:22	2.24

Client Sample ID: LFB-16:022417
Date Collected: 02/24/17 15:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,2-Dichloroethane	ND		1.8		ppb v/v			03/04/17 02:22	2.24
1,2-Dichloropropane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,3,5-Trimethylbenzene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,3-Dichlorobenzene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,4-Dichlorobenzene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
2-Butanone (MEK)	ND		1.8		ppb v/v			03/04/17 02:22	2.24
2-Hexanone	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,3-Butadiene	ND		1.8		ppb v/v			03/04/17 02:22	2.24
4-Ethyltoluene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
4-Methyl-2-pentanone (MIBK)	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Acetone	ND		11		ppb v/v			03/04/17 02:22	2.24
Benzene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Benzyl chloride	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Bromodichloromethane	ND		0.67		ppb v/v			03/04/17 02:22	2.24
Bromoform	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Bromomethane	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Carbon disulfide	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Carbon tetrachloride	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Chlorobenzene	ND		0.67		ppb v/v			03/04/17 02:22	2.24
Chloroethane	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Chloroform	ND		0.67		ppb v/v			03/04/17 02:22	2.24
Chloromethane	**7.5**		1.8		ppb v/v			03/04/17 02:22	2.24
cis-1,2-Dichloroethene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
cis-1,3-Dichloropropene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Dibromochloromethane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Dichlorodifluoromethane	**1.0**		0.90		ppb v/v			03/04/17 02:22	2.24
Ethylbenzene	**24**		0.90		ppb v/v			03/04/17 02:22	2.24
Hexachlorobutadiene	ND		4.5		ppb v/v			03/04/17 02:22	2.24
m,p-Xylene	**100**		1.8		ppb v/v			03/04/17 02:22	2.24
Methylene Chloride	ND		0.90		ppb v/v			03/04/17 02:22	2.24
o-Xylene	**46**		0.90		ppb v/v			03/04/17 02:22	2.24
Styrene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Tetrachloroethene	**10**		0.90		ppb v/v			03/04/17 02:22	2.24
Toluene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
2-Chlorotoluene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
trans-1,2-Dichloroethene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
trans-1,3-Dichloropropene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Cyclohexane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Trichloroethene	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Trichlorofluoromethane	**6.1**		0.90		ppb v/v			03/04/17 02:22	2.24
Vinyl acetate	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Vinyl chloride	ND		0.90		ppb v/v			03/04/17 02:22	2.24
1,4-Dioxane	ND		1.8		ppb v/v			03/04/17 02:22	2.24
n-Heptane	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Hexane	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Isopropylbenzene	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Methyl-t-Butyl Ether (MTBE)	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Methyl methacrylate	ND		1.8		ppb v/v			03/04/17 02:22	2.24

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-16:022417
Date Collected: 02/24/17 15:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Propylene	**1.5**		0.90		ppb v/v			03/04/17 02:22	2.24
Tetrahydrofuran	ND		1.8		ppb v/v			03/04/17 02:22	2.24
2,2,4-Trimethylpentane	ND		0.90		ppb v/v			03/04/17 02:22	2.24
Vinyl bromide	ND		1.8		ppb v/v			03/04/17 02:22	2.24
Ethanol	ND		2.2		ppb v/v			03/04/17 02:22	2.24
2-Propanol	ND		4.5		ppb v/v			03/04/17 02:22	2.24

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0037		mg/m3			03/04/17 02:22	2.24
1,1,2,2-Tetrachloroethane	ND		0.0062		mg/m3			03/04/17 02:22	2.24
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0069		mg/m3			03/04/17 02:22	2.24
1,1,2-Trichloroethane	ND		0.0049		mg/m3			03/04/17 02:22	2.24
1,1-Dichloroethane	ND		0.0027		mg/m3			03/04/17 02:22	2.24
1,1-Dichloroethene	ND		0.0071		mg/m3			03/04/17 02:22	2.24
1,2,4-Trichlorobenzene	ND		0.033		mg/m3			03/04/17 02:22	2.24
1,2,4-Trimethylbenzene	ND		0.0088		mg/m3			03/04/17 02:22	2.24
1,2-Dibromoethane (EDB)	ND		0.014		mg/m3			03/04/17 02:22	2.24
Allyl chloride	ND		0.0056		mg/m3			03/04/17 02:22	2.24
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.020**		0.0063		mg/m3			03/04/17 02:22	2.24
1,2-Dichlorobenzene	ND		0.0054		mg/m3			03/04/17 02:22	2.24
1,2-Dichloroethane	ND		0.0073		mg/m3			03/04/17 02:22	2.24
1,2-Dichloropropane	ND		0.0041		mg/m3			03/04/17 02:22	2.24
1,3,5-Trimethylbenzene	ND		0.0044		mg/m3			03/04/17 02:22	2.24
1,3-Dichlorobenzene	ND		0.0054		mg/m3			03/04/17 02:22	2.24
1,4-Dichlorobenzene	ND		0.0054		mg/m3			03/04/17 02:22	2.24
2-Butanone (MEK)	ND		0.0053		mg/m3			03/04/17 02:22	2.24
2-Hexanone	ND		0.0037		mg/m3			03/04/17 02:22	2.24
1,3-Butadiene	ND		0.0040		mg/m3			03/04/17 02:22	2.24
4-Ethyltoluene	ND		0.0044		mg/m3			03/04/17 02:22	2.24
4-Methyl-2-pentanone (MIBK)	ND		0.0037		mg/m3			03/04/17 02:22	2.24
Acetone	ND		0.027		mg/m3			03/04/17 02:22	2.24
Benzene	ND		0.0029		mg/m3			03/04/17 02:22	2.24
Benzyl chloride	ND		0.0093		mg/m3			03/04/17 02:22	2.24
Bromodichloromethane	ND		0.0045		mg/m3			03/04/17 02:22	2.24
Bromoform	ND		0.0093		mg/m3			03/04/17 02:22	2.24
Bromomethane	ND		0.0070		mg/m3			03/04/17 02:22	2.24
Carbon disulfide	ND		0.0056		mg/m3			03/04/17 02:22	2.24
Carbon tetrachloride	ND		0.011		mg/m3			03/04/17 02:22	2.24
Chlorobenzene	ND		0.0031		mg/m3			03/04/17 02:22	2.24
Chloroethane	ND		0.0047		mg/m3			03/04/17 02:22	2.24
Chloroform	ND		0.0033		mg/m3			03/04/17 02:22	2.24
Chloromethane	**0.015**		0.0037		mg/m3			03/04/17 02:22	2.24
cis-1,2-Dichloroethene	ND		0.0036		mg/m3			03/04/17 02:22	2.24
cis-1,3-Dichloropropene	ND		0.0041		mg/m3			03/04/17 02:22	2.24
Dibromochloromethane	ND		0.0076		mg/m3			03/04/17 02:22	2.24
Dichlorodifluoromethane	**0.0051**		0.0044		mg/m3			03/04/17 02:22	2.24
Ethylbenzene	**0.10**		0.0039		mg/m3			03/04/17 02:22	2.24
Hexachlorobutadiene	ND		0.048		mg/m3			03/04/17 02:22	2.24

Client Sample ID: LFB-16:022417
Date Collected: 02/24/17 15:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-8
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	**0.45**		0.0078		mg/m3			03/04/17 02:22	2.24
Methylene Chloride	ND		0.0031		mg/m3			03/04/17 02:22	2.24
o-Xylene	**0.20**		0.0039		mg/m3			03/04/17 02:22	2.24
Styrene	ND		0.0038		mg/m3			03/04/17 02:22	2.24
Tetrachloroethene	**0.068**		0.0061		mg/m3			03/04/17 02:22	2.24
Toluene	ND		0.0034		mg/m3			03/04/17 02:22	2.24
2-Chlorotoluene	ND		0.0046		mg/m3			03/04/17 02:22	2.24
trans-1,2-Dichloroethene	ND		0.0036		mg/m3			03/04/17 02:22	2.24
trans-1,3-Dichloropropene	ND		0.0041		mg/m3			03/04/17 02:22	2.24
Cyclohexane	ND		0.0031		mg/m3			03/04/17 02:22	2.24
Trichloroethene	ND		0.0048		mg/m3			03/04/17 02:22	2.24
Trichlorofluoromethane	**0.035**		0.0050		mg/m3			03/04/17 02:22	2.24
Vinyl acetate	ND		0.0063		mg/m3			03/04/17 02:22	2.24
Vinyl chloride	ND		0.0023		mg/m3			03/04/17 02:22	2.24
1,4-Dioxane	ND		0.0065		mg/m3			03/04/17 02:22	2.24
n-Heptane	ND		0.0073		mg/m3			03/04/17 02:22	2.24
Hexane	ND		0.0063		mg/m3			03/04/17 02:22	2.24
Isopropylbenzene	ND		0.0088		mg/m3			03/04/17 02:22	2.24
Methyl-t-Butyl Ether (MTBE)	ND		0.0065		mg/m3			03/04/17 02:22	2.24
Methyl methacrylate	ND		0.0073		mg/m3			03/04/17 02:22	2.24
Naphthalene	ND		0.0094		mg/m3			03/04/17 02:22	2.24
Propylene	**0.0026**		0.0015		mg/m3			03/04/17 02:22	2.24
Tetrahydrofuran	ND		0.0053		mg/m3			03/04/17 02:22	2.24
2,2,4-Trimethylpentane	ND		0.0042		mg/m3			03/04/17 02:22	2.24
Vinyl bromide	ND		0.0078		mg/m3			03/04/17 02:22	2.24
Ethanol	ND		0.0042		mg/m3			03/04/17 02:22	2.24
2-Propanol	ND		0.011		mg/m3			03/04/17 02:22	2.24

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*		*03/04/17 02:22*	*2.24*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*03/04/17 02:22*	*2.24*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/04/17 02:22*	*2.24*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**620**		220		ppb v/v			03/10/17 02:55	2.24

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**2.5**		0.92		mg/m3			03/10/17 02:55	2.24

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*03/10/17 02:55*	*2.24*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*03/10/17 02:55*	*2.24*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/10/17 02:55*	*2.24*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-17:022417
Date Collected: 02/24/17 15:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.59		ppb v/v			03/04/17 03:15	1.95
1,1,2,2-Tetrachloroethane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,1,2-Trichloroethane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,1-Dichloroethane	**1.1**		0.59		ppb v/v			03/04/17 03:15	1.95
1,1-Dichloroethene	ND		1.6		ppb v/v			03/04/17 03:15	1.95
1,2,4-Trichlorobenzene	ND		3.9		ppb v/v			03/04/17 03:15	1.95
1,2,4-Trimethylbenzene	ND		1.6		ppb v/v			03/04/17 03:15	1.95
1,2-Dibromoethane (EDB)	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Allyl chloride	ND		1.6		ppb v/v			03/04/17 03:15	1.95
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**1.4**		0.78		ppb v/v			03/04/17 03:15	1.95
1,2-Dichlorobenzene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,2-Dichloroethane	ND		1.6		ppb v/v			03/04/17 03:15	1.95
1,2-Dichloropropane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,3,5-Trimethylbenzene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,3-Dichlorobenzene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,4-Dichlorobenzene	**5.0**		0.78		ppb v/v			03/04/17 03:15	1.95
2-Butanone (MEK)	ND		1.6		ppb v/v			03/04/17 03:15	1.95
2-Hexanone	ND		0.78		ppb v/v			03/04/17 03:15	1.95
1,3-Butadiene	ND		1.6		ppb v/v			03/04/17 03:15	1.95
4-Ethyltoluene	**1.4**		0.78		ppb v/v			03/04/17 03:15	1.95
4-Methyl-2-pentanone (MIBK)	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Acetone	ND		9.8		ppb v/v			03/04/17 03:15	1.95
Benzene	**1.9**		0.78		ppb v/v			03/04/17 03:15	1.95
Benzyl chloride	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Bromodichloromethane	ND		0.59		ppb v/v			03/04/17 03:15	1.95
Bromoform	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Bromomethane	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Carbon disulfide	**1.6**		1.6		ppb v/v			03/04/17 03:15	1.95
Carbon tetrachloride	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Chlorobenzene	ND		0.59		ppb v/v			03/04/17 03:15	1.95
Chloroethane	**1.9**		1.6		ppb v/v			03/04/17 03:15	1.95
Chloroform	ND		0.59		ppb v/v			03/04/17 03:15	1.95
Chloromethane	**9.7**		1.6		ppb v/v			03/04/17 03:15	1.95
cis-1,2-Dichloroethene	**2.9**		0.78		ppb v/v			03/04/17 03:15	1.95
cis-1,3-Dichloropropene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Dibromochloromethane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Dichlorodifluoromethane	**2.9**		0.78		ppb v/v			03/04/17 03:15	1.95
Ethylbenzene	**12**		0.78		ppb v/v			03/04/17 03:15	1.95
Hexachlorobutadiene	ND		3.9		ppb v/v			03/04/17 03:15	1.95
m,p-Xylene	**42**		1.6		ppb v/v			03/04/17 03:15	1.95
Methylene Chloride	ND		0.78		ppb v/v			03/04/17 03:15	1.95
o-Xylene	**21**		0.78		ppb v/v			03/04/17 03:15	1.95
Styrene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Tetrachloroethene	**24**		0.78		ppb v/v			03/04/17 03:15	1.95
Toluene	**2.1**		0.78		ppb v/v			03/04/17 03:15	1.95
2-Chlorotoluene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
trans-1,2-Dichloroethene	ND		0.78		ppb v/v			03/04/17 03:15	1.95
trans-1,3-Dichloropropene	ND		0.78		ppb v/v			03/04/17 03:15	1.95

Client Sample ID: LFB-17:022417
Date Collected: 02/24/17 15:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Trichloroethene	**2.6**		0.78		ppb v/v			03/04/17 03:15	1.95
Trichlorofluoromethane	**39**		0.78		ppb v/v			03/04/17 03:15	1.95
Vinyl acetate	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Vinyl chloride	**2.1**		0.78		ppb v/v			03/04/17 03:15	1.95
1,4-Dioxane	ND		1.6		ppb v/v			03/04/17 03:15	1.95
n-Heptane	**2.1**		1.6		ppb v/v			03/04/17 03:15	1.95
Hexane	**3.5**		1.6		ppb v/v			03/04/17 03:15	1.95
Isopropylbenzene	**3.3**		1.6		ppb v/v			03/04/17 03:15	1.95
Methyl-t-Butyl Ether (MTBE)	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Methyl methacrylate	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Naphthalene	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Propylene	**39**		0.78		ppb v/v			03/04/17 03:15	1.95
Tetrahydrofuran	**1.8**		1.6		ppb v/v			03/04/17 03:15	1.95
2,2,4-Trimethylpentane	ND		0.78		ppb v/v			03/04/17 03:15	1.95
Vinyl bromide	ND		1.6		ppb v/v			03/04/17 03:15	1.95
Ethanol	**5.9**		2.0		ppb v/v			03/04/17 03:15	1.95
2-Propanol	ND		3.9		ppb v/v			03/04/17 03:15	1.95

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0032		mg/m3			03/04/17 03:15	1.95
1,1,2,2-Tetrachloroethane	ND		0.0054		mg/m3			03/04/17 03:15	1.95
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0060		mg/m3			03/04/17 03:15	1.95
1,1,2-Trichloroethane	ND		0.0043		mg/m3			03/04/17 03:15	1.95
1,1-Dichloroethane	**0.0043**		0.0024		mg/m3			03/04/17 03:15	1.95
1,1-Dichloroethene	ND		0.0062		mg/m3			03/04/17 03:15	1.95
1,2,4-Trichlorobenzene	ND		0.029		mg/m3			03/04/17 03:15	1.95
1,2,4-Trimethylbenzene	ND		0.0077		mg/m3			03/04/17 03:15	1.95
1,2-Dibromoethane (EDB)	ND		0.012		mg/m3			03/04/17 03:15	1.95
Allyl chloride	ND		0.0049		mg/m3			03/04/17 03:15	1.95
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.0095**		0.0055		mg/m3			03/04/17 03:15	1.95
1,2-Dichlorobenzene	ND		0.0047		mg/m3			03/04/17 03:15	1.95
1,2-Dichloroethane	ND		0.0063		mg/m3			03/04/17 03:15	1.95
1,2-Dichloropropane	ND		0.0036		mg/m3			03/04/17 03:15	1.95
1,3,5-Trimethylbenzene	ND		0.0038		mg/m3			03/04/17 03:15	1.95
1,3-Dichlorobenzene	ND		0.0047		mg/m3			03/04/17 03:15	1.95
1,4-Dichlorobenzene	**0.030**		0.0047		mg/m3			03/04/17 03:15	1.95
2-Butanone (MEK)	ND		0.0046		mg/m3			03/04/17 03:15	1.95
2-Hexanone	ND		0.0032		mg/m3			03/04/17 03:15	1.95
1,3-Butadiene	ND		0.0035		mg/m3			03/04/17 03:15	1.95
4-Ethyltoluene	**0.0067**		0.0038		mg/m3			03/04/17 03:15	1.95
4-Methyl-2-pentanone (MIBK)	ND		0.0032		mg/m3			03/04/17 03:15	1.95
Acetone	ND		0.023		mg/m3			03/04/17 03:15	1.95
Benzene	**0.0059**		0.0025		mg/m3			03/04/17 03:15	1.95
Benzyl chloride	ND		0.0081		mg/m3			03/04/17 03:15	1.95
Bromodichloromethane	ND		0.0039		mg/m3			03/04/17 03:15	1.95
Bromoform	ND		0.0081		mg/m3			03/04/17 03:15	1.95
Bromomethane	ND		0.0061		mg/m3			03/04/17 03:15	1.95
Carbon disulfide	**0.0050**		0.0049		mg/m3			03/04/17 03:15	1.95

Client Sample ID: LFB-17:022417
Date Collected: 02/24/17 15:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-9
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.0098		mg/m3			03/04/17 03:15	1.95
Chlorobenzene	ND		0.0027		mg/m3			03/04/17 03:15	1.95
Chloroethane	**0.0051**		0.0041		mg/m3			03/04/17 03:15	1.95
Chloroform	ND		0.0029		mg/m3			03/04/17 03:15	1.95
Chloromethane	**0.020**		0.0032		mg/m3			03/04/17 03:15	1.95
cis-1,2-Dichloroethene	**0.011**		0.0031		mg/m3			03/04/17 03:15	1.95
cis-1,3-Dichloropropene	ND		0.0035		mg/m3			03/04/17 03:15	1.95
Dibromochloromethane	ND		0.0066		mg/m3			03/04/17 03:15	1.95
Dichlorodifluoromethane	**0.014**		0.0039		mg/m3			03/04/17 03:15	1.95
Ethylbenzene	**0.053**		0.0034		mg/m3			03/04/17 03:15	1.95
Hexachlorobutadiene	ND		0.042		mg/m3			03/04/17 03:15	1.95
m,p-Xylene	**0.18**		0.0068		mg/m3			03/04/17 03:15	1.95
Methylene Chloride	ND		0.0027		mg/m3			03/04/17 03:15	1.95
o-Xylene	**0.093**		0.0034		mg/m3			03/04/17 03:15	1.95
Styrene	ND		0.0033		mg/m3			03/04/17 03:15	1.95
Tetrachloroethene	**0.16**		0.0053		mg/m3			03/04/17 03:15	1.95
Toluene	**0.0078**		0.0029		mg/m3			03/04/17 03:15	1.95
2-Chlorotoluene	ND		0.0040		mg/m3			03/04/17 03:15	1.95
trans-1,2-Dichloroethene	ND		0.0031		mg/m3			03/04/17 03:15	1.95
trans-1,3-Dichloropropene	ND		0.0035		mg/m3			03/04/17 03:15	1.95
Cyclohexane	ND		0.0027		mg/m3			03/04/17 03:15	1.95
Trichloroethene	**0.014**		0.0042		mg/m3			03/04/17 03:15	1.95
Trichlorofluoromethane	**0.22**		0.0044		mg/m3			03/04/17 03:15	1.95
Vinyl acetate	ND		0.0055		mg/m3			03/04/17 03:15	1.95
Vinyl chloride	**0.0054**		0.0020		mg/m3			03/04/17 03:15	1.95
1,4-Dioxane	ND		0.0056		mg/m3			03/04/17 03:15	1.95
n-Heptane	**0.0085**		0.0064		mg/m3			03/04/17 03:15	1.95
Hexane	**0.012**		0.0055		mg/m3			03/04/17 03:15	1.95
Isopropylbenzene	**0.016**		0.0077		mg/m3			03/04/17 03:15	1.95
Methyl-t-Butyl Ether (MTBE)	ND		0.0056		mg/m3			03/04/17 03:15	1.95
Methyl methacrylate	ND		0.0064		mg/m3			03/04/17 03:15	1.95
Naphthalene	ND		0.0082		mg/m3			03/04/17 03:15	1.95
Propylene	**0.068**		0.0013		mg/m3			03/04/17 03:15	1.95
Tetrahydrofuran	**0.0053**		0.0046		mg/m3			03/04/17 03:15	1.95
2,2,4-Trimethylpentane	ND		0.0036		mg/m3			03/04/17 03:15	1.95
Vinyl bromide	ND		0.0068		mg/m3			03/04/17 03:15	1.95
Ethanol	**0.011**		0.0037		mg/m3			03/04/17 03:15	1.95
2-Propanol	ND		0.0096		mg/m3			03/04/17 03:15	1.95

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*		*03/04/17 03:15*	*1.95*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*03/04/17 03:15*	*1.95*
Toluene-d8 (Surr)	*96*		*70 - 130*		*03/04/17 03:15*	*1.95*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**1400**		200		ppb v/v			03/10/17 03:39	1.95

Client Sample ID: LFB-17:022417

Lab Sample ID: 590-5571-9

Date Collected: 02/24/17 15:20

Matrix: Air

Date Received: 02/24/17 16:55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	**5.6**		0.80		mg/m3			03/10/17 03:39	1.95

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*03/10/17 03:39*	*1.95*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*03/10/17 03:39*	*1.95*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/10/17 03:39*	*1.95*

Client Sample ID: LFB-5:022417

Lab Sample ID: 590-5571-10

Date Collected: 02/24/17 15:40

Matrix: Air

Date Received: 02/24/17 16:55

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9		ppb v/v			03/04/17 04:07	16.4
1,1,2,2-Tetrachloroethane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,1,2-Trichloroethane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,1-Dichloroethane	ND		4.9		ppb v/v			03/04/17 04:07	16.4
1,1-Dichloroethene	ND		13		ppb v/v			03/04/17 04:07	16.4
1,2,4-Trichlorobenzene	ND		33		ppb v/v			03/04/17 04:07	16.4
1,2,4-Trimethylbenzene	ND		13		ppb v/v			03/04/17 04:07	16.4
1,2-Dibromoethane (EDB)	ND		13		ppb v/v			03/04/17 04:07	16.4
Allyl chloride	ND		13		ppb v/v			03/04/17 04:07	16.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**10**		6.6		ppb v/v			03/04/17 04:07	16.4
1,2-Dichlorobenzene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,2-Dichloroethane	ND		13		ppb v/v			03/04/17 04:07	16.4
1,2-Dichloropropane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,3,5-Trimethylbenzene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,3-Dichlorobenzene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,4-Dichlorobenzene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
2-Butanone (MEK)	ND		13		ppb v/v			03/04/17 04:07	16.4
2-Hexanone	ND		6.6		ppb v/v			03/04/17 04:07	16.4
1,3-Butadiene	**24**		13		ppb v/v			03/04/17 04:07	16.4
4-Ethyltoluene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
4-Methyl-2-pentanone (MIBK)	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Acetone	ND		82		ppb v/v			03/04/17 04:07	16.4
Benzene	**19**		6.6		ppb v/v			03/04/17 04:07	16.4
Benzyl chloride	ND		13		ppb v/v			03/04/17 04:07	16.4
Bromodichloromethane	ND		4.9		ppb v/v			03/04/17 04:07	16.4
Bromoform	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Bromomethane	ND		13		ppb v/v			03/04/17 04:07	16.4
Carbon disulfide	ND		13		ppb v/v			03/04/17 04:07	16.4
Carbon tetrachloride	ND		13		ppb v/v			03/04/17 04:07	16.4
Chlorobenzene	**6.2**		4.9		ppb v/v			03/04/17 04:07	16.4
Chloroethane	ND		13		ppb v/v			03/04/17 04:07	16.4
Chloroform	ND		4.9		ppb v/v			03/04/17 04:07	16.4
Chloromethane	ND		13		ppb v/v			03/04/17 04:07	16.4
cis-1,2-Dichloroethene	**24**		6.6		ppb v/v			03/04/17 04:07	16.4
cis-1,3-Dichloropropene	ND		6.6		ppb v/v			03/04/17 04:07	16.4

Client Sample ID: LFB-5:022417
Date Collected: 02/24/17 15:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Dichlorodifluoromethane	**22**		6.6		ppb v/v			03/04/17 04:07	16.4
Ethylbenzene	**21**		6.6		ppb v/v			03/04/17 04:07	16.4
Hexachlorobutadiene	ND		33		ppb v/v			03/04/17 04:07	16.4
m,p-Xylene	ND		13		ppb v/v			03/04/17 04:07	16.4
Methylene Chloride	ND		6.6		ppb v/v			03/04/17 04:07	16.4
o-Xylene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Styrene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Tetrachloroethene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Toluene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
2-Chlorotoluene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
trans-1,2-Dichloroethene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
trans-1,3-Dichloropropene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Cyclohexane	**9.4**		6.6		ppb v/v			03/04/17 04:07	16.4
Trichloroethene	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Trichlorofluoromethane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Vinyl acetate	ND		13		ppb v/v			03/04/17 04:07	16.4
Vinyl chloride	**67**		6.6		ppb v/v			03/04/17 04:07	16.4
1,4-Dioxane	ND		13		ppb v/v			03/04/17 04:07	16.4
n-Heptane	**29**		13		ppb v/v			03/04/17 04:07	16.4
Hexane	**62**		13		ppb v/v			03/04/17 04:07	16.4
Isopropylbenzene	**13**		13		ppb v/v			03/04/17 04:07	16.4
Methyl-t-Butyl Ether (MTBE)	ND		13		ppb v/v			03/04/17 04:07	16.4
Methyl methacrylate	ND		13		ppb v/v			03/04/17 04:07	16.4
Naphthalene	ND		13		ppb v/v			03/04/17 04:07	16.4
Propylene	**410**		6.6		ppb v/v			03/04/17 04:07	16.4
Tetrahydrofuran	ND		13		ppb v/v			03/04/17 04:07	16.4
2,2,4-Trimethylpentane	ND		6.6		ppb v/v			03/04/17 04:07	16.4
Vinyl bromide	ND		13		ppb v/v			03/04/17 04:07	16.4
Ethanol	**45**		16		ppb v/v			03/04/17 04:07	16.4
2-Propanol	ND		33		ppb v/v			03/04/17 04:07	16.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.027		mg/m3			03/04/17 04:07	16.4
1,1,2,2-Tetrachloroethane	ND		0.045		mg/m3			03/04/17 04:07	16.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.050		mg/m3			03/04/17 04:07	16.4
1,1,2-Trichloroethane	ND		0.036		mg/m3			03/04/17 04:07	16.4
1,1-Dichloroethane	ND		0.020		mg/m3			03/04/17 04:07	16.4
1,1-Dichloroethene	ND		0.052		mg/m3			03/04/17 04:07	16.4
1,2,4-Trichlorobenzene	ND		0.24		mg/m3			03/04/17 04:07	16.4
1,2,4-Trimethylbenzene	ND		0.064		mg/m3			03/04/17 04:07	16.4
1,2-Dibromoethane (EDB)	ND		0.10		mg/m3			03/04/17 04:07	16.4
Allyl chloride	ND		0.041		mg/m3			03/04/17 04:07	16.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**0.070**		0.046		mg/m3			03/04/17 04:07	16.4
1,2-Dichlorobenzene	ND		0.039		mg/m3			03/04/17 04:07	16.4
1,2-Dichloroethane	ND		0.053		mg/m3			03/04/17 04:07	16.4
1,2-Dichloropropane	ND		0.030		mg/m3			03/04/17 04:07	16.4
1,3,5-Trimethylbenzene	ND		0.032		mg/m3			03/04/17 04:07	16.4
1,3-Dichlorobenzene	ND		0.039		mg/m3			03/04/17 04:07	16.4

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-5:022417
Date Collected: 02/24/17 15:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.039		mg/m3			03/04/17 04:07	16.4
2-Butanone (MEK)	ND		0.039		mg/m3			03/04/17 04:07	16.4
2-Hexanone	ND		0.027		mg/m3			03/04/17 04:07	16.4
1,3-Butadiene	**0.053**		0.029		mg/m3			03/04/17 04:07	16.4
4-Ethyltoluene	ND		0.032		mg/m3			03/04/17 04:07	16.4
4-Methyl-2-pentanone (MIBK)	ND		0.027		mg/m3			03/04/17 04:07	16.4
Acetone	ND		0.19		mg/m3			03/04/17 04:07	16.4
Benzene	**0.060**		0.021		mg/m3			03/04/17 04:07	16.4
Benzyl chloride	ND		0.068		mg/m3			03/04/17 04:07	16.4
Bromodichloromethane	ND		0.033		mg/m3			03/04/17 04:07	16.4
Bromoform	ND		0.068		mg/m3			03/04/17 04:07	16.4
Bromomethane	ND		0.051		mg/m3			03/04/17 04:07	16.4
Carbon disulfide	ND		0.041		mg/m3			03/04/17 04:07	16.4
Carbon tetrachloride	ND		0.083		mg/m3			03/04/17 04:07	16.4
Chlorobenzene	**0.029**		0.023		mg/m3			03/04/17 04:07	16.4
Chloroethane	ND		0.035		mg/m3			03/04/17 04:07	16.4
Chloroform	ND		0.024		mg/m3			03/04/17 04:07	16.4
Chloromethane	ND		0.027		mg/m3			03/04/17 04:07	16.4
cis-1,2-Dichloroethene	**0.097**		0.026		mg/m3			03/04/17 04:07	16.4
cis-1,3-Dichloropropene	ND		0.030		mg/m3			03/04/17 04:07	16.4
Dibromochloromethane	ND		0.056		mg/m3			03/04/17 04:07	16.4
Dichlorodifluoromethane	**0.11**		0.032		mg/m3			03/04/17 04:07	16.4
Ethylbenzene	**0.090**		0.028		mg/m3			03/04/17 04:07	16.4
Hexachlorobutadiene	ND		0.35		mg/m3			03/04/17 04:07	16.4
m,p-Xylene	ND		0.057		mg/m3			03/04/17 04:07	16.4
Methylene Chloride	ND		0.023		mg/m3			03/04/17 04:07	16.4
o-Xylene	ND		0.028		mg/m3			03/04/17 04:07	16.4
Styrene	ND		0.028		mg/m3			03/04/17 04:07	16.4
Tetrachloroethene	ND		0.044		mg/m3			03/04/17 04:07	16.4
Toluene	ND		0.025		mg/m3			03/04/17 04:07	16.4
2-Chlorotoluene	ND		0.034		mg/m3			03/04/17 04:07	16.4
trans-1,2-Dichloroethene	ND		0.026		mg/m3			03/04/17 04:07	16.4
trans-1,3-Dichloropropene	ND		0.030		mg/m3			03/04/17 04:07	16.4
Cyclohexane	**0.032**		0.023		mg/m3			03/04/17 04:07	16.4
Trichloroethene	ND		0.035		mg/m3			03/04/17 04:07	16.4
Trichlorofluoromethane	ND		0.037		mg/m3			03/04/17 04:07	16.4
Vinyl acetate	ND		0.046		mg/m3			03/04/17 04:07	16.4
Vinyl chloride	**0.17**		0.017		mg/m3			03/04/17 04:07	16.4
1,4-Dioxane	ND		0.047		mg/m3			03/04/17 04:07	16.4
n-Heptane	**0.12**		0.054		mg/m3			03/04/17 04:07	16.4
Hexane	**0.22**		0.046		mg/m3			03/04/17 04:07	16.4
Isopropylbenzene	**0.065**		0.064		mg/m3			03/04/17 04:07	16.4
Methyl-t-Butyl Ether (MTBE)	ND		0.047		mg/m3			03/04/17 04:07	16.4
Methyl methacrylate	ND		0.054		mg/m3			03/04/17 04:07	16.4
Naphthalene	ND		0.069		mg/m3			03/04/17 04:07	16.4
Propylene	**0.70**		0.011		mg/m3			03/04/17 04:07	16.4
Tetrahydrofuran	ND		0.039		mg/m3			03/04/17 04:07	16.4
2,2,4-Trimethylpentane	ND		0.031		mg/m3			03/04/17 04:07	16.4
Vinyl bromide	ND		0.057		mg/m3			03/04/17 04:07	16.4

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-5:022417
Date Collected: 02/24/17 15:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-10
Matrix: Air

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	0.084		0.031		mg/m3			03/04/17 04:07	16.4
2-Propanol	ND		0.081		mg/m3			03/04/17 04:07	16.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*		*03/04/17 04:07*	*16.4*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*03/04/17 04:07*	*16.4*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/04/17 04:07*	*16.4*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	5400		1600		ppb v/v			03/10/17 04:23	16.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	22		6.7		mg/m3			03/10/17 04:23	16.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*03/10/17 04:23*	*16.4*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*03/10/17 04:23*	*16.4*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/10/17 04:23*	*16.4*

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-153016/9
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30		ppb v/v			03/03/17 17:42	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			03/03/17 17:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40		ppb v/v			03/03/17 17:42	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			03/03/17 17:42	1
1,1-Dichloroethane	ND		0.30		ppb v/v			03/03/17 17:42	1
1,1-Dichloroethene	ND		0.80		ppb v/v			03/03/17 17:42	1
1,2,4-Trichlorobenzene	ND		2.0		ppb v/v			03/03/17 17:42	1
1,2,4-Trimethylbenzene	ND		0.80		ppb v/v			03/03/17 17:42	1
1,2-Dibromoethane (EDB)	ND		0.80		ppb v/v			03/03/17 17:42	1
Allyl chloride	ND		0.80		ppb v/v			03/03/17 17:42	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40		ppb v/v			03/03/17 17:42	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			03/03/17 17:42	1
1,2-Dichloroethane	ND		0.80		ppb v/v			03/03/17 17:42	1
1,2-Dichloropropane	ND		0.40		ppb v/v			03/03/17 17:42	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			03/03/17 17:42	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			03/03/17 17:42	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			03/03/17 17:42	1
2-Butanone (MEK)	ND		0.80		ppb v/v			03/03/17 17:42	1
2-Hexanone	ND		0.40		ppb v/v			03/03/17 17:42	1
1,3-Butadiene	ND		0.80		ppb v/v			03/03/17 17:42	1
4-Ethyltoluene	ND		0.40		ppb v/v			03/03/17 17:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.40		ppb v/v			03/03/17 17:42	1
Acetone	ND		5.0		ppb v/v			03/03/17 17:42	1
Benzene	ND		0.40		ppb v/v			03/03/17 17:42	1
Benzyl chloride	ND		0.80		ppb v/v			03/03/17 17:42	1
Bromodichloromethane	ND		0.30		ppb v/v			03/03/17 17:42	1
Bromoform	ND		0.40		ppb v/v			03/03/17 17:42	1
Bromomethane	ND		0.80		ppb v/v			03/03/17 17:42	1
Carbon disulfide	ND		0.80		ppb v/v			03/03/17 17:42	1
Carbon tetrachloride	ND		0.80		ppb v/v			03/03/17 17:42	1
Chlorobenzene	ND		0.30		ppb v/v			03/03/17 17:42	1
Chloroethane	ND		0.80		ppb v/v			03/03/17 17:42	1
Chloroform	ND		0.30		ppb v/v			03/03/17 17:42	1
Chloromethane	ND		0.80		ppb v/v			03/03/17 17:42	1
cis-1,2-Dichloroethene	ND		0.40		ppb v/v			03/03/17 17:42	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			03/03/17 17:42	1
Dibromochloromethane	ND		0.40		ppb v/v			03/03/17 17:42	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			03/03/17 17:42	1
Ethylbenzene	ND		0.40		ppb v/v			03/03/17 17:42	1
Hexachlorobutadiene	ND		2.0		ppb v/v			03/03/17 17:42	1
m,p-Xylene	ND		0.80		ppb v/v			03/03/17 17:42	1
Methylene Chloride	ND		0.40		ppb v/v			03/03/17 17:42	1
o-Xylene	ND		0.40		ppb v/v			03/03/17 17:42	1
Styrene	ND		0.40		ppb v/v			03/03/17 17:42	1
Tetrachloroethene	ND		0.40		ppb v/v			03/03/17 17:42	1
Toluene	ND		0.40		ppb v/v			03/03/17 17:42	1
2-Chlorotoluene	ND		0.40		ppb v/v			03/03/17 17:42	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			03/03/17 17:42	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-153016/9
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			03/03/17 17:42	1
Cyclohexane	ND		0.40		ppb v/v			03/03/17 17:42	1
Trichloroethene	ND		0.40		ppb v/v			03/03/17 17:42	1
Trichlorofluoromethane	ND		0.40		ppb v/v			03/03/17 17:42	1
Vinyl acetate	ND		0.80		ppb v/v			03/03/17 17:42	1
Vinyl chloride	ND		0.40		ppb v/v			03/03/17 17:42	1
1,4-Dioxane	ND		0.80		ppb v/v			03/03/17 17:42	1
n-Heptane	ND		0.80		ppb v/v			03/03/17 17:42	1
Hexane	ND		0.80		ppb v/v			03/03/17 17:42	1
Isopropylbenzene	ND		0.80		ppb v/v			03/03/17 17:42	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80		ppb v/v			03/03/17 17:42	1
Methyl methacrylate	ND		0.80		ppb v/v			03/03/17 17:42	1
Naphthalene	ND		0.80		ppb v/v			03/03/17 17:42	1
Propylene	ND		0.40		ppb v/v			03/03/17 17:42	1
Tetrahydrofuran	ND		0.80		ppb v/v			03/03/17 17:42	1
2,2,4-Trimethylpentane	ND		0.40		ppb v/v			03/03/17 17:42	1
Vinyl bromide	ND		0.80		ppb v/v			03/03/17 17:42	1
Ethanol	ND		1.0		ppb v/v			03/03/17 17:42	1
2-Propanol	ND		2.0		ppb v/v			03/03/17 17:42	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016		mg/m3			03/03/17 17:42	1
1,1,2,2-Tetrachloroethane	ND		0.0027		mg/m3			03/03/17 17:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031		mg/m3			03/03/17 17:42	1
1,1,2-Trichloroethane	ND		0.0022		mg/m3			03/03/17 17:42	1
1,1-Dichloroethane	ND		0.0012		mg/m3			03/03/17 17:42	1
1,1-Dichloroethene	ND		0.0032		mg/m3			03/03/17 17:42	1
1,2,4-Trichlorobenzene	ND		0.015		mg/m3			03/03/17 17:42	1
1,2,4-Trimethylbenzene	ND		0.0039		mg/m3			03/03/17 17:42	1
1,2-Dibromoethane (EDB)	ND		0.0061		mg/m3			03/03/17 17:42	1
Allyl chloride	ND		0.0025		mg/m3			03/03/17 17:42	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028		mg/m3			03/03/17 17:42	1
1,2-Dichlorobenzene	ND		0.0024		mg/m3			03/03/17 17:42	1
1,2-Dichloroethane	ND		0.0032		mg/m3			03/03/17 17:42	1
1,2-Dichloropropane	ND		0.0018		mg/m3			03/03/17 17:42	1
1,3,5-Trimethylbenzene	ND		0.0020		mg/m3			03/03/17 17:42	1
1,3-Dichlorobenzene	ND		0.0024		mg/m3			03/03/17 17:42	1
1,4-Dichlorobenzene	ND		0.0024		mg/m3			03/03/17 17:42	1
2-Butanone (MEK)	ND		0.0024		mg/m3			03/03/17 17:42	1
2-Hexanone	ND		0.0016		mg/m3			03/03/17 17:42	1
1,3-Butadiene	ND		0.0018		mg/m3			03/03/17 17:42	1
4-Ethyltoluene	ND		0.0020		mg/m3			03/03/17 17:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016		mg/m3			03/03/17 17:42	1
Acetone	ND		0.012		mg/m3			03/03/17 17:42	1
Benzene	ND		0.0013		mg/m3			03/03/17 17:42	1
Benzyl chloride	ND		0.0041		mg/m3			03/03/17 17:42	1
Bromodichloromethane	ND		0.0020		mg/m3			03/03/17 17:42	1
Bromoform	ND		0.0041		mg/m3			03/03/17 17:42	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-153016/9
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.0031		mg/m3			03/03/17 17:42	1
Carbon disulfide	ND		0.0025		mg/m3			03/03/17 17:42	1
Carbon tetrachloride	ND		0.0050		mg/m3			03/03/17 17:42	1
Chlorobenzene	ND		0.0014		mg/m3			03/03/17 17:42	1
Chloroethane	ND		0.0021		mg/m3			03/03/17 17:42	1
Chloroform	ND		0.0015		mg/m3			03/03/17 17:42	1
Chloromethane	ND		0.0017		mg/m3			03/03/17 17:42	1
cis-1,2-Dichloroethene	ND		0.0016		mg/m3			03/03/17 17:42	1
cis-1,3-Dichloropropene	ND		0.0018		mg/m3			03/03/17 17:42	1
Dibromochloromethane	ND		0.0034		mg/m3			03/03/17 17:42	1
Dichlorodifluoromethane	ND		0.0020		mg/m3			03/03/17 17:42	1
Ethylbenzene	ND		0.0017		mg/m3			03/03/17 17:42	1
Hexachlorobutadiene	ND		0.021		mg/m3			03/03/17 17:42	1
m,p-Xylene	ND		0.0035		mg/m3			03/03/17 17:42	1
Methylene Chloride	ND		0.0014		mg/m3			03/03/17 17:42	1
o-Xylene	ND		0.0017		mg/m3			03/03/17 17:42	1
Styrene	ND		0.0017		mg/m3			03/03/17 17:42	1
Tetrachloroethene	ND		0.0027		mg/m3			03/03/17 17:42	1
Toluene	ND		0.0015		mg/m3			03/03/17 17:42	1
2-Chlorotoluene	ND		0.0021		mg/m3			03/03/17 17:42	1
trans-1,2-Dichloroethene	ND		0.0016		mg/m3			03/03/17 17:42	1
trans-1,3-Dichloropropene	ND		0.0018		mg/m3			03/03/17 17:42	1
Cyclohexane	ND		0.0014		mg/m3			03/03/17 17:42	1
Trichloroethene	ND		0.0021		mg/m3			03/03/17 17:42	1
Trichlorofluoromethane	ND		0.0022		mg/m3			03/03/17 17:42	1
Vinyl acetate	ND		0.0028		mg/m3			03/03/17 17:42	1
Vinyl chloride	ND		0.0010		mg/m3			03/03/17 17:42	1
1,4-Dioxane	ND		0.0029		mg/m3			03/03/17 17:42	1
n-Heptane	ND		0.0033		mg/m3			03/03/17 17:42	1
Hexane	ND		0.0028		mg/m3			03/03/17 17:42	1
Isopropylbenzene	ND		0.0039		mg/m3			03/03/17 17:42	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029		mg/m3			03/03/17 17:42	1
Methyl methacrylate	ND		0.0033		mg/m3			03/03/17 17:42	1
Naphthalene	ND		0.0042		mg/m3			03/03/17 17:42	1
Propylene	ND		0.00069		mg/m3			03/03/17 17:42	1
Tetrahydrofuran	ND		0.0024		mg/m3			03/03/17 17:42	1
2,2,4-Trimethylpentane	ND		0.0019		mg/m3			03/03/17 17:42	1
Vinyl bromide	ND		0.0035		mg/m3			03/03/17 17:42	1
Ethanol	ND		0.0019		mg/m3			03/03/17 17:42	1
2-Propanol	ND		0.0049		mg/m3			03/03/17 17:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/03/17 17:42*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*03/03/17 17:42*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/03/17 17:42*	*1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153016/4
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.4		ppb v/v		97	65 - 124
1,1,2,2-Tetrachloroethane	20.0	22.7		ppb v/v		114	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.5		ppb v/v		97	50 - 132
1,1,2-Trichloroethane	20.0	21.4		ppb v/v		107	71 - 131
1,1-Dichloroethane	20.0	20.7		ppb v/v		104	65 - 125
1,1-Dichloroethene	20.0	18.4		ppb v/v		92	53 - 128
1,2,4-Trichlorobenzene	20.0	19.4		ppb v/v		97	59 - 150
1,2,4-Trimethylbenzene	20.0	19.6		ppb v/v		98	61 - 145
1,2-Dibromoethane (EDB)	20.0	21.3		ppb v/v		107	68 - 131
Allyl chloride	20.0	22.2		ppb v/v		111	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	20.9		ppb v/v		105	64 - 124
1,2-Dichlorobenzene	20.0	22.4		ppb v/v		112	73 - 143
1,2-Dichloroethane	20.0	20.0		ppb v/v		100	71 - 131
1,2-Dichloropropane	20.0	20.9		ppb v/v		105	74 - 128
1,3,5-Trimethylbenzene	20.0	19.1		ppb v/v		96	65 - 136
1,3-Dichlorobenzene	20.0	22.2		ppb v/v		111	77 - 136
1,4-Dichlorobenzene	20.0	22.7		ppb v/v		114	73 - 143
2-Butanone (MEK)	20.0	21.0		ppb v/v		105	71 - 131
2-Hexanone	20.0	23.8		ppb v/v		119	70 - 128
1,3-Butadiene	20.0	20.9		ppb v/v		105	58 - 126
4-Ethyltoluene	20.0	18.6		ppb v/v		93	62 - 136
4-Methyl-2-pentanone (MIBK)	20.0	23.3		ppb v/v		116	73 - 133
Acetone	20.0	19.6		ppb v/v		98	71 - 131
Benzene	20.0	20.8		ppb v/v		104	68 - 128
Benzyl chloride	20.0	18.8		ppb v/v		94	58 - 120
Bromodichloromethane	20.0	20.0		ppb v/v		100	65 - 130
Bromoform	20.0	20.9		ppb v/v		105	64 - 144
Bromomethane	20.0	23.1		ppb v/v		115	70 - 131
Carbon disulfide	20.0	19.6		ppb v/v		98	63 - 123
Carbon tetrachloride	20.0	19.6		ppb v/v		98	67 - 127
Chlorobenzene	20.0	21.2		ppb v/v		106	70 - 132
Chloroethane	20.0	22.7		ppb v/v		114	70 - 131
Chloroform	20.0	19.7		ppb v/v		98	69 - 129
Chloromethane	20.0	20.3		ppb v/v		102	67 - 127
cis-1,2-Dichloroethene	20.0	21.4		ppb v/v		107	68 - 128
cis-1,3-Dichloropropene	20.0	24.0		ppb v/v		120	78 - 132
Dibromochloromethane	20.0	19.6		ppb v/v		98	68 - 128
Dichlorodifluoromethane	20.0	21.2		ppb v/v		106	69 - 129
Ethylbenzene	20.0	20.9		ppb v/v		105	76 - 136
Hexachlorobutadiene	20.0	17.0		ppb v/v		85	42 - 150
m,p-Xylene	40.0	42.7		ppb v/v		107	75 - 138
Methylene Chloride	20.0	19.1		ppb v/v		95	65 - 125
o-Xylene	20.0	21.3		ppb v/v		106	77 - 132
Styrene	20.0	22.0		ppb v/v		110	76 - 144
Tetrachloroethene	20.0	19.3		ppb v/v		96	56 - 138
Toluene	20.0	21.9		ppb v/v		109	71 - 132

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153016/4
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	20.0	20.5		ppb v/v		102	73 - 131
trans-1,2-Dichloroethene	20.0	20.6		ppb v/v		103	70 - 130
trans-1,3-Dichloropropene	20.0	19.4		ppb v/v		97	56 - 136
Cyclohexane	20.0	20.4		ppb v/v		102	63 - 128
Trichloroethene	20.0	20.6		ppb v/v		103	64 - 127
Trichlorofluoromethane	20.0	19.8		ppb v/v		99	68 - 128
Vinyl acetate	20.0	24.6		ppb v/v		123	77 - 134
Vinyl chloride	20.0	22.0		ppb v/v		110	69 - 129
1,4-Dioxane	20.0	22.0		ppb v/v		110	55 - 141
n-Heptane	20.0	22.3		ppb v/v		111	69 - 129
Hexane	20.0	19.5		ppb v/v		97	63 - 123
Isopropylbenzene	20.0	21.0		ppb v/v		105	75 - 135
Methyl-t-Butyl Ether (MTBE)	20.0	19.3		ppb v/v		96	72 - 132
Methyl methacrylate	20.0	22.5		ppb v/v		112	71 - 130
Naphthalene	20.0	17.7		ppb v/v		88	58 - 150
Propylene	20.0	23.1		ppb v/v		115	72 - 132
Tetrahydrofuran	20.0	20.0		ppb v/v		100	69 - 129
2,2,4-Trimethylpentane	20.0	21.8		ppb v/v		109	72 - 132
Vinyl bromide	20.0	20.2		ppb v/v		101	65 - 125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.106		mg/m3		97	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.156		mg/m3		114	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.149		mg/m3		97	50 - 132
1,1,2-Trichloroethane	0.11	0.117		mg/m3		107	71 - 131
1,1-Dichloroethane	0.081	0.0839		mg/m3		104	65 - 125
1,1-Dichloroethene	0.079	0.0729		mg/m3		92	53 - 128
1,2,4-Trichlorobenzene	0.15	0.144		mg/m3		97	59 - 150
1,2,4-Trimethylbenzene	0.098	0.0961		mg/m3		98	61 - 145
1,2-Dibromoethane (EDB)	0.15	0.164		mg/m3		107	68 - 131
Allyl chloride	0.063	0.0696		mg/m3		111	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.146		mg/m3		105	64 - 124
1,2-Dichlorobenzene	0.12	0.135		mg/m3		112	73 - 143
1,2-Dichloroethane	0.081	0.0810		mg/m3		100	71 - 131
1,2-Dichloropropane	0.092	0.0968		mg/m3		105	74 - 128
1,3,5-Trimethylbenzene	0.098	0.0939		mg/m3		96	65 - 136
1,3-Dichlorobenzene	0.12	0.134		mg/m3		111	77 - 136
1,4-Dichlorobenzene	0.12	0.137		mg/m3		114	73 - 143
2-Butanone (MEK)	0.059	0.0620		mg/m3		105	71 - 131
2-Hexanone	0.082	0.0975		mg/m3		119	70 - 128
1,3-Butadiene	0.044	0.0462		mg/m3		105	58 - 126
4-Ethyltoluene	0.098	0.0915		mg/m3		93	62 - 136
4-Methyl-2-pentanone (MIBK)	0.082	0.0953		mg/m3		116	73 - 133
Acetone	0.048	0.0467		mg/m3		98	71 - 131
Benzene	0.064	0.0666		mg/m3		104	68 - 128
Benzyl chloride	0.10	0.0976		mg/m3		94	58 - 120
Bromodichloromethane	0.13	0.134		mg/m3		100	65 - 130

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153016/4
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	0.21	0.216		mg/m3		105	64 - 144
Bromomethane	0.078	0.0897		mg/m3		115	70 - 131
Carbon disulfide	0.062	0.0609		mg/m3		98	63 - 123
Carbon tetrachloride	0.13	0.123		mg/m3		98	67 - 127
Chlorobenzene	0.092	0.0974		mg/m3		106	70 - 132
Chloroethane	0.053	0.0600		mg/m3		114	70 - 131
Chloroform	0.098	0.0961		mg/m3		98	69 - 129
Chloromethane	0.041	0.0419		mg/m3		102	67 - 127
cis-1,2-Dichloroethene	0.079	0.0849		mg/m3		107	68 - 128
cis-1,3-Dichloropropene	0.091	0.109		mg/m3		120	78 - 132
Dibromochloromethane	0.17	0.167		mg/m3		98	68 - 128
Dichlorodifluoromethane	0.099	0.105		mg/m3		106	69 - 129
Ethylbenzene	0.087	0.0908		mg/m3		105	76 - 136
Hexachlorobutadiene	0.21	0.181		mg/m3		85	42 - 150
m,p-Xylene	0.17	0.185		mg/m3		107	75 - 138
Methylene Chloride	0.069	0.0663		mg/m3		95	65 - 125
o-Xylene	0.087	0.0924		mg/m3		106	77 - 132
Styrene	0.085	0.0938		mg/m3		110	76 - 144
Tetrachloroethene	0.14	0.131		mg/m3		96	56 - 138
Toluene	0.075	0.0824		mg/m3		109	71 - 132
2-Chlorotoluene	0.10	0.106		mg/m3		102	73 - 131
trans-1,2-Dichloroethene	0.079	0.0818		mg/m3		103	70 - 130
trans-1,3-Dichloropropene	0.091	0.0882		mg/m3		97	56 - 136
Cyclohexane	0.069	0.0703		mg/m3		102	63 - 128
Trichloroethene	0.11	0.111		mg/m3		103	64 - 127
Trichlorofluoromethane	0.11	0.111		mg/m3		99	68 - 128
Vinyl acetate	0.070	0.0866		mg/m3		123	77 - 134
Vinyl chloride	0.051	0.0563		mg/m3		110	69 - 129
1,4-Dioxane	0.072	0.0791		mg/m3		110	55 - 141
n-Heptane	0.082	0.0913		mg/m3		111	69 - 129
Hexane	0.070	0.0686		mg/m3		97	63 - 123
Isopropylbenzene	0.098	0.103		mg/m3		105	75 - 135
Methyl-t-Butyl Ether (MTBE)	0.072	0.0696		mg/m3		96	72 - 132
Methyl methacrylate	0.082	0.0921		mg/m3		112	71 - 130
Naphthalene	0.10	0.0925		mg/m3		88	58 - 150
Propylene	0.034	0.0397		mg/m3		115	72 - 132
Tetrahydrofuran	0.059	0.0590		mg/m3		100	69 - 129
2,2,4-Trimethylpentane	0.093	0.102		mg/m3		109	72 - 132
Vinyl bromide	0.087	0.0884		mg/m3		101	65 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153016/6
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			100	97.9		ppb v/v		98	62 - 131		
2-Propanol			20.0	21.7		ppb v/v		108	55 - 139		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			0.19	0.184		mg/m3		98	62 - 131		
2-Propanol			0.049	0.0533		mg/m3		108	55 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 320-153016/5
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	18.8		ppb v/v		94	65 - 124	3	25
1,1,2,2-Tetrachloroethane			20.0	22.9		ppb v/v		114	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane			20.0	19.4		ppb v/v		97	50 - 132	1	25
1,1,2-Trichloroethane			20.0	22.4		ppb v/v		112	71 - 131	5	25
1,1-Dichloroethane			20.0	20.4		ppb v/v		102	65 - 125	2	25
1,1-Dichloroethene			20.0	17.9		ppb v/v		90	53 - 128	3	25
1,2,4-Trichlorobenzene			20.0	19.6		ppb v/v		98	59 - 150	1	25
1,2,4-Trimethylbenzene			20.0	19.4		ppb v/v		97	61 - 145	1	25
1,2-Dibromoethane (EDB)			20.0	21.6		ppb v/v		108	68 - 131	1	25
Allyl chloride			20.0	22.3		ppb v/v		111	77 - 137	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane			20.0	21.5		ppb v/v		107	64 - 124	3	25
1,2-Dichlorobenzene			20.0	22.3		ppb v/v		111	73 - 143	1	25
1,2-Dichloroethane			20.0	19.7		ppb v/v		98	71 - 131	2	25
1,2-Dichloropropane			20.0	20.9		ppb v/v		104	74 - 128	0	25
1,3,5-Trimethylbenzene			20.0	19.0		ppb v/v		95	65 - 136	1	25
1,3-Dichlorobenzene			20.0	22.1		ppb v/v		110	77 - 136	1	25
1,4-Dichlorobenzene			20.0	22.6		ppb v/v		113	73 - 143	0	25
2-Butanone (MEK)			20.0	21.5		ppb v/v		107	71 - 131	2	25
2-Hexanone			20.0	24.4		ppb v/v		122	70 - 128	3	25
1,3-Butadiene			20.0	20.3		ppb v/v		101	58 - 126	3	25
4-Ethyltoluene			20.0	17.9		ppb v/v		89	62 - 136	4	25
4-Methyl-2-pentanone (MIBK)			20.0	23.1		ppb v/v		116	73 - 133	1	25
Acetone			20.0	19.3		ppb v/v		96	71 - 131	2	25
Benzene			20.0	21.1		ppb v/v		106	68 - 128	1	25
Benzyl chloride			20.0	18.8		ppb v/v		94	58 - 120	0	25
Bromodichloromethane			20.0	19.9		ppb v/v		99	65 - 130	1	25
Bromoform			20.0	20.2		ppb v/v		101	64 - 144	3	25
Bromomethane			20.0	23.1		ppb v/v		116	70 - 131	0	25
Carbon disulfide			20.0	19.8		ppb v/v		99	63 - 123	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-153016/5
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon tetrachloride	20.0	19.2		ppb v/v		96	67 - 127	2	25
Chlorobenzene	20.0	21.1		ppb v/v		106	70 - 132	0	25
Chloroethane	20.0	23.3		ppb v/v		116	70 - 131	2	25
Chloroform	20.0	19.5		ppb v/v		97	69 - 129	1	25
Chloromethane	20.0	20.9		ppb v/v		105	67 - 127	3	25
cis-1,2-Dichloroethene	20.0	21.2		ppb v/v		106	68 - 128	1	25
cis-1,3-Dichloropropene	20.0	23.7		ppb v/v		119	78 - 132	1	25
Dibromochloromethane	20.0	20.1		ppb v/v		100	68 - 128	3	25
Dichlorodifluoromethane	20.0	21.6		ppb v/v		108	69 - 129	2	25
Ethylbenzene	20.0	20.9		ppb v/v		105	76 - 136	0	25
Hexachlorobutadiene	20.0	16.7		ppb v/v		84	42 - 150	1	25
m,p-Xylene	40.0	42.3		ppb v/v		106	75 - 138	1	25
Methylene Chloride	20.0	18.9		ppb v/v		94	65 - 125	1	25
o-Xylene	20.0	21.2		ppb v/v		106	77 - 132	1	25
Styrene	20.0	21.8		ppb v/v		109	76 - 144	1	25
Tetrachloroethene	20.0	19.7		ppb v/v		99	56 - 138	2	25
Toluene	20.0	20.9		ppb v/v		105	71 - 132	4	25
2-Chlorotoluene	20.0	20.7		ppb v/v		103	73 - 131	1	25
trans-1,2-Dichloroethene	20.0	20.6		ppb v/v		103	70 - 130	0	25
trans-1,3-Dichloropropene	20.0	19.9		ppb v/v		100	56 - 136	2	25
Cyclohexane	20.0	21.2		ppb v/v		106	63 - 128	4	25
Trichloroethene	20.0	21.3		ppb v/v		106	64 - 127	3	25
Trichlorofluoromethane	20.0	19.1		ppb v/v		96	68 - 128	3	25
Vinyl acetate	20.0	24.2		ppb v/v		121	77 - 134	2	25
Vinyl chloride	20.0	21.9		ppb v/v		109	69 - 129	1	25
1,4-Dioxane	20.0	22.1		ppb v/v		110	55 - 141	0	25
n-Heptane	20.0	22.3		ppb v/v		111	69 - 129	0	25
Hexane	20.0	19.4		ppb v/v		97	63 - 123	1	25
Isopropylbenzene	20.0	20.6		ppb v/v		103	75 - 135	2	25
Methyl-t-Butyl Ether (MTBE)	20.0	19.3		ppb v/v		97	72 - 132	0	25
Methyl methacrylate	20.0	22.7		ppb v/v		113	71 - 130	1	25
Naphthalene	20.0	17.9		ppb v/v		90	58 - 150	1	25
Propylene	20.0	23.2		ppb v/v		116	72 - 132	1	25
Tetrahydrofuran	20.0	20.2		ppb v/v		101	69 - 129	1	25
2,2,4-Trimethylpentane	20.0	22.2		ppb v/v		111	72 - 132	2	25
Vinyl bromide	20.0	20.0		ppb v/v		100	65 - 125	1	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.11	0.103		mg/m3		94	65 - 124	3	25
1,1,2,2-Tetrachloroethane	0.14	0.157		mg/m3		114	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.148		mg/m3		97	50 - 132	1	25
1,1,2-Trichloroethane	0.11	0.122		mg/m3		112	71 - 131	5	25
1,1-Dichloroethane	0.081	0.0825		mg/m3		102	65 - 125	2	25
1,1-Dichloroethene	0.079	0.0711		mg/m3		90	53 - 128	3	25
1,2,4-Trichlorobenzene	0.15	0.145		mg/m3		98	59 - 150	1	25
1,2,4-Trimethylbenzene	0.098	0.0952		mg/m3		97	61 - 145	1	25
1,2-Dibromoethane (EDB)	0.15	0.166		mg/m3		108	68 - 131	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-153016/5
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Allyl chloride			0.063	0.0697		mg/m3		111	77 - 137	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane			0.14	0.150		mg/m3		107	64 - 124	3	25
1,2-Dichlorobenzene			0.12	0.134		mg/m3		111	73 - 143	1	25
1,2-Dichloroethane			0.081	0.0797		mg/m3		98	71 - 131	2	25
1,2-Dichloropropane			0.092	0.0964		mg/m3		104	74 - 128	0	25
1,3,5-Trimethylbenzene			0.098	0.0933		mg/m3		95	65 - 136	1	25
1,3-Dichlorobenzene			0.12	0.133		mg/m3		110	77 - 136	1	25
1,4-Dichlorobenzene			0.12	0.136		mg/m3		113	73 - 143	0	25
2-Butanone (MEK)			0.059	0.0634		mg/m3		107	71 - 131	2	25
2-Hexanone			0.082	0.100		mg/m3		122	70 - 128	3	25
1,3-Butadiene			0.044	0.0448		mg/m3		101	58 - 126	3	25
4-Ethyltoluene			0.098	0.0879		mg/m3		89	62 - 136	4	25
4-Methyl-2-pentanone (MIBK)			0.082	0.0946		mg/m3		116	73 - 133	1	25
Acetone			0.048	0.0458		mg/m3		96	71 - 131	2	25
Benzene			0.064	0.0674		mg/m3		106	68 - 128	1	25
Benzyl chloride			0.10	0.0971		mg/m3		94	58 - 120	0	25
Bromodichloromethane			0.13	0.133		mg/m3		99	65 - 130	1	25
Bromoform			0.21	0.209		mg/m3		101	64 - 144	3	25
Bromomethane			0.078	0.0897		mg/m3		116	70 - 131	0	25
Carbon disulfide			0.062	0.0617		mg/m3		99	63 - 123	1	25
Carbon tetrachloride			0.13	0.121		mg/m3		96	67 - 127	2	25
Chlorobenzene			0.092	0.0973		mg/m3		106	70 - 132	0	25
Chloroethane			0.053	0.0614		mg/m3		116	70 - 131	2	25
Chloroform			0.098	0.0950		mg/m3		97	69 - 129	1	25
Chloromethane			0.041	0.0433		mg/m3		105	67 - 127	3	25
cis-1,2-Dichloroethene			0.079	0.0839		mg/m3		106	68 - 128	1	25
cis-1,3-Dichloropropene			0.091	0.108		mg/m3		119	78 - 132	1	25
Dibromochloromethane			0.17	0.171		mg/m3		100	68 - 128	3	25
Dichlorodifluoromethane			0.099	0.107		mg/m3		108	69 - 129	2	25
Ethylbenzene			0.087	0.0908		mg/m3		105	76 - 136	0	25
Hexachlorobutadiene			0.21	0.178		mg/m3		84	42 - 150	1	25
m,p-Xylene			0.17	0.184		mg/m3		106	75 - 138	1	25
Methylene Chloride			0.069	0.0656		mg/m3		94	65 - 125	1	25
o-Xylene			0.087	0.0919		mg/m3		106	77 - 132	1	25
Styrene			0.085	0.0929		mg/m3		109	76 - 144	1	25
Tetrachloroethene			0.14	0.134		mg/m3		99	56 - 138	2	25
Toluene			0.075	0.0789		mg/m3		105	71 - 132	4	25
2-Chlorotoluene			0.10	0.107		mg/m3		103	73 - 131	1	25
trans-1,2-Dichloroethene			0.079	0.0818		mg/m3		103	70 - 130	0	25
trans-1,3-Dichloropropene			0.091	0.0903		mg/m3		100	56 - 136	2	25
Cyclohexane			0.069	0.0730		mg/m3		106	63 - 128	4	25
Trichloroethene			0.11	0.114		mg/m3		106	64 - 127	3	25
Trichlorofluoromethane			0.11	0.107		mg/m3		96	68 - 128	3	25
Vinyl acetate			0.070	0.0851		mg/m3		121	77 - 134	2	25
Vinyl chloride			0.051	0.0559		mg/m3		109	69 - 129	1	25
1,4-Dioxane			0.072	0.0795		mg/m3		110	55 - 141	0	25
n-Heptane			0.082	0.0913		mg/m3		111	69 - 129	0	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-153016/5
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexane			0.070	0.0683		mg/m3		97	63 - 123	1	25
Isopropylbenzene			0.098	0.101		mg/m3		103	75 - 135	2	25
Methyl-t-Butyl Ether (MTBE)			0.072	0.0697		mg/m3		97	72 - 132	0	25
Methyl methacrylate			0.082	0.0929		mg/m3		113	71 - 130	1	25
Naphthalene			0.10	0.0939		mg/m3		90	58 - 150	1	25
Propylene			0.034	0.0400		mg/m3		116	72 - 132	1	25
Tetrahydrofuran			0.059	0.0596		mg/m3		101	69 - 129	1	25
2,2,4-Trimethylpentane			0.093	0.104		mg/m3		111	72 - 132	2	25
Vinyl bromide			0.087	0.0873		mg/m3		100	65 - 125	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 320-153016/7
Matrix: Air
Analysis Batch: 153016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			100	101		ppb v/v		101	62 - 131	3	25
2-Propanol			20.0	22.5		ppb v/v		113	55 - 139	4	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			0.19	0.191		mg/m3		101	62 - 131	3	25
2-Propanol			0.049	0.0554		mg/m3		113	55 - 139	4	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 320-153675/9
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30		ppb v/v			03/07/17 19:24	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			03/07/17 19:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40		ppb v/v			03/07/17 19:24	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			03/07/17 19:24	1
1,1-Dichloroethane	ND		0.30		ppb v/v			03/07/17 19:24	1
1,1-Dichloroethene	ND		0.80		ppb v/v			03/07/17 19:24	1
1,2,4-Trichlorobenzene	ND		2.0		ppb v/v			03/07/17 19:24	1
1,2,4-Trimethylbenzene	ND		0.80		ppb v/v			03/07/17 19:24	1
1,2-Dibromoethane (EDB)	ND		0.80		ppb v/v			03/07/17 19:24	1
Allyl chloride	ND		0.80		ppb v/v			03/07/17 19:24	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40		ppb v/v			03/07/17 19:24	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-153675/9
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.40		ppb v/v			03/07/17 19:24	1
1,2-Dichloroethane	ND		0.80		ppb v/v			03/07/17 19:24	1
1,2-Dichloropropane	ND		0.40		ppb v/v			03/07/17 19:24	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			03/07/17 19:24	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			03/07/17 19:24	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			03/07/17 19:24	1
2-Butanone (MEK)	ND		0.80		ppb v/v			03/07/17 19:24	1
2-Hexanone	ND		0.40		ppb v/v			03/07/17 19:24	1
1,3-Butadiene	ND		0.80		ppb v/v			03/07/17 19:24	1
4-Ethyltoluene	ND		0.40		ppb v/v			03/07/17 19:24	1
4-Methyl-2-pentanone (MIBK)	ND		0.40		ppb v/v			03/07/17 19:24	1
Acetone	ND		5.0		ppb v/v			03/07/17 19:24	1
Benzene	ND		0.40		ppb v/v			03/07/17 19:24	1
Benzyl chloride	ND		0.80		ppb v/v			03/07/17 19:24	1
Bromodichloromethane	ND		0.30		ppb v/v			03/07/17 19:24	1
Bromoform	ND		0.40		ppb v/v			03/07/17 19:24	1
Bromomethane	ND		0.80		ppb v/v			03/07/17 19:24	1
Carbon disulfide	ND		0.80		ppb v/v			03/07/17 19:24	1
Carbon tetrachloride	ND		0.80		ppb v/v			03/07/17 19:24	1
Chlorobenzene	ND		0.30		ppb v/v			03/07/17 19:24	1
Chloroethane	ND		0.80		ppb v/v			03/07/17 19:24	1
Chloroform	ND		0.30		ppb v/v			03/07/17 19:24	1
Chloromethane	ND		0.80		ppb v/v			03/07/17 19:24	1
cis-1,2-Dichloroethene	ND		0.40		ppb v/v			03/07/17 19:24	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			03/07/17 19:24	1
Dibromochloromethane	ND		0.40		ppb v/v			03/07/17 19:24	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			03/07/17 19:24	1
Ethylbenzene	ND		0.40		ppb v/v			03/07/17 19:24	1
Hexachlorobutadiene	ND		2.0		ppb v/v			03/07/17 19:24	1
m,p-Xylene	ND		0.80		ppb v/v			03/07/17 19:24	1
Methylene Chloride	ND		0.40		ppb v/v			03/07/17 19:24	1
o-Xylene	ND		0.40		ppb v/v			03/07/17 19:24	1
Styrene	ND		0.40		ppb v/v			03/07/17 19:24	1
Tetrachloroethene	ND		0.40		ppb v/v			03/07/17 19:24	1
Toluene	ND		0.40		ppb v/v			03/07/17 19:24	1
2-Chlorotoluene	ND		0.40		ppb v/v			03/07/17 19:24	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			03/07/17 19:24	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			03/07/17 19:24	1
Cyclohexane	ND		0.40		ppb v/v			03/07/17 19:24	1
Trichloroethene	ND		0.40		ppb v/v			03/07/17 19:24	1
Trichlorofluoromethane	ND		0.40		ppb v/v			03/07/17 19:24	1
Vinyl acetate	ND		0.80		ppb v/v			03/07/17 19:24	1
Vinyl chloride	ND		0.40		ppb v/v			03/07/17 19:24	1
1,4-Dioxane	ND		0.80		ppb v/v			03/07/17 19:24	1
n-Heptane	ND		0.80		ppb v/v			03/07/17 19:24	1
Hexane	ND		0.80		ppb v/v			03/07/17 19:24	1
Isopropylbenzene	ND		0.80		ppb v/v			03/07/17 19:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80		ppb v/v			03/07/17 19:24	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-153675/9
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	ND		0.80		ppb v/v			03/07/17 19:24	1
Naphthalene	ND		0.80		ppb v/v			03/07/17 19:24	1
Propylene	ND		0.40		ppb v/v			03/07/17 19:24	1
Tetrahydrofuran	ND		0.80		ppb v/v			03/07/17 19:24	1
2,2,4-Trimethylpentane	ND		0.40		ppb v/v			03/07/17 19:24	1
Vinyl bromide	ND		0.80		ppb v/v			03/07/17 19:24	1
Ethanol	ND		1.0		ppb v/v			03/07/17 19:24	1
2-Propanol	ND		2.0		ppb v/v			03/07/17 19:24	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016		mg/m3			03/07/17 19:24	1
1,1,2,2-Tetrachloroethane	ND		0.0027		mg/m3			03/07/17 19:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031		mg/m3			03/07/17 19:24	1
1,1,2-Trichloroethane	ND		0.0022		mg/m3			03/07/17 19:24	1
1,1-Dichloroethane	ND		0.0012		mg/m3			03/07/17 19:24	1
1,1-Dichloroethene	ND		0.0032		mg/m3			03/07/17 19:24	1
1,2,4-Trichlorobenzene	ND		0.015		mg/m3			03/07/17 19:24	1
1,2,4-Trimethylbenzene	ND		0.0039		mg/m3			03/07/17 19:24	1
1,2-Dibromoethane (EDB)	ND		0.0061		mg/m3			03/07/17 19:24	1
Allyl chloride	ND		0.0025		mg/m3			03/07/17 19:24	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028		mg/m3			03/07/17 19:24	1
1,2-Dichlorobenzene	ND		0.0024		mg/m3			03/07/17 19:24	1
1,2-Dichloroethane	ND		0.0032		mg/m3			03/07/17 19:24	1
1,2-Dichloropropane	ND		0.0018		mg/m3			03/07/17 19:24	1
1,3,5-Trimethylbenzene	ND		0.0020		mg/m3			03/07/17 19:24	1
1,3-Dichlorobenzene	ND		0.0024		mg/m3			03/07/17 19:24	1
1,4-Dichlorobenzene	ND		0.0024		mg/m3			03/07/17 19:24	1
2-Butanone (MEK)	ND		0.0024		mg/m3			03/07/17 19:24	1
2-Hexanone	ND		0.0016		mg/m3			03/07/17 19:24	1
1,3-Butadiene	ND		0.0018		mg/m3			03/07/17 19:24	1
4-Ethyltoluene	ND		0.0020		mg/m3			03/07/17 19:24	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016		mg/m3			03/07/17 19:24	1
Acetone	ND		0.012		mg/m3			03/07/17 19:24	1
Benzene	ND		0.0013		mg/m3			03/07/17 19:24	1
Benzyl chloride	ND		0.0041		mg/m3			03/07/17 19:24	1
Bromodichloromethane	ND		0.0020		mg/m3			03/07/17 19:24	1
Bromoform	ND		0.0041		mg/m3			03/07/17 19:24	1
Bromomethane	ND		0.0031		mg/m3			03/07/17 19:24	1
Carbon disulfide	ND		0.0025		mg/m3			03/07/17 19:24	1
Carbon tetrachloride	ND		0.0050		mg/m3			03/07/17 19:24	1
Chlorobenzene	ND		0.0014		mg/m3			03/07/17 19:24	1
Chloroethane	ND		0.0021		mg/m3			03/07/17 19:24	1
Chloroform	ND		0.0015		mg/m3			03/07/17 19:24	1
Chloromethane	ND		0.0017		mg/m3			03/07/17 19:24	1
cis-1,2-Dichloroethene	ND		0.0016		mg/m3			03/07/17 19:24	1
cis-1,3-Dichloropropene	ND		0.0018		mg/m3			03/07/17 19:24	1
Dibromochloromethane	ND		0.0034		mg/m3			03/07/17 19:24	1
Dichlorodifluoromethane	ND		0.0020		mg/m3			03/07/17 19:24	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-153675/9
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.0017		mg/m3			03/07/17 19:24	1
Hexachlorobutadiene	ND		0.021		mg/m3			03/07/17 19:24	1
m,p-Xylene	ND		0.0035		mg/m3			03/07/17 19:24	1
Methylene Chloride	ND		0.0014		mg/m3			03/07/17 19:24	1
o-Xylene	ND		0.0017		mg/m3			03/07/17 19:24	1
Styrene	ND		0.0017		mg/m3			03/07/17 19:24	1
Tetrachloroethene	ND		0.0027		mg/m3			03/07/17 19:24	1
Toluene	ND		0.0015		mg/m3			03/07/17 19:24	1
2-Chlorotoluene	ND		0.0021		mg/m3			03/07/17 19:24	1
trans-1,2-Dichloroethene	ND		0.0016		mg/m3			03/07/17 19:24	1
trans-1,3-Dichloropropene	ND		0.0018		mg/m3			03/07/17 19:24	1
Cyclohexane	ND		0.0014		mg/m3			03/07/17 19:24	1
Trichloroethene	ND		0.0021		mg/m3			03/07/17 19:24	1
Trichlorofluoromethane	ND		0.0022		mg/m3			03/07/17 19:24	1
Vinyl acetate	ND		0.0028		mg/m3			03/07/17 19:24	1
Vinyl chloride	ND		0.0010		mg/m3			03/07/17 19:24	1
1,4-Dioxane	ND		0.0029		mg/m3			03/07/17 19:24	1
n-Heptane	ND		0.0033		mg/m3			03/07/17 19:24	1
Hexane	ND		0.0028		mg/m3			03/07/17 19:24	1
Isopropylbenzene	ND		0.0039		mg/m3			03/07/17 19:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029		mg/m3			03/07/17 19:24	1
Methyl methacrylate	ND		0.0033		mg/m3			03/07/17 19:24	1
Naphthalene	ND		0.0042		mg/m3			03/07/17 19:24	1
Propylene	ND		0.00069		mg/m3			03/07/17 19:24	1
Tetrahydrofuran	ND		0.0024		mg/m3			03/07/17 19:24	1
2,2,4-Trimethylpentane	ND		0.0019		mg/m3			03/07/17 19:24	1
Vinyl bromide	ND		0.0035		mg/m3			03/07/17 19:24	1
Ethanol	ND		0.0019		mg/m3			03/07/17 19:24	1
2-Propanol	ND		0.0049		mg/m3			03/07/17 19:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*03/07/17 19:24*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*03/07/17 19:24*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/07/17 19:24*	*1*

Lab Sample ID: LCS 320-153675/4
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.6		ppb v/v		98	65 - 124
1,1,2,2-Tetrachloroethane	20.0	22.9		ppb v/v		115	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.6		ppb v/v		98	50 - 132
1,1,2-Trichloroethane	20.0	21.9		ppb v/v		110	71 - 131
1,1-Dichloroethane	20.0	20.6		ppb v/v		103	65 - 125
1,1-Dichloroethene	20.0	18.3		ppb v/v		92	53 - 128
1,2,4-Trichlorobenzene	20.0	20.2		ppb v/v		101	59 - 150

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153675/4
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	20.0	20.4		ppb v/v		102	61 - 145
1,2-Dibromoethane (EDB)	20.0	21.4		ppb v/v		107	68 - 131
Allyl chloride	20.0	22.1		ppb v/v		110	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.6		ppb v/v		108	64 - 124
1,2-Dichlorobenzene	20.0	22.9		ppb v/v		114	73 - 143
1,2-Dichloroethane	20.0	20.6		ppb v/v		103	71 - 131
1,2-Dichloropropane	20.0	21.5		ppb v/v		107	74 - 128
1,3,5-Trimethylbenzene	20.0	19.7		ppb v/v		99	65 - 136
1,3-Dichlorobenzene	20.0	22.8		ppb v/v		114	77 - 136
1,4-Dichlorobenzene	20.0	23.3		ppb v/v		117	73 - 143
2-Butanone (MEK)	20.0	20.9		ppb v/v		104	71 - 131
2-Hexanone	20.0	23.8		ppb v/v		119	70 - 128
1,3-Butadiene	20.0	20.3		ppb v/v		102	58 - 126
4-Ethyltoluene	20.0	18.6		ppb v/v		93	62 - 136
4-Methyl-2-pentanone (MIBK)	20.0	23.7		ppb v/v		118	73 - 133
Acetone	20.0	19.6		ppb v/v		98	71 - 131
Benzene	20.0	21.3		ppb v/v		107	68 - 128
Benzyl chloride	20.0	19.0		ppb v/v		95	58 - 120
Bromodichloromethane	20.0	20.4		ppb v/v		102	65 - 130
Bromoform	20.0	21.1		ppb v/v		105	64 - 144
Bromomethane	20.0	22.7		ppb v/v		113	70 - 131
Carbon disulfide	20.0	19.6		ppb v/v		98	63 - 123
Carbon tetrachloride	20.0	20.1		ppb v/v		101	67 - 127
Chlorobenzene	20.0	21.2		ppb v/v		106	70 - 132
Chloroethane	20.0	22.2		ppb v/v		111	70 - 131
Chloroform	20.0	19.8		ppb v/v		99	69 - 129
Chloromethane	20.0	20.7		ppb v/v		104	67 - 127
cis-1,2-Dichloroethene	20.0	21.0		ppb v/v		105	68 - 128
cis-1,3-Dichloropropene	20.0	24.3		ppb v/v		121	78 - 132
Dibromochloromethane	20.0	20.0		ppb v/v		100	68 - 128
Dichlorodifluoromethane	20.0	23.8		ppb v/v		119	69 - 129
Ethylbenzene	20.0	21.2		ppb v/v		106	76 - 136
Hexachlorobutadiene	20.0	17.6		ppb v/v		88	42 - 150
m,p-Xylene	40.0	43.4		ppb v/v		108	75 - 138
Methylene Chloride	20.0	18.9		ppb v/v		95	65 - 125
o-Xylene	20.0	21.7		ppb v/v		108	77 - 132
Styrene	20.0	22.3		ppb v/v		111	76 - 144
Tetrachloroethene	20.0	19.8		ppb v/v		99	56 - 138
Toluene	20.0	21.8		ppb v/v		109	71 - 132
2-Chlorotoluene	20.0	21.3		ppb v/v		106	73 - 131
trans-1,2-Dichloroethene	20.0	20.8		ppb v/v		104	70 - 130
trans-1,3-Dichloropropene	20.0	19.6		ppb v/v		98	56 - 136
Cyclohexane	20.0	21.3		ppb v/v		107	63 - 128
Trichloroethene	20.0	21.4		ppb v/v		107	64 - 127
Trichlorofluoromethane	20.0	20.0		ppb v/v		100	68 - 128
Vinyl acetate	20.0	23.9		ppb v/v		120	77 - 134
Vinyl chloride	20.0	21.8		ppb v/v		109	69 - 129

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153675/4
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	20.0	21.7		ppb v/v		109	55 - 141
n-Heptane	20.0	22.3		ppb v/v		111	69 - 129
Hexane	20.0	19.7		ppb v/v		98	63 - 123
Isopropylbenzene	20.0	21.6		ppb v/v		108	75 - 135
Methyl-t-Butyl Ether (MTBE)	20.0	19.4		ppb v/v		97	72 - 132
Methyl methacrylate	20.0	22.6		ppb v/v		113	71 - 130
Naphthalene	20.0	18.2		ppb v/v		91	58 - 150
Propylene	20.0	23.4		ppb v/v		117	72 - 132
Tetrahydrofuran	20.0	19.6		ppb v/v		98	69 - 129
2,2,4-Trimethylpentane	20.0	22.0		ppb v/v		110	72 - 132
Vinyl bromide	20.0	19.8		ppb v/v		99	65 - 125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.11	0.107		mg/m3		98	65 - 124
1,1,2,2-Tetrachloroethane	0.14	0.157		mg/m3		115	75 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.150		mg/m3		98	50 - 132
1,1,2-Trichloroethane	0.11	0.120		mg/m3		110	71 - 131
1,1-Dichloroethane	0.081	0.0833		mg/m3		103	65 - 125
1,1-Dichloroethene	0.079	0.0727		mg/m3		92	53 - 128
1,2,4-Trichlorobenzene	0.15	0.150		mg/m3		101	59 - 150
1,2,4-Trimethylbenzene	0.098	0.100		mg/m3		102	61 - 145
1,2-Dibromoethane (EDB)	0.15	0.164		mg/m3		107	68 - 131
Allyl chloride	0.063	0.0691		mg/m3		110	77 - 137
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.151		mg/m3		108	64 - 124
1,2-Dichlorobenzene	0.12	0.137		mg/m3		114	73 - 143
1,2-Dichloroethane	0.081	0.0833		mg/m3		103	71 - 131
1,2-Dichloropropane	0.092	0.0992		mg/m3		107	74 - 128
1,3,5-Trimethylbenzene	0.098	0.0971		mg/m3		99	65 - 136
1,3-Dichlorobenzene	0.12	0.137		mg/m3		114	77 - 136
1,4-Dichlorobenzene	0.12	0.140		mg/m3		117	73 - 143
2-Butanone (MEK)	0.059	0.0615		mg/m3		104	71 - 131
2-Hexanone	0.082	0.0975		mg/m3		119	70 - 128
1,3-Butadiene	0.044	0.0450		mg/m3		102	58 - 126
4-Ethyltoluene	0.098	0.0916		mg/m3		93	62 - 136
4-Methyl-2-pentanone (MIBK)	0.082	0.0971		mg/m3		118	73 - 133
Acetone	0.048	0.0466		mg/m3		98	71 - 131
Benzene	0.064	0.0681		mg/m3		107	68 - 128
Benzyl chloride	0.10	0.0984		mg/m3		95	58 - 120
Bromodichloromethane	0.13	0.137		mg/m3		102	65 - 130
Bromoform	0.21	0.218		mg/m3		105	64 - 144
Bromomethane	0.078	0.0881		mg/m3		113	70 - 131
Carbon disulfide	0.062	0.0612		mg/m3		98	63 - 123
Carbon tetrachloride	0.13	0.127		mg/m3		101	67 - 127
Chlorobenzene	0.092	0.0976		mg/m3		106	70 - 132
Chloroethane	0.053	0.0587		mg/m3		111	70 - 131
Chloroform	0.098	0.0969		mg/m3		99	69 - 129
Chloromethane	0.041	0.0428		mg/m3		104	67 - 127

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-153675/4
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.079	0.0833		mg/m3		105	68 - 128
cis-1,3-Dichloropropene	0.091	0.110		mg/m3		121	78 - 132
Dibromochloromethane	0.17	0.171		mg/m3		100	68 - 128
Dichlorodifluoromethane	0.099	0.118		mg/m3		119	69 - 129
Ethylbenzene	0.087	0.0921		mg/m3		106	76 - 136
Hexachlorobutadiene	0.21	0.187		mg/m3		88	42 - 150
m,p-Xylene	0.17	0.188		mg/m3		108	75 - 138
Methylene Chloride	0.069	0.0657		mg/m3		95	65 - 125
o-Xylene	0.087	0.0940		mg/m3		108	77 - 132
Styrene	0.085	0.0949		mg/m3		111	76 - 144
Tetrachloroethene	0.14	0.134		mg/m3		99	56 - 138
Toluene	0.075	0.0821		mg/m3		109	71 - 132
2-Chlorotoluene	0.10	0.110		mg/m3		106	73 - 131
trans-1,2-Dichloroethene	0.079	0.0824		mg/m3		104	70 - 130
trans-1,3-Dichloropropene	0.091	0.0891		mg/m3		98	56 - 136
Cyclohexane	0.069	0.0735		mg/m3		107	63 - 128
Trichloroethene	0.11	0.115		mg/m3		107	64 - 127
Trichlorofluoromethane	0.11	0.113		mg/m3		100	68 - 128
Vinyl acetate	0.070	0.0842		mg/m3		120	77 - 134
Vinyl chloride	0.051	0.0557		mg/m3		109	69 - 129
1,4-Dioxane	0.072	0.0784		mg/m3		109	55 - 141
n-Heptane	0.082	0.0912		mg/m3		111	69 - 129
Hexane	0.070	0.0693		mg/m3		98	63 - 123
Isopropylbenzene	0.098	0.106		mg/m3		108	75 - 135
Methyl-t-Butyl Ether (MTBE)	0.072	0.0700		mg/m3		97	72 - 132
Methyl methacrylate	0.082	0.0927		mg/m3		113	71 - 130
Naphthalene	0.10	0.0955		mg/m3		91	58 - 150
Propylene	0.034	0.0403		mg/m3		117	72 - 132
Tetrahydrofuran	0.059	0.0579		mg/m3		98	69 - 129
2,2,4-Trimethylpentane	0.093	0.103		mg/m3		110	72 - 132
Vinyl bromide	0.087	0.0868		mg/m3		99	65 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCS 320-153675/6
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	100	96.8		ppb v/v		97	62 - 131
2-Propanol	20.0	21.4		ppb v/v		107	55 - 139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	0.19	0.182		mg/m3		97	62 - 131
2-Propanol	0.049	0.0526		mg/m3		107	55 - 139

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		70 - 130
4-Bromofluorobenzene (Surr)	104		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 320-153675/5
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	19.2		ppb v/v		96	65 - 124	2	25
1,1,2,2-Tetrachloroethane			20.0	23.3		ppb v/v		116	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane			20.0	19.5		ppb v/v		98	50 - 132	0	25
1,1,2-Trichloroethane			20.0	22.4		ppb v/v		112	71 - 131	2	25
1,1-Dichloroethane			20.0	20.8		ppb v/v		104	65 - 125	1	25
1,1-Dichloroethene			20.0	18.2		ppb v/v		91	53 - 128	1	25
1,2,4-Trichlorobenzene			20.0	20.7		ppb v/v		103	59 - 150	2	25
1,2,4-Trimethylbenzene			20.0	20.2		ppb v/v		101	61 - 145	1	25
1,2-Dibromoethane (EDB)			20.0	22.1		ppb v/v		111	68 - 131	3	25
Allyl chloride			20.0	22.1		ppb v/v		111	77 - 137	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane			20.0	21.7		ppb v/v		108	64 - 124	1	25
1,2-Dichlorobenzene			20.0	23.2		ppb v/v		116	73 - 143	1	25
1,2-Dichloroethane			20.0	20.0		ppb v/v		100	71 - 131	3	25
1,2-Dichloropropane			20.0	21.0		ppb v/v		105	74 - 128	2	25
1,3,5-Trimethylbenzene			20.0	19.7		ppb v/v		98	65 - 136	0	25
1,3-Dichlorobenzene			20.0	22.8		ppb v/v		114	77 - 136	0	25
1,4-Dichlorobenzene			20.0	23.6		ppb v/v		118	73 - 143	1	25
2-Butanone (MEK)			20.0	20.5		ppb v/v		103	71 - 131	2	25
2-Hexanone			20.0	24.5		ppb v/v		122	70 - 128	3	25
1,3-Butadiene			20.0	20.3		ppb v/v		101	58 - 126	0	25
4-Ethyltoluene			20.0	18.7		ppb v/v		93	62 - 136	0	25
4-Methyl-2-pentanone (MIBK)			20.0	23.4		ppb v/v		117	73 - 133	1	25
Acetone			20.0	19.4		ppb v/v		97	71 - 131	1	25
Benzene			20.0	21.6		ppb v/v		108	68 - 128	1	25
Benzyl chloride			20.0	19.2		ppb v/v		96	58 - 120	1	25
Bromodichloromethane			20.0	20.3		ppb v/v		102	65 - 130	0	25
Bromoform			20.0	21.4		ppb v/v		107	64 - 144	2	25
Bromomethane			20.0	23.1		ppb v/v		116	70 - 131	2	25
Carbon disulfide			20.0	19.9		ppb v/v		100	63 - 123	1	25
Carbon tetrachloride			20.0	19.4		ppb v/v		97	67 - 127	4	25
Chlorobenzene			20.0	21.9		ppb v/v		109	70 - 132	3	25
Chloroethane			20.0	23.1		ppb v/v		115	70 - 131	4	25
Chloroform			20.0	19.7		ppb v/v		99	69 - 129	1	25
Chloromethane			20.0	20.7		ppb v/v		104	67 - 127	0	25
cis-1,2-Dichloroethene			20.0	21.1		ppb v/v		105	68 - 128	0	25
cis-1,3-Dichloropropene			20.0	24.7		ppb v/v		124	78 - 132	2	25
Dibromochloromethane			20.0	20.3		ppb v/v		102	68 - 128	1	25
Dichlorodifluoromethane			20.0	20.5		ppb v/v		103	69 - 129	15	25
Ethylbenzene			20.0	21.5		ppb v/v		107	76 - 136	1	25
Hexachlorobutadiene			20.0	17.7		ppb v/v		88	42 - 150	1	25
m,p-Xylene			40.0	43.7		ppb v/v		109	75 - 138	1	25
Methylene Chloride			20.0	18.6		ppb v/v		93	65 - 125	2	25
o-Xylene			20.0	22.0		ppb v/v		110	77 - 132	2	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-153675/5
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Styrene	20.0	22.6		ppb v/v		113	76 - 144	2	25
Tetrachloroethene	20.0	20.3		ppb v/v		102	56 - 138	3	25
Toluene	20.0	21.9		ppb v/v		109	71 - 132	0	25
2-Chlorotoluene	20.0	21.3		ppb v/v		106	73 - 131	0	25
trans-1,2-Dichloroethene	20.0	20.8		ppb v/v		104	70 - 130	0	25
trans-1,3-Dichloropropene	20.0	20.2		ppb v/v		101	56 - 136	3	25
Cyclohexane	20.0	21.4		ppb v/v		107	63 - 128	0	25
Trichloroethene	20.0	21.8		ppb v/v		109	64 - 127	2	25
Trichlorofluoromethane	20.0	19.3		ppb v/v		97	68 - 128	4	25
Vinyl acetate	20.0	24.5		ppb v/v		122	77 - 134	2	25
Vinyl chloride	20.0	22.3		ppb v/v		111	69 - 129	2	25
1,4-Dioxane	20.0	22.6		ppb v/v		113	55 - 141	4	25
n-Heptane	20.0	22.7		ppb v/v		113	69 - 129	2	25
Hexane	20.0	19.1		ppb v/v		95	63 - 123	3	25
Isopropylbenzene	20.0	21.6		ppb v/v		108	75 - 135	0	25
Methyl-t-Butyl Ether (MTBE)	20.0	19.4		ppb v/v		97	72 - 132	0	25
Methyl methacrylate	20.0	23.2		ppb v/v		116	71 - 130	2	25
Naphthalene	20.0	18.5		ppb v/v		92	58 - 150	2	25
Propylene	20.0	23.0		ppb v/v		115	72 - 132	2	25
Tetrahydrofuran	20.0	20.1		ppb v/v		101	69 - 129	2	25
2,2,4-Trimethylpentane	20.0	22.5		ppb v/v		113	72 - 132	2	25
Vinyl bromide	20.0	20.2		ppb v/v		101	65 - 125	2	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.11	0.105		mg/m3		96	65 - 124	2	25
1,1,2,2-Tetrachloroethane	0.14	0.160		mg/m3		116	75 - 135	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.150		mg/m3		98	50 - 132	0	25
1,1,2-Trichloroethane	0.11	0.122		mg/m3		112	71 - 131	2	25
1,1-Dichloroethane	0.081	0.0843		mg/m3		104	65 - 125	1	25
1,1-Dichloroethene	0.079	0.0720		mg/m3		91	53 - 128	1	25
1,2,4-Trichlorobenzene	0.15	0.153		mg/m3		103	59 - 150	2	25
1,2,4-Trimethylbenzene	0.098	0.0994		mg/m3		101	61 - 145	1	25
1,2-Dibromoethane (EDB)	0.15	0.170		mg/m3		111	68 - 131	3	25
Allyl chloride	0.063	0.0692		mg/m3		111	77 - 137	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.14	0.152		mg/m3		108	64 - 124	1	25
1,2-Dichlorobenzene	0.12	0.139		mg/m3		116	73 - 143	1	25
1,2-Dichloroethane	0.081	0.0811		mg/m3		100	71 - 131	3	25
1,2-Dichloropropane	0.092	0.0973		mg/m3		105	74 - 128	2	25
1,3,5-Trimethylbenzene	0.098	0.0967		mg/m3		98	65 - 136	0	25
1,3-Dichlorobenzene	0.12	0.137		mg/m3		114	77 - 136	0	25
1,4-Dichlorobenzene	0.12	0.142		mg/m3		118	73 - 143	1	25
2-Butanone (MEK)	0.059	0.0606		mg/m3		103	71 - 131	2	25
2-Hexanone	0.082	0.100		mg/m3		122	70 - 128	3	25
1,3-Butadiene	0.044	0.0449		mg/m3		101	58 - 126	0	25
4-Ethyltoluene	0.098	0.0919		mg/m3		93	62 - 136	0	25
4-Methyl-2-pentanone (MIBK)	0.082	0.0958		mg/m3		117	73 - 133	1	25
Acetone	0.048	0.0461		mg/m3		97	71 - 131	1	25

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-153675/5
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.064	0.0689		mg/m3		108	68 - 128	1	25
Benzyl chloride	0.10	0.0996		mg/m3		96	58 - 120	1	25
Bromodichloromethane	0.13	0.136		mg/m3		102	65 - 130	0	25
Bromoform	0.21	0.221		mg/m3		107	64 - 144	2	25
Bromomethane	0.078	0.0898		mg/m3		116	70 - 131	2	25
Carbon disulfide	0.062	0.0621		mg/m3		100	63 - 123	1	25
Carbon tetrachloride	0.13	0.122		mg/m3		97	67 - 127	4	25
Chlorobenzene	0.092	0.101		mg/m3		109	70 - 132	3	25
Chloroethane	0.053	0.0608		mg/m3		115	70 - 131	4	25
Chloroform	0.098	0.0963		mg/m3		99	69 - 129	1	25
Chloromethane	0.041	0.0428		mg/m3		104	67 - 127	0	25
cis-1,2-Dichloroethene	0.079	0.0836		mg/m3		105	68 - 128	0	25
cis-1,3-Dichloropropene	0.091	0.112		mg/m3		124	78 - 132	2	25
Dibromochloromethane	0.17	0.173		mg/m3		102	68 - 128	1	25
Dichlorodifluoromethane	0.099	0.102		mg/m3		103	69 - 129	15	25
Ethylbenzene	0.087	0.0933		mg/m3		107	76 - 136	1	25
Hexachlorobutadiene	0.21	0.189		mg/m3		88	42 - 150	1	25
m,p-Xylene	0.17	0.190		mg/m3		109	75 - 138	1	25
Methylene Chloride	0.069	0.0645		mg/m3		93	65 - 125	2	25
o-Xylene	0.087	0.0955		mg/m3		110	77 - 132	2	25
Styrene	0.085	0.0964		mg/m3		113	76 - 144	2	25
Tetrachloroethene	0.14	0.138		mg/m3		102	56 - 138	3	25
Toluene	0.075	0.0824		mg/m3		109	71 - 132	0	25
2-Chlorotoluene	0.10	0.110		mg/m3		106	73 - 131	0	25
trans-1,2-Dichloroethene	0.079	0.0826		mg/m3		104	70 - 130	0	25
trans-1,3-Dichloropropene	0.091	0.0915		mg/m3		101	56 - 136	3	25
Cyclohexane	0.069	0.0737		mg/m3		107	63 - 128	0	25
Trichloroethene	0.11	0.117		mg/m3		109	64 - 127	2	25
Trichlorofluoromethane	0.11	0.108		mg/m3		97	68 - 128	4	25
Vinyl acetate	0.070	0.0862		mg/m3		122	77 - 134	2	25
Vinyl chloride	0.051	0.0569		mg/m3		111	69 - 129	2	25
1,4-Dioxane	0.072	0.0815		mg/m3		113	55 - 141	4	25
n-Heptane	0.082	0.0929		mg/m3		113	69 - 129	2	25
Hexane	0.070	0.0672		mg/m3		95	63 - 123	3	25
Isopropylbenzene	0.098	0.106		mg/m3		108	75 - 135	0	25
Methyl-t-Butyl Ether (MTBE)	0.072	0.0699		mg/m3		97	72 - 132	0	25
Methyl methacrylate	0.082	0.0949		mg/m3		116	71 - 130	2	25
Naphthalene	0.10	0.0969		mg/m3		92	58 - 150	2	25
Propylene	0.034	0.0396		mg/m3		115	72 - 132	2	25
Tetrahydrofuran	0.059	0.0594		mg/m3		101	69 - 129	2	25
2,2,4-Trimethylpentane	0.093	0.105		mg/m3		113	72 - 132	2	25
Vinyl bromide	0.087	0.0885		mg/m3		101	65 - 125	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-153675/7
Matrix: Air
Analysis Batch: 153675

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			100	98.6		ppb v/v		99	62 - 131	2	25
2-Propanol			20.0	21.7		ppb v/v		109	55 - 139	1	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			0.19	0.186		mg/m3		99	62 - 131	2	25
2-Propanol			0.049	0.0534		mg/m3		109	55 - 139	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 320-154163/7
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30		ppb v/v			03/09/17 20:49	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			03/09/17 20:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40		ppb v/v			03/09/17 20:49	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			03/09/17 20:49	1
1,1-Dichloroethane	ND		0.30		ppb v/v			03/09/17 20:49	1
1,1-Dichloroethene	ND		0.80		ppb v/v			03/09/17 20:49	1
1,2,4-Trichlorobenzene	ND		2.0		ppb v/v			03/09/17 20:49	1
1,2,4-Trimethylbenzene	ND		0.80		ppb v/v			03/09/17 20:49	1
1,2-Dibromoethane (EDB)	ND		0.80		ppb v/v			03/09/17 20:49	1
Allyl chloride	ND		0.80		ppb v/v			03/09/17 20:49	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40		ppb v/v			03/09/17 20:49	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			03/09/17 20:49	1
1,2-Dichloroethane	ND		0.80		ppb v/v			03/09/17 20:49	1
1,2-Dichloropropane	ND		0.40		ppb v/v			03/09/17 20:49	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			03/09/17 20:49	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			03/09/17 20:49	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			03/09/17 20:49	1
2-Butanone (MEK)	ND		0.80		ppb v/v			03/09/17 20:49	1
2-Hexanone	ND		0.40		ppb v/v			03/09/17 20:49	1
1,3-Butadiene	ND		0.80		ppb v/v			03/09/17 20:49	1
4-Ethyltoluene	ND		0.40		ppb v/v			03/09/17 20:49	1
4-Methyl-2-pentanone (MIBK)	ND		0.40		ppb v/v			03/09/17 20:49	1
Acetone	ND		5.0		ppb v/v			03/09/17 20:49	1
Benzene	ND		0.40		ppb v/v			03/09/17 20:49	1
Benzyl chloride	ND		0.80		ppb v/v			03/09/17 20:49	1
Bromodichloromethane	ND		0.30		ppb v/v			03/09/17 20:49	1
Bromoform	ND		0.40		ppb v/v			03/09/17 20:49	1
Bromomethane	ND		0.80		ppb v/v			03/09/17 20:49	1
Carbon disulfide	ND		0.80		ppb v/v			03/09/17 20:49	1
Carbon tetrachloride	ND		0.80		ppb v/v			03/09/17 20:49	1
Chlorobenzene	ND		0.30		ppb v/v			03/09/17 20:49	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-154163/7
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.80		ppb v/v			03/09/17 20:49	1
Chloroform	ND		0.30		ppb v/v			03/09/17 20:49	1
Chloromethane	ND		0.80		ppb v/v			03/09/17 20:49	1
cis-1,2-Dichloroethene	ND		0.40		ppb v/v			03/09/17 20:49	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			03/09/17 20:49	1
Dibromochloromethane	ND		0.40		ppb v/v			03/09/17 20:49	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			03/09/17 20:49	1
Ethylbenzene	ND		0.40		ppb v/v			03/09/17 20:49	1
Gasoline Range Organics (C6-C12)	ND		100		ppb v/v			03/09/17 20:49	1
Hexachlorobutadiene	ND		2.0		ppb v/v			03/09/17 20:49	1
m,p-Xylene	ND		0.80		ppb v/v			03/09/17 20:49	1
Methylene Chloride	ND		0.40		ppb v/v			03/09/17 20:49	1
o-Xylene	ND		0.40		ppb v/v			03/09/17 20:49	1
Styrene	ND		0.40		ppb v/v			03/09/17 20:49	1
Tetrachloroethene	ND		0.40		ppb v/v			03/09/17 20:49	1
Toluene	ND		0.40		ppb v/v			03/09/17 20:49	1
2-Chlorotoluene	ND		0.40		ppb v/v			03/09/17 20:49	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			03/09/17 20:49	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			03/09/17 20:49	1
Cyclohexane	ND		0.40		ppb v/v			03/09/17 20:49	1
Trichloroethene	ND		0.40		ppb v/v			03/09/17 20:49	1
Trichlorofluoromethane	ND		0.40		ppb v/v			03/09/17 20:49	1
Vinyl acetate	ND		0.80		ppb v/v			03/09/17 20:49	1
Vinyl chloride	ND		0.40		ppb v/v			03/09/17 20:49	1
1,4-Dioxane	ND		0.80		ppb v/v			03/09/17 20:49	1
n-Heptane	ND		0.80		ppb v/v			03/09/17 20:49	1
Hexane	ND		0.80		ppb v/v			03/09/17 20:49	1
Isopropylbenzene	ND		0.80		ppb v/v			03/09/17 20:49	1
Methyl-t-Butyl Ether (MTBE)	ND		0.80		ppb v/v			03/09/17 20:49	1
Methyl methacrylate	ND		0.80		ppb v/v			03/09/17 20:49	1
Naphthalene	ND		0.80		ppb v/v			03/09/17 20:49	1
Propylene	ND		0.40		ppb v/v			03/09/17 20:49	1
Tetrahydrofuran	ND		0.80		ppb v/v			03/09/17 20:49	1
2,2,4-Trimethylpentane	ND		0.40		ppb v/v			03/09/17 20:49	1
Vinyl bromide	ND		0.80		ppb v/v			03/09/17 20:49	1
Ethanol	NC		1.0		ppb v/v			03/09/17 20:49	1
2-Propanol	ND		2.0		ppb v/v			03/09/17 20:49	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.0016		mg/m3			03/09/17 20:49	1
1,1,2,2-Tetrachloroethane	ND		0.0027		mg/m3			03/09/17 20:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.0031		mg/m3			03/09/17 20:49	1
1,1,2-Trichloroethane	ND		0.0022		mg/m3			03/09/17 20:49	1
1,1-Dichloroethane	ND		0.0012		mg/m3			03/09/17 20:49	1
1,1-Dichloroethene	ND		0.0032		mg/m3			03/09/17 20:49	1
1,2,4-Trichlorobenzene	ND		0.015		mg/m3			03/09/17 20:49	1
1,2,4-Trimethylbenzene	ND		0.0039		mg/m3			03/09/17 20:49	1
1,2-Dibromoethane (EDB)	ND		0.0061		mg/m3			03/09/17 20:49	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-154163/7
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		0.0025		mg/m3			03/09/17 20:49	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.0028		mg/m3			03/09/17 20:49	1
1,2-Dichlorobenzene	ND		0.0024		mg/m3			03/09/17 20:49	1
1,2-Dichloroethane	ND		0.0032		mg/m3			03/09/17 20:49	1
1,2-Dichloropropane	ND		0.0018		mg/m3			03/09/17 20:49	1
1,3,5-Trimethylbenzene	ND		0.0020		mg/m3			03/09/17 20:49	1
1,3-Dichlorobenzene	ND		0.0024		mg/m3			03/09/17 20:49	1
1,4-Dichlorobenzene	ND		0.0024		mg/m3			03/09/17 20:49	1
2-Butanone (MEK)	ND		0.0024		mg/m3			03/09/17 20:49	1
2-Hexanone	ND		0.0016		mg/m3			03/09/17 20:49	1
1,3-Butadiene	ND		0.0018		mg/m3			03/09/17 20:49	1
4-Ethyltoluene	ND		0.0020		mg/m3			03/09/17 20:49	1
4-Methyl-2-pentanone (MIBK)	ND		0.0016		mg/m3			03/09/17 20:49	1
Acetone	ND		0.012		mg/m3			03/09/17 20:49	1
Benzene	ND		0.0013		mg/m3			03/09/17 20:49	1
Benzyl chloride	ND		0.0041		mg/m3			03/09/17 20:49	1
Bromodichloromethane	ND		0.0020		mg/m3			03/09/17 20:49	1
Bromoform	ND		0.0041		mg/m3			03/09/17 20:49	1
Bromomethane	ND		0.0031		mg/m3			03/09/17 20:49	1
Carbon disulfide	ND		0.0025		mg/m3			03/09/17 20:49	1
Carbon tetrachloride	ND		0.0050		mg/m3			03/09/17 20:49	1
Chlorobenzene	ND		0.0014		mg/m3			03/09/17 20:49	1
Chloroethane	ND		0.0021		mg/m3			03/09/17 20:49	1
Chloroform	ND		0.0015		mg/m3			03/09/17 20:49	1
Chloromethane	ND		0.0017		mg/m3			03/09/17 20:49	1
cis-1,2-Dichloroethene	ND		0.0016		mg/m3			03/09/17 20:49	1
cis-1,3-Dichloropropene	ND		0.0018		mg/m3			03/09/17 20:49	1
Dibromochloromethane	ND		0.0034		mg/m3			03/09/17 20:49	1
Dichlorodifluoromethane	ND		0.0020		mg/m3			03/09/17 20:49	1
Ethylbenzene	ND		0.0017		mg/m3			03/09/17 20:49	1
Gasoline Range Organics (C6-C12)	ND		0.41		mg/m3			03/09/17 20:49	1
Hexachlorobutadiene	ND		0.021		mg/m3			03/09/17 20:49	1
m,p-Xylene	ND		0.0035		mg/m3			03/09/17 20:49	1
Methylene Chloride	ND		0.0014		mg/m3			03/09/17 20:49	1
o-Xylene	ND		0.0017		mg/m3			03/09/17 20:49	1
Styrene	ND		0.0017		mg/m3			03/09/17 20:49	1
Tetrachloroethene	ND		0.0027		mg/m3			03/09/17 20:49	1
Toluene	ND		0.0015		mg/m3			03/09/17 20:49	1
2-Chlorotoluene	ND		0.0021		mg/m3			03/09/17 20:49	1
trans-1,2-Dichloroethene	ND		0.0016		mg/m3			03/09/17 20:49	1
trans-1,3-Dichloropropene	ND		0.0018		mg/m3			03/09/17 20:49	1
Cyclohexane	ND		0.0014		mg/m3			03/09/17 20:49	1
Trichloroethene	ND		0.0021		mg/m3			03/09/17 20:49	1
Trichlorofluoromethane	ND		0.0022		mg/m3			03/09/17 20:49	1
Vinyl acetate	ND		0.0028		mg/m3			03/09/17 20:49	1
Vinyl chloride	ND		0.0010		mg/m3			03/09/17 20:49	1
1,4-Dioxane	ND		0.0029		mg/m3			03/09/17 20:49	1
n-Heptane	ND		0.0033		mg/m3			03/09/17 20:49	1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-154163/7
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		0.0028		mg/m3			03/09/17 20:49	1
Isopropylbenzene	ND		0.0039		mg/m3			03/09/17 20:49	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0029		mg/m3			03/09/17 20:49	1
Methyl methacrylate	ND		0.0033		mg/m3			03/09/17 20:49	1
Naphthalene	ND		0.0042		mg/m3			03/09/17 20:49	1
Propylene	ND		0.00069		mg/m3			03/09/17 20:49	1
Tetrahydrofuran	ND		0.0024		mg/m3			03/09/17 20:49	1
2,2,4-Trimethylpentane	ND		0.0019		mg/m3			03/09/17 20:49	1
Vinyl bromide	ND		0.0035		mg/m3			03/09/17 20:49	1
2-Propanol	ND		0.0049		mg/m3			03/09/17 20:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*03/09/17 20:49*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/09/17 20:49*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/09/17 20:49*	*1*

Lab Sample ID: LCS 320-154163/4
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			5000	3730		ppb v/v		75	70 - 130		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			20	15.3		mg/m3		75	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*130*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 320-154163/5
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)			5000	3790		ppb v/v		76	70 - 130	2	25

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)			20	15.5		mg/m3		76	70 - 130	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*129*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-154163/5
Matrix: Air
Analysis Batch: 154163

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	102		70 - 130

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Client Sample ID: LFB-8:022417
Date Collected: 02/24/17 12:45
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-1
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	9.7	50 mL	250 mL	154163	03/09/17 21:33	AP1	TAL SAC
Total/NA	Analysis	TO-15		9.7	50 mL	250 mL	153016	03/03/17 20:16	AP1	TAL SAC

Client Sample ID: LFB-9:022417
Date Collected: 02/24/17 13:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-2
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	3.83	125 mL	250 mL	154163	03/09/17 22:16	AP1	TAL SAC
Total/NA	Analysis	TO-15		3.83	125 mL	250 mL	153675	03/07/17 22:06	AP1	TAL SAC

Client Sample ID: LFB-11:022417
Date Collected: 02/24/17 13:20
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-3
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RADL	57.7	8.12 mL	250 mL	154163	03/09/17 23:00	AP1	TAL SAC
Total/NA	Analysis	TO-15		23.4	20 mL	250 mL	153016	03/03/17 21:58	AP1	TAL SAC
Total/NA	Analysis	TO-15	DL	57.7	8.12 mL	250 mL	153675	03/07/17 22:57	AP1	TAL SAC

Client Sample ID: LFB-10:022417
Date Collected: 02/24/17 13:40
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-4
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	1	710 mL	250 mL	154163	03/10/17 00:00	AP1	TAL SAC
Total/NA	Analysis	TO-15		1	459 mL	250 mL	153675	03/07/17 23:53	AP1	TAL SAC

Client Sample ID: LFB-3:022417
Date Collected: 02/24/17 14:00
Date Received: 02/24/17 16:55

Lab Sample ID: 590-5571-5
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	20.4	25 mL	250 mL	154163	03/10/17 00:44	AP1	TAL SAC
Total/NA	Analysis	TO-15		20.4	25 mL	250 mL	153016	03/03/17 23:43	AP1	TAL SAC

Client Sample ID: LFB-4:022417

Lab Sample ID: 590-5571-6

Date Collected: 02/24/17 14:20

Matrix: Air

Date Received: 02/24/17 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	25.7	20 mL	250 mL	154163	03/10/17 01:27	AP1	TAL SAC
Total/NA	Analysis	TO-15		25.7	20 mL	250 mL	153016	03/04/17 00:35	AP1	TAL SAC

Client Sample ID: LFB-15:022417

Lab Sample ID: 590-5571-7

Date Collected: 02/24/17 14:40

Matrix: Air

Date Received: 02/24/17 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	4.82	100 mL	250 mL	154163	03/10/17 02:10	AP1	TAL SAC
Total/NA	Analysis	TO-15		4.82	100 mL	250 mL	153016	03/04/17 01:27	AP1	TAL SAC

Client Sample ID: LFB-16:022417

Lab Sample ID: 590-5571-8

Date Collected: 02/24/17 15:00

Matrix: Air

Date Received: 02/24/17 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	2.24	200 mL	250 mL	154163	03/10/17 02:55	AP1	TAL SAC
Total/NA	Analysis	TO-15		2.24	200 mL	250 mL	153016	03/04/17 02:22	AP1	TAL SAC

Client Sample ID: LFB-17:022417

Lab Sample ID: 590-5571-9

Date Collected: 02/24/17 15:20

Matrix: Air

Date Received: 02/24/17 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	1.95	225 mL	250 mL	154163	03/10/17 03:39	AP1	TAL SAC
Total/NA	Analysis	TO-15		1.95	225 mL	250 mL	153016	03/04/17 03:15	AP1	TAL SAC

Client Sample ID: LFB-5:022417

Lab Sample ID: 590-5571-10

Date Collected: 02/24/17 15:40

Matrix: Air

Date Received: 02/24/17 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15	RA	16.4	30 mL	250 mL	154163	03/10/17 04:23	AP1	TAL SAC
Total/NA	Analysis	TO-15		16.4	30 mL	250 mL	153016	03/04/17 04:07	AP1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Laboratory: TestAmerica Spokane

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17 *
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5571-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.374.4378 fax 916.372.1059

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Information	**Project Manager:** Jon Rueden	**Samples Collected By:** JML
Company Name: GeoEngineers	**Phone:** 509-363-3125	
Address: 523 E. Second Ave	**Email:** jrueden@geoengineers.com	
City/State/Zip Spokane WA 99204		
Phone: 509 363 3125	**Site Contact:**	
FAX:	**TA Contact:**	
Project Name: Marshall Landfill	**Anaylsis Turnaround Time**	
Site/Location: Marshall, WA	Standard (Specific): Std.	
P O # 0504-104-00	Rush (Specifiy):	

COC No: 1 of 1 COCs

For Lab Use Only:
Walk-in Client:
Lab Sampling:

Job / SDG No.:
(See below for Add'l Items)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Flow Controller ID	Canister ID	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
LFB-8:022417	2/24/17	1245	1250	-26	-2	7103	A6158D	X												X		
LFB-9:022417		1300	1305	-26	-2	7790	A7141D	X												X		
LFB-11:022417		1320	1325	-27	-2	7549	A6976D	X												X		
LFB-10:022417		1340	1345	-29	-2	7176	5204D	X												X		
LFB-3:022417		1400	1405	-25	-2	7739	5032D	X												X		
LFB-4:022417		1420	1425	-26	-3	7666	A6900D	X												X		
LFB-15:022417		1440	1445	-27	-1	7090	A7123D	X												X		
LFB-16:022417		1500	1505	-28	-1.5	7484	A6987D	X												X		
LFB-17:022417		1520	1525	-28.5	-2	7234	A7161D	X												X		
LFB-5:022417		1540	1545	-26	-1	7544	A6996D	X												X		

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

Temperature (Fahrenheit)			
Start	Interior	Ambient	
Stop			

590-5571 Chain of Custody

Special Instructions/QC Requirements & Comments:

Samples Shipped by:	**Date / Time:**	**Samples Received by:** Sheila Knack	2/24/17 1655
Samples Relinquished by:	**Date / Time:** 2/24/2017 1655	**Received by:**	
Relinquished by:	**Date / Time:**	**Received by:**	
Lab Use Only: **Shipper Name:**	**Opened by:**	**Condition:**	

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2504.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5571-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/9/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: San Poil River- Highway 21 (2033-003-01)	Project #: 59000551			
Site: GeoEngineers - San Poil River	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15_MOD/Air_Pass_Can (MOD) TPHgas/BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-8:022417 (590-5571-1)	2/24/17	12:45 Pacific		Air			X	1	
LFB-9:022417 (590-5571-2)	2/24/17	13:00 Pacific		Air			X	1	
LFB-11:022417 (590-5571-3)	2/24/17	13:20 Pacific		Air			X	1	
LFB-10:022417 (590-5571-4)	2/24/17	13:40 Pacific		Air			X	1	
LFB-3:022417 (590-5571-5)	2/24/17	14:00 Pacific		Air			X	1	
LFB-4:022417 (590-5571-6)	2/24/17	14:20 Pacific		Air			X	1	
LFB-15:022417 (590-5571-7)	2/24/17	14:40 Pacific		Air			X	1	
LFB-16:022417 (590-5571-8)	2/24/17	15:00 Pacific		Air			X	1	
LFB-17:022417 (590-5571-9)	2/24/17	15:20 Pacific		Air			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Trady	2/27/17 900	TA Spok	Ron Nilsen	2/28/17 920	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

3/14/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2504.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5571-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 3/9/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: San Poil River- Highway 21 (2033-003-01)	Project #: 59000551			
Site: GeoEngineers - San Poil River	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TO15_MOD/Air_Pass_Can (MOD) TPHgas/BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LFB-5 022417 (590-5571-10)	2/24/17	15:40 Pacific		Air			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. !

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kady	2/27/17 950	TheDock	Ron Nelson	2/28/17 920	TAES
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

3/14/2017

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5571-1

Login Number: 5571
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5571-1

Login Number: 5571
List Number: 2
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 02/28/17 12:43 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5564-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
3/17/2017 10:33:46 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-5564-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The sample was received on 2/23/2017 3:15 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8º C.

GC/MS VOA
Method 8260C: The method blank for analytical batch 590-10912 contained Dichlorofluoromethane above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-239702 recovered outside acceptance criteria, low biased, for 2,4-Dinitrophenol and Benzoic acid. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-239702 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-239396 recovered outside control limits for the following analytes: 4,6-Dinitro-2-methylphenol, Bis(2-ethylhexyl) phthalate and 4-Chloroaniline.

Method 8270D: The following analyte recovered outside control limits for the LCSD associated with preparation batch 580-239396 and analytical batch 580-239702: 4-Chloroaniline and Bis(2-ethylhexyl) phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8151A: The 2,4-Dichlorophenylacetic acid surrogate recovery associated with preparation batch 280-363884 and analytical batch 280-365316 was outside acceptance limits (high biased) on the confirmation column for the following samples: SW-1:022317 (590-5564-1) and (LCS 280-363884/2-A). The recovery was within acceptance limits on the front column; therefore the data is reported. Surrogate recoveries are reported from the front column.

Method 8151A: The laboratory control sample (LCSD) for preparation batch 280-363884 and analytical batch 280-365316 recovered outside control limits (low) for 2,4,5-TP (Silvex) on the front column. The back column was in control. All associated samples were ND for 2,4,5-TP (Silvex) on both columns; therefore, the 2,4,5-TP (Silvex) results were reported from the back (in control) column.

Method 8141B: The surrogate recovery for the method blank associated with preparation batch 280-363590 and analytical batch 280-365610 was outside control limits (low). Surrogate recoveries for the associated samples were all within control limits and the samples were ND for all target analytes; therefore, the data is reported.

Method 8141B: The initial calibration verification (ICV) result for batch 280-365610 was below the lower control limit for Malathion on the front column and for Mevinphos on the back column. The back column was in control for Malathion and the front column was in control for Mevinphos. Sample results were non-detects for the affected analytes; therefore, the data have been reported from the column that was in control in the ICV.

Method 8081B: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside the upper control limit: (CCB 580-239470/16) and (CCB 580-239470/37). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The continuing calibration verification (CCV) associated with batch 580-239470 recovered outside acceptance criteria, low biased, for delta-BHC on the confirmation column only. A reporting limit (RL) standard was analyzed, and the target analyte was detected.

Job ID: 590-5564-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Since the associated sample was non-detect above the RL for this analyte, the data have been reported.

Method 8081B: The following CCV fell high outside the control limits for %D for surrogate Tetrachloro-m-xylene on the primary column only. All associated samples had surrogate recoveries within the control limits on both columns; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin
Method 8290A: The bracketing continuing calibration verification (CCV031317B) associated with batch 320-154960 has analyte (1,2,3,4,7,8-HxCDD) with percent difference value that is between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 245.1: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with batch 240098.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Biology
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3510C_8141B: The following sample formed emulsions during the extraction procedure: SW-1:022317 (590-5564-1). The emulsions were broken up using the pour back method for the first and second extraction with MeCl2.

Method 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-363884.

Method 8151A: The following sample formed emulsions during the extraction procedure: SW-1:022317 (590-5564-1). The emulsions were broken up using the pour back method for the first, second and third extraction with MeCl2.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5564-1	SW-1:022317	Water	02/23/17 13:50	02/23/17 15:15

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
B	Compound was found in the blank and sample.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 19:22	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 19:22	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 19:22	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 19:22	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 19:22	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 19:22	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 19:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 19:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 19:22	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 19:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 19:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 19:22	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 19:22	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 19:22	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 19:22	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 19:22	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 19:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 19:22	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 19:22	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 19:22	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 19:22	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 19:22	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 19:22	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 19:22	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 19:22	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 19:22	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 19:22	1
Acetone	ND		30	14	ug/L			03/01/17 19:22	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 19:22	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 19:22	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 19:22	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 19:22	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 19:22	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 19:22	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 19:22	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 19:22	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 19:22	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 19:22	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 19:22	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 19:22	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 19:22	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 19:22	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 19:22	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 19:22	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 19:22	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			03/01/17 19:22	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 19:22	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 19:22	1
Hexane	ND		1.0	0.084	ug/L			03/01/17 19:22	1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 19:22	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 19:22	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 19:22	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 19:22	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 19:22	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 19:22	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 19:22	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 19:22	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 19:22	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 19:22	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 19:22	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 19:22	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 19:22	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 19:22	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 19:22	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 19:22	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 19:22	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 19:22	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 19:22	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 125*		*03/01/17 19:22*	*1*
4-Bromofluorobenzene (Surr)	*107*		*69 - 120*		*03/01/17 19:22*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 120*		*03/01/17 19:22*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/01/17 19:22*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*03/01/17 19:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
1,2-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
1,3-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
1,4-Dichlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
1-Methylnaphthalene	ND		0.058	0.029	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,4-Dichlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,4-Dimethylphenol	ND		1.9	0.29	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,4-Dinitrophenol	ND		4.9	0.97	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,4-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2,6-Dinitrotoluene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2-Chloronaphthalene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
2-Chlorophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.19	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
2-Methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2-Nitroaniline	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
2-Nitrophenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
3 & 4 Methylphenol	ND		0.78	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
3,3'-Dichlorobenzidine	ND		1.9	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
3-Nitroaniline	ND		0.39	0.12	ug/L		02/27/17 16:44	03/04/17 00:46	1
4,6-Dinitro-2-methylphenol	ND	*	3.9	0.97	ug/L		02/27/17 16:44	03/04/17 00:46	1
4-Bromophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
4-Chloro-3-methylphenol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
4-Chloroaniline	ND	*	0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
4-Chlorophenyl phenyl ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
4-Nitroaniline	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
4-Nitrophenol	ND		2.9	0.97	ug/L		02/27/17 16:44	03/04/17 00:46	1
Acenaphthene	ND		0.097	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Acenaphthylene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Anthracene	ND		0.039	0.0097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzo[a]anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzo[a]pyrene	ND		0.039	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzo[b]fluoranthene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzo[g,h,i]perylene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzo[k]fluoranthene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzoic acid	ND		2.9	0.58	ug/L		02/27/17 16:44	03/04/17 00:46	1
Benzyl alcohol	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
bis (2-chloroisopropyl) ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Bis(2-chloroethoxy)methane	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Bis(2-chloroethyl)ether	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Bis(2-ethylhexyl) phthalate	ND	*	2.9	1.1	ug/L		02/27/17 16:44	03/04/17 00:46	1
Butyl benzyl phthalate	**0.38**	**J**	0.58	0.19	ug/L		02/27/17 16:44	03/04/17 00:46	1
Carbazole	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Chrysene	ND		0.039	0.013	ug/L		02/27/17 16:44	03/04/17 00:46	1
Dibenz(a,h)anthracene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Dibenzofuran	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Diethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Dimethyl phthalate	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Di-n-butyl phthalate	**0.17**	**J**	0.39	0.13	ug/L		02/27/17 16:44	03/04/17 00:46	1
Di-n-octyl phthalate	ND		0.39	0.18	ug/L		02/27/17 16:44	03/04/17 00:46	1
Fluoranthene	ND		0.049	0.013	ug/L		02/27/17 16:44	03/04/17 00:46	1
Fluorene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Hexachlorobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Hexachlorobutadiene	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Hexachlorocyclopentadiene	ND		1.9	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Hexachloroethane	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Isophorone	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Naphthalene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Nitrobenzene	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
N-Nitrosodi-n-propylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
N-Nitrosodiphenylamine	ND		0.39	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.68	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Phenanthrene	ND		0.078	0.019	ug/L		02/27/17 16:44	03/04/17 00:46	1
Phenol	ND		0.58	0.097	ug/L		02/27/17 16:44	03/04/17 00:46	1
Pyrene	ND		0.058	0.013	ug/L		02/27/17 16:44	03/04/17 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*57 - 132*	*02/27/17 16:44*	*03/04/17 00:46*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*02/27/17 16:44*	*03/04/17 00:46*	*1*
2-Fluorophenol	*78*		*50 - 113*	*02/27/17 16:44*	*03/04/17 00:46*	*1*
Nitrobenzene-d5	*80*		*59 - 120*	*02/27/17 16:44*	*03/04/17 00:46*	*1*
Phenol-d5	*81*		*52 - 120*	*02/27/17 16:44*	*03/04/17 00:46*	*1*
Terphenyl-d14	*97*		*72 - 140*	*02/27/17 16:44*	*03/04/17 00:46*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 16:26	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.028	0.0057	ug/L		02/28/17 10:48	03/01/17 01:33	1
4,4'-DDE	ND		0.019	0.0028	ug/L		02/28/17 10:48	03/01/17 01:33	1
4,4'-DDT	ND		0.028	0.0047	ug/L		02/28/17 10:48	03/01/17 01:33	1
Aldrin	ND		0.028	0.0066	ug/L		02/28/17 10:48	03/01/17 01:33	1
alpha-BHC	ND		0.028	0.0066	ug/L		02/28/17 10:48	03/01/17 01:33	1
alpha-Chlordane	ND		0.019	0.0028	ug/L		02/28/17 10:48	03/01/17 01:33	1
beta-BHC	ND		0.047	0.011	ug/L		02/28/17 10:48	03/01/17 01:33	1
delta-BHC	ND		0.047	0.0094	ug/L		02/28/17 10:48	03/01/17 01:33	1
Dieldrin	ND		0.028	0.0047	ug/L		02/28/17 10:48	03/01/17 01:33	1
Endosulfan I	ND		0.019	0.0028	ug/L		02/28/17 10:48	03/01/17 01:33	1
Endosulfan II	ND		0.019	0.0019	ug/L		02/28/17 10:48	03/01/17 01:33	1
Endosulfan sulfate	ND		0.019	0.0019	ug/L		02/28/17 10:48	03/01/17 01:33	1
Endrin	ND		0.019	0.0028	ug/L		02/28/17 10:48	03/01/17 01:33	1
Endrin aldehyde	ND		0.19	0.032	ug/L		02/28/17 10:48	03/01/17 01:33	1
Endrin ketone	ND		0.019	0.0019	ug/L		02/28/17 10:48	03/01/17 01:33	1
gamma-BHC (Lindane)	ND		0.028	0.0047	ug/L		02/28/17 10:48	03/01/17 01:33	1
gamma-Chlordane	ND		0.019	0.0028	ug/L		02/28/17 10:48	03/01/17 01:33	1
Heptachlor	ND		0.019	0.0038	ug/L		02/28/17 10:48	03/01/17 01:33	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		02/28/17 10:48	03/01/17 01:33	1
Methoxychlor	ND		0.094	0.0019	ug/L		02/28/17 10:48	03/01/17 01:33	1
Toxaphene	ND		0.94	0.21	ug/L		02/28/17 10:48	03/01/17 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*95*		*22 - 150*	*02/28/17 10:48*	*03/01/17 01:33*	*1*
Tetrachloro-m-xylene	*107*		*40 - 113*	*02/28/17 10:48*	*03/01/17 01:33*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.094	0.058	ug/L		02/24/17 15:26	02/24/17 17:02	1
PCB-1221	ND		0.094	0.058	ug/L		02/24/17 15:26	02/24/17 17:02	1
PCB-1232	ND		0.094	0.058	ug/L		02/24/17 15:26	02/24/17 17:02	1
PCB-1242	ND		0.094	0.058	ug/L		02/24/17 15:26	02/24/17 17:02	1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.094	0.058	ug/L		02/24/17 15:26	02/24/17 17:02	1
PCB-1254	ND		0.094	0.058	ug/L		02/24/17 15:26	02/24/17 17:02	1
PCB-1260	ND		0.094	0.041	ug/L		02/24/17 15:26	02/24/17 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*20 - 120*	*02/24/17 15:26*	*02/24/17 17:02*	*1*
DCB Decachlorobiphenyl (Surr)	*88*		*36 - 138*	*02/24/17 15:26*	*02/24/17 17:02*	*1*

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		9.6	0.28	ug/L		02/27/17 19:29	03/16/17 03:06	1
Azinphos-methyl	ND		2.4	0.16	ug/L		02/27/17 19:29	03/16/17 03:06	1
Bolstar	ND		0.96	0.30	ug/L		02/27/17 19:29	03/16/17 03:06	1
Chlorpyrifos	ND		1.4	0.35	ug/L		02/27/17 19:29	03/16/17 03:06	1
Coumaphos	ND		0.96	0.13	ug/L		02/27/17 19:29	03/16/17 03:06	1
Demeton, Total	ND		2.9	0.20	ug/L		02/27/17 19:29	03/16/17 03:06	1
Diazinon	ND		0.48	0.14	ug/L		02/27/17 19:29	03/16/17 03:06	1
Dichlorvos	ND		0.48	0.16	ug/L		02/27/17 19:29	03/16/17 03:06	1
Dimethoate	ND		1.4	0.43	ug/L		02/27/17 19:29	03/16/17 03:06	1
Disulfoton	ND		0.96	0.31	ug/L		02/27/17 19:29	03/16/17 03:06	1
EPN	ND		1.2	0.14	ug/L		02/27/17 19:29	03/16/17 03:06	1
Famphur	ND		0.96	0.17	ug/L		02/27/17 19:29	03/16/17 03:06	1
Fensulfothion	ND		2.4	0.52	ug/L		02/27/17 19:29	03/16/17 03:06	1
Fenthion	ND		2.4	0.15	ug/L		02/27/17 19:29	03/16/17 03:06	1
Malathion	ND		1.9	0.13	ug/L		02/27/17 19:29	03/16/17 03:06	1
Merphos	ND		4.8	0.17	ug/L		02/27/17 19:29	03/16/17 03:06	1
Methyl parathion	ND		3.8	0.14	ug/L		02/27/17 19:29	03/16/17 03:06	1
Mevinphos	ND		5.9	0.44	ug/L		02/27/17 19:29	03/16/17 03:06	1
Ethyl Parathion	ND		0.96	0.14	ug/L		02/27/17 19:29	03/16/17 03:06	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/16/17 03:06	1
Ronnel	ND		9.6	0.11	ug/L		02/27/17 19:29	03/16/17 03:06	1
Simazine	ND		9.6	0.21	ug/L		02/27/17 19:29	03/16/17 03:06	1
Sulfotepp	ND		1.4	0.16	ug/L		02/27/17 19:29	03/16/17 03:06	1
Thionazin	ND		0.96	0.30	ug/L		02/27/17 19:29	03/16/17 03:06	1
Tokuthion	ND		1.5	0.12	ug/L		02/27/17 19:29	03/16/17 03:06	1
Trichloronate	ND		1.4	0.23	ug/L		02/27/17 19:29	03/16/17 03:06	1
Ethoprop	ND		1.4	0.17	ug/L		02/27/17 19:29	03/16/17 03:06	1
Propazine	ND		9.6	0.28	ug/L		02/27/17 19:29	03/16/17 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Chlormefos	*52*		*49 - 171*	*02/27/17 19:29*	*03/16/17 03:06*	*1*
Triphenylphosphate	*75*		*60 - 154*	*02/27/17 19:29*	*03/16/17 03:06*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.96	0.18	ug/L		03/01/17 11:11	03/14/17 09:29	1
2,4-D	ND		3.8	0.20	ug/L		03/01/17 11:11	03/14/17 09:29	1
2,4-DB	ND		3.8	0.34	ug/L		03/01/17 11:11	03/14/17 09:29	1
Dalapon	ND		1.9	0.87	ug/L		03/01/17 11:11	03/14/17 09:29	1
Dicamba	ND		1.9	0.14	ug/L		03/01/17 11:11	03/14/17 09:29	1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8151A - Herbicides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	ND		3.8	0.62	ug/L		03/01/17 11:11	03/14/17 09:29	1
MCPA	ND		380	16	ug/L		03/01/17 11:11	03/14/17 09:29	1
MCPP	ND		380	32	ug/L		03/01/17 11:11	03/14/17 09:29	1
Silvex (2,4,5-TP)	ND		0.96	0.16	ug/L		03/01/17 11:11	03/14/17 09:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*84*		*39 - 135*	*03/01/17 11:11*	*03/14/17 09:29*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13	0.042	mg/L		02/28/17 09:16	02/28/17 18:21	1
Residual Range Organics (RRO) (C25-C36)	ND		0.21	0.063	mg/L		02/28/17 09:16	02/28/17 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*02/28/17 09:16*	*02/28/17 18:21*	*1*
n-Triacontane-d62	*95*		*50 - 150*	*02/28/17 09:16*	*02/28/17 18:21*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12**		0.80	0.42	mg/L			02/24/17 08:38	1
Nitrate as N	**1.4**		0.20	0.039	mg/L			02/24/17 08:38	1
Nitrite as N	ND		0.20	0.069	mg/L			02/24/17 08:38	1
Sulfate	**16**		0.50	0.13	mg/L			02/24/17 08:38	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.17	pg/L		03/10/17 11:17	03/14/17 13:38	1
2,3,7,8-TCDF	ND		9.5	0.12	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,7,8-PeCDD	ND		48	0.21	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,7,8-PeCDF	ND		48	0.13	pg/L		03/10/17 11:17	03/14/17 13:38	1
2,3,4,7,8-PeCDF	ND		48	0.13	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,4,7,8-HxCDD	ND		48	0.14	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,6,7,8-HxCDD	ND		48	0.12	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,7,8,9-HxCDD	ND		48	0.10	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,4,7,8-HxCDF	ND		48	0.17	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,6,7,8-HxCDF	ND		48	0.14	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,7,8,9-HxCDF	**0.40**	**J**	48	0.16	pg/L		03/10/17 11:17	03/14/17 13:38	1
2,3,4,6,7,8-HxCDF	ND		48	0.16	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,4,6,7,8-HpCDD	**0.73**	**J q**	48	0.30	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,4,6,7,8-HpCDF	**0.23**	**J B q**	48	0.081	pg/L		03/10/17 11:17	03/14/17 13:38	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.090	pg/L		03/10/17 11:17	03/14/17 13:38	1
OCDD	**2.6**	**J B q**	95	0.15	pg/L		03/10/17 11:17	03/14/17 13:38	1
OCDF	ND		95	0.21	pg/L		03/10/17 11:17	03/14/17 13:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-2,3,7,8-TCDF	*88*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-1,2,3,7,8-PeCDD	*97*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-1,2,3,7,8-PeCDF	*92*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-1,2,3,6,7,8-HxCDD	*114*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDF	*92*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*101*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*102*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*
13C-OCDD	*96*		*40 - 135*	*03/10/17 11:17*	*03/14/17 13:38*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 15:35	1
Antimony	**0.00021**	**J**	0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 15:35	1
Barium	**0.043**		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 15:35	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 15:35	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 15:35	1
Chromium	**0.00047**		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 15:35	1
Copper	**0.00065**	**J**	0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 15:35	1
Iron	**0.26**		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 15:35	1
Lead	**0.00033**	**J**	0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 15:35	1
Manganese	**0.019**		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 15:35	1
Nickel	**0.00040**	**J**	0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 15:35	1
Selenium	**0.00030**	**J**	0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 15:35	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 15:35	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 15:35	1
Vanadium	**0.010**		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 15:35	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 15:35	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 12:24	1
Antimony	**0.00015**	**J**	0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 12:24	1
Barium	**0.042**		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 12:24	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 12:24	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 12:24	1
Chromium	**0.00029**	**J**	0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 12:24	1
Copper	**0.00080**	**J**	0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 12:24	1
Iron	**0.20**		0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 12:24	1
Lead	**0.00020**	**J**	0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 12:24	1
Manganese	**0.018**		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 12:24	1
Nickel	**0.00040**	**J**	0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 12:24	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 12:24	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 12:24	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 12:24	1
Vanadium	**0.0094**		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 12:24	1
Zinc	ND		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 12:24	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 13:05	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:10	1

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Client Sample ID: SW-1:022317
Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:31	03/01/17 15:23	1
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:50	1
Chemical Oxygen Demand	**26**		20	4.0	mg/L			03/02/17 18:11	1
Total Organic Carbon	**9.0**		1.0	0.50	mg/L			03/01/17 22:11	1

Method: SM 9223B - Coliforms, Total, and E.Coli

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Total	**370**		1.0	1.0	MPN/100mL			02/23/17 16:10	1
Escherichia coli	**1.0**		1.0	1.0	MPN/100mL			02/23/17 16:10	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			03/01/17 10:56	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			03/01/17 10:56	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			03/01/17 10:56	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			03/01/17 10:56	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			03/01/17 10:56	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			03/01/17 10:56	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			03/01/17 10:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/17 10:56	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			03/01/17 10:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			03/01/17 10:56	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			03/01/17 10:56	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			03/01/17 10:56	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			03/01/17 10:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			03/01/17 10:56	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			03/01/17 10:56	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			03/01/17 10:56	1
2-Butanone (MEK)	ND		10	4.4	ug/L			03/01/17 10:56	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			03/01/17 10:56	1
2-Hexanone	ND		10	0.75	ug/L			03/01/17 10:56	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			03/01/17 10:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			03/01/17 10:56	1
Acetone	ND		30	14	ug/L			03/01/17 10:56	1
Benzene	ND		0.40	0.093	ug/L			03/01/17 10:56	1
Bromobenzene	ND		1.0	0.28	ug/L			03/01/17 10:56	1
Bromochloromethane	ND		2.0	0.44	ug/L			03/01/17 10:56	1
Bromodichloromethane	ND		1.0	0.96	ug/L			03/01/17 10:56	1
Bromoform	ND		5.0	1.6	ug/L			03/01/17 10:56	1
Bromomethane	ND		5.0	0.22	ug/L			03/01/17 10:56	1
Carbon disulfide	ND		5.0	2.0	ug/L			03/01/17 10:56	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Chlorobenzene	ND		1.0	0.14	ug/L			03/01/17 10:56	1
Chloroethane	ND		2.0	0.16	ug/L			03/01/17 10:56	1
Chloroform	ND		1.0	0.91	ug/L			03/01/17 10:56	1
Chloromethane	ND		3.0	0.22	ug/L			03/01/17 10:56	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			03/01/17 10:56	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			03/01/17 10:56	1
Dibromochloromethane	ND		2.0	1.8	ug/L			03/01/17 10:56	1
Dibromomethane	ND		2.0	0.50	ug/L			03/01/17 10:56	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			03/01/17 10:56	1
Dichlorofluoromethane	0.341	J	1.0	0.30	ug/L			03/01/17 10:56	1
Ethylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			03/01/17 10:56	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-10912/5
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			03/01/17 10:56	1
Isopropylbenzene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
m,p-Xylene	ND		2.0	0.28	ug/L			03/01/17 10:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/01/17 10:56	1
Methylene Chloride	ND		5.0	1.0	ug/L			03/01/17 10:56	1
Naphthalene	ND		2.0	0.63	ug/L			03/01/17 10:56	1
n-Butylbenzene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
N-Propylbenzene	ND		1.0	0.063	ug/L			03/01/17 10:56	1
o-Xylene	ND		1.0	0.16	ug/L			03/01/17 10:56	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			03/01/17 10:56	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			03/01/17 10:56	1
Styrene	ND		1.0	0.24	ug/L			03/01/17 10:56	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			03/01/17 10:56	1
Tetrachloroethene	ND		1.0	0.22	ug/L			03/01/17 10:56	1
Toluene	ND		1.0	0.31	ug/L			03/01/17 10:56	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			03/01/17 10:56	1
Trichloroethene	ND		1.0	0.20	ug/L			03/01/17 10:56	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			03/01/17 10:56	1
Vinyl chloride	ND		0.40	0.13	ug/L			03/01/17 10:56	1
Xylenes, Total	ND		3.0	0.44	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 125*		*03/01/17 10:56*	*1*
4-Bromofluorobenzene (Surr)	*108*		*69 - 120*		*03/01/17 10:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*03/01/17 10:56*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.77		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	71 - 130
1,1,2,2-Tetrachloroethane	10.0	9.74		ug/L		97	66 - 122
1,1,2-Trichloroethane	10.0	9.86		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	10.1		ug/L		101	70 - 127
1,1-Dichloroethane	10.0	9.77		ug/L		98	79 - 121
1,1-Dichloroethene	10.0	9.57		ug/L		96	69 - 127
1,1-Dichloropropene	10.0	9.83		ug/L		98	76 - 125
1,2,3-Trichlorobenzene	10.0	9.57		ug/L		96	60 - 125
1,2,3-Trichloropropane	10.0	9.70		ug/L		97	60 - 124
1,2,4-Trichlorobenzene	10.0	9.75		ug/L		98	66 - 124
1,2,4-Trimethylbenzene	10.0	10.2		ug/L		102	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.91	J	ug/L		89	36 - 140
1,2-Dichlorobenzene	10.0	9.95		ug/L		99	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	9.74		ug/L		97	76 - 121
1,3,5-Trimethylbenzene	10.0	10.2		ug/L		102	75 - 122
1,3-Dichlorobenzene	10.0	10.0		ug/L		100	77 - 120
1,3-Dichloropropane	10.0	10.1		ug/L		101	75 - 120
1,4-Dichlorobenzene	10.0	9.38		ug/L		94	77 - 121
2,2-Dichloropropane	10.0	11.1		ug/L		111	49 - 147
2-Butanone (MEK)	50.0	51.5		ug/L		103	40 - 150
2-Chlorotoluene	10.0	9.80		ug/L		98	75 - 121
2-Hexanone	50.0	45.7		ug/L		91	46 - 146
4-Chlorotoluene	10.0	10.4		ug/L		104	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	47.0		ug/L		94	60 - 127
Acetone	50.0	46.9		ug/L		94	20 - 150
Benzene	10.0	9.81		ug/L		98	80 - 120
Bromobenzene	10.0	9.65		ug/L		97	74 - 121
Bromochloromethane	10.0	9.93		ug/L		99	70 - 126
Bromodichloromethane	10.0	9.74		ug/L		97	67 - 125
Bromoform	10.0	9.76		ug/L		98	60 - 122
Bromomethane	10.0	10.2		ug/L		102	45 - 150
Carbon disulfide	10.0	9.59		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.95		ug/L		99	68 - 134
Chlorobenzene	10.0	9.97		ug/L		100	79 - 125
Chloroethane	10.0	10.3		ug/L		103	48 - 150
Chloroform	10.0	10.0		ug/L		100	73 - 126
Chloromethane	10.0	9.03		ug/L		90	51 - 150
cis-1,2-Dichloroethene	10.0	9.74		ug/L		97	76 - 121
cis-1,3-Dichloropropene	10.0	9.04		ug/L		90	72 - 120
Dibromochloromethane	10.0	10.3		ug/L		103	72 - 120
Dibromomethane	10.0	10.3		ug/L		103	71 - 120
Dichlorodifluoromethane	10.0	8.24		ug/L		82	32 - 150
Dichlorofluoromethane	10.0	9.98		ug/L		100	60 - 140
Ethylbenzene	10.0	9.95		ug/L		99	80 - 120
Hexachlorobutadiene	10.0	9.76		ug/L		98	62 - 132
Hexane	10.0	9.50		ug/L		95	68 - 125
Isopropylbenzene	10.0	9.58		ug/L		96	77 - 123
m,p-Xylene	10.0	9.48		ug/L		95	80 - 120
Methyl tert-butyl ether	10.0	9.43		ug/L		94	71 - 128
Methylene Chloride	10.0	9.67		ug/L		97	20 - 150
Naphthalene	10.0	8.71		ug/L		87	63 - 124
n-Butylbenzene	10.0	9.50		ug/L		95	71 - 120
N-Propylbenzene	10.0	9.61		ug/L		96	76 - 120
o-Xylene	10.0	9.48		ug/L		95	80 - 120
p-Isopropyltoluene	10.0	9.47		ug/L		95	77 - 120
sec-Butylbenzene	10.0	9.96		ug/L		100	74 - 121
Styrene	10.0	9.61		ug/L		96	73 - 120
tert-Butylbenzene	10.0	9.42		ug/L		94	79 - 120
Tetrachloroethene	10.0	10.2		ug/L		102	71 - 132
Toluene	10.0	10.0		ug/L		100	80 - 123
trans-1,2-Dichloroethene	10.0	9.53		ug/L		95	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-10912/1003
Matrix: Water
Analysis Batch: 10912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	70 - 121
Trichloroethene	10.0	10.2		ug/L		102	75 - 129
Trichlorofluoromethane	10.0	9.70		ug/L		97	60 - 140
Vinyl chloride	10.0	9.31		ug/L		93	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-10911/5
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			03/01/17 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*03/01/17 10:56*	*1*

Lab Sample ID: LCS 590-10911/1004
Matrix: Water
Analysis Batch: 10911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	1000	919		ug/L		92	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*68.7 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Chlorophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
2-Nitrophenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
3-Nitroaniline	ND		0.40	0.12	ug/L		02/27/17 16:44	03/03/17 16:12	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chloroaniline	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitroaniline	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
4-Nitrophenol	ND		3.0	1.0	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthene	ND		0.10	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Acenaphthylene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Anthracene	ND		0.040	0.010	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzoic acid	ND		3.0	0.60	ug/L		02/27/17 16:44	03/03/17 16:12	1
Benzyl alcohol	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
bis (2-chloroisopropyl) ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		02/27/17 16:44	03/03/17 16:12	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		02/27/17 16:44	03/03/17 16:12	1
Carbazole	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Chrysene	ND		0.040	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dibenzofuran	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Diethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		02/27/17 16:44	03/03/17 16:12	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluoranthene	ND		0.050	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1
Fluorene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-239396/1-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Hexachloroethane	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Isophorone	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Naphthalene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Nitrobenzene	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pentachlorophenol	ND		0.70	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenanthrene	ND		0.080	0.020	ug/L		02/27/17 16:44	03/03/17 16:12	1
Phenol	ND		0.60	0.10	ug/L		02/27/17 16:44	03/03/17 16:12	1
Pyrene	ND		0.060	0.013	ug/L		02/27/17 16:44	03/03/17 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*57 - 132*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
2-Fluorophenol	*80*		*50 - 113*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Nitrobenzene-d5	*81*		*59 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Phenol-d5	*85*		*52 - 120*	*02/27/17 16:44*	*03/03/17 16:12*	*1*
Terphenyl-d14	*101*		*72 - 140*	*02/27/17 16:44*	*03/03/17 16:12*	*1*

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.91		ug/L		95	40 - 115
1,2-Dichlorobenzene	2.00	1.79		ug/L		89	44 - 119
1,3-Dichlorobenzene	2.00	1.71		ug/L		86	34 - 116
1,4-Dichlorobenzene	2.00	1.70		ug/L		85	40 - 118
1-Methylnaphthalene	2.00	1.95		ug/L		97	54 - 119
2,4,5-Trichlorophenol	2.00	1.75		ug/L		88	56 - 122
2,4,6-Trichlorophenol	2.00	1.96		ug/L		98	55 - 134
2,4-Dichlorophenol	2.00	2.06		ug/L		103	50 - 125
2,4-Dimethylphenol	2.00	1.66	J	ug/L		83	20 - 106
2,4-Dinitrophenol	4.00	1.72	J	ug/L		43	24 - 139
2,4-Dinitrotoluene	2.00	1.86		ug/L		93	40 - 143
2,6-Dinitrotoluene	2.00	1.86		ug/L		93	45 - 134
2-Chloronaphthalene	2.00	1.99		ug/L		100	55 - 125
2-Chlorophenol	2.00	1.97		ug/L		99	57 - 125
2-Methylnaphthalene	2.00	2.01		ug/L		101	56 - 117
2-Methylphenol	2.00	1.81		ug/L		91	53 - 118
2-Nitroaniline	2.00	1.81		ug/L		90	58 - 124
2-Nitrophenol	2.00	1.56		ug/L		78	20 - 150
3 & 4 Methylphenol	2.00	1.92		ug/L		96	54 - 112
3,3'-Dichlorobenzidine	4.00	2.65		ug/L		66	20 - 121
3-Nitroaniline	2.00	1.43		ug/L		71	22 - 124
4,6-Dinitro-2-methylphenol	4.00	2.00	J	ug/L		50	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Bromophenyl phenyl ether	2.00	2.07		ug/L		104	62 - 132
4-Chloro-3-methylphenol	2.00	1.91		ug/L		95	56 - 133
4-Chloroaniline	2.00	0.422		ug/L		21	20 - 110
4-Chlorophenyl phenyl ether	2.00	1.99		ug/L		99	59 - 125
4-Nitroaniline	2.00	1.74		ug/L		87	40 - 118
4-Nitrophenol	4.00	3.75		ug/L		94	20 - 150
Acenaphthene	2.00	1.84		ug/L		92	55 - 113
Acenaphthylene	2.00	1.80		ug/L		90	24 - 135
Anthracene	2.00	1.83		ug/L		91	20 - 125
Benzo[a]anthracene	2.00	2.03		ug/L		101	49 - 115
Benzo[a]pyrene	2.00	1.54		ug/L		77	20 - 115
Benzo[b]fluoranthene	2.00	2.07		ug/L		103	63 - 129
Benzo[g,h,i]perylene	2.00	1.83		ug/L		91	58 - 127
Benzo[k]fluoranthene	2.00	1.91		ug/L		96	60 - 134
Benzoic acid	4.00	1.95	J	ug/L		49	20 - 150
Benzyl alcohol	2.00	2.01		ug/L		100	52 - 124
bis (2-chloroisopropyl) ether	2.00	2.01		ug/L		100	44 - 123
Bis(2-chloroethoxy)methane	2.00	1.98		ug/L		99	59 - 125
Bis(2-chloroethyl)ether	2.00	1.91		ug/L		95	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.26	J	ug/L		113	22 - 150
Butyl benzyl phthalate	2.00	2.38		ug/L		119	46 - 150
Carbazole	2.00	2.34		ug/L		117	68 - 142
Chrysene	2.00	2.03		ug/L		101	57 - 131
Dibenz(a,h)anthracene	2.00	1.51		ug/L		76	56 - 124
Dibenzofuran	2.00	1.97		ug/L		98	60 - 125
Diethyl phthalate	2.00	2.05		ug/L		102	60 - 134
Dimethyl phthalate	2.00	2.14		ug/L		107	65 - 134
Di-n-butyl phthalate	2.00	2.47		ug/L		123	67 - 140
Di-n-octyl phthalate	2.00	2.03		ug/L		102	55 - 150
Fluoranthene	2.00	2.25		ug/L		113	70 - 135
Fluorene	2.00	1.95		ug/L		98	57 - 125
Hexachlorobenzene	2.00	1.84		ug/L		92	55 - 135
Hexachlorobutadiene	2.00	1.83		ug/L		91	25 - 125
Hexachlorocyclopentadiene	2.00	0.793	J	ug/L		40	20 - 110
Hexachloroethane	2.00	1.65		ug/L		82	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.81		ug/L		91	54 - 124
Isophorone	2.00	1.91		ug/L		95	64 - 125
Naphthalene	2.00	1.88		ug/L		94	56 - 119
Nitrobenzene	2.00	1.85		ug/L		92	62 - 125
N-Nitrosodi-n-propylamine	2.00	1.77		ug/L		89	54 - 120
N-Nitrosodiphenylamine	2.00	1.68		ug/L		84	40 - 124
Pentachlorophenol	4.00	2.30		ug/L		58	30 - 122
Phenanthrene	2.00	2.00		ug/L		100	57 - 125
Phenol	2.00	1.85		ug/L		93	53 - 113
Pyrene	2.00	2.24		ug/L		112	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-239396/2-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239396

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*85*		*59 - 120*
Phenol-d5	*88*		*52 - 120*
Terphenyl-d14	*102*		*72 - 140*

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.91		ug/L		95	40 - 115	0	20
1,2-Dichlorobenzene			2.00	1.85		ug/L		92	44 - 119	3	20
1,3-Dichlorobenzene			2.00	1.82		ug/L		91	34 - 116	6	29
1,4-Dichlorobenzene			2.00	1.78		ug/L		89	40 - 118	5	20
1-Methylnaphthalene			2.00	1.92		ug/L		96	54 - 119	1	20
2,4,5-Trichlorophenol			2.00	1.76		ug/L		88	56 - 122	1	20
2,4,6-Trichlorophenol			2.00	1.91		ug/L		96	55 - 134	2	20
2,4-Dichlorophenol			2.00	2.06		ug/L		103	50 - 125	0	26
2,4-Dimethylphenol			2.00	1.57	J	ug/L		79	20 - 106	5	35
2,4-Dinitrophenol			4.00	2.34	J	ug/L		59	24 - 139	31	35
2,4-Dinitrotoluene			2.00	1.95		ug/L		98	40 - 143	5	29
2,6-Dinitrotoluene			2.00	1.92		ug/L		96	45 - 134	3	31
2-Chloronaphthalene			2.00	2.03		ug/L		102	55 - 125	2	20
2-Chlorophenol			2.00	2.02		ug/L		101	57 - 125	3	20
2-Methylnaphthalene			2.00	2.00		ug/L		100	56 - 117	1	20
2-Methylphenol			2.00	1.83		ug/L		92	53 - 118	1	33
2-Nitroaniline			2.00	1.92		ug/L		96	58 - 124	6	20
2-Nitrophenol			2.00	1.69		ug/L		85	20 - 150	8	35
3 & 4 Methylphenol			2.00	1.93		ug/L		96	54 - 112	0	20
3,3'-Dichlorobenzidine			4.00	2.70		ug/L		67	20 - 121	2	35
3-Nitroaniline			2.00	1.47		ug/L		74	22 - 124	3	35
4,6-Dinitro-2-methylphenol			4.00	2.85	J *	ug/L		71	20 - 150	35	30
4-Bromophenyl phenyl ether			2.00	2.08		ug/L		104	62 - 132	0	20
4-Chloro-3-methylphenol			2.00	1.91		ug/L		95	56 - 133	0	20
4-Chloroaniline			2.00	ND	*	ug/L		5	20 - 110	128	35
4-Chlorophenyl phenyl ether			2.00	2.02		ug/L		101	59 - 125	2	20
4-Nitroaniline			2.00	1.98		ug/L		99	40 - 118	13	20
4-Nitrophenol			4.00	3.95		ug/L		99	20 - 150	5	29
Acenaphthene			2.00	1.91		ug/L		95	55 - 113	4	20
Acenaphthylene			2.00	1.86		ug/L		93	24 - 135	3	20
Anthracene			2.00	1.71		ug/L		85	20 - 125	7	26
Benzo[a]anthracene			2.00	2.01		ug/L		101	49 - 115	1	20
Benzo[a]pyrene			2.00	1.45		ug/L		73	20 - 115	6	35
Benzo[b]fluoranthene			2.00	2.16		ug/L		108	63 - 129	4	20
Benzo[g,h,i]perylene			2.00	1.84		ug/L		92	58 - 127	1	20
Benzo[k]fluoranthene			2.00	1.96		ug/L		98	60 - 134	3	20
Benzoic acid			4.00	1.96	J	ug/L		49	20 - 150	0	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-239396/3-A
Matrix: Water
Analysis Batch: 239702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239396

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	2.07		ug/L		104	52 - 124	3	20
bis (2-chloroisopropyl) ether	2.00	2.05		ug/L		102	44 - 123	2	20
Bis(2-chloroethoxy)methane	2.00	2.03		ug/L		101	59 - 125	2	20
Bis(2-chloroethyl)ether	2.00	1.97		ug/L		98	55 - 125	3	20
Bis(2-ethylhexyl) phthalate	2.00	3.09	*	ug/L		154	22 - 150	31	20
Butyl benzyl phthalate	2.00	2.39		ug/L		119	46 - 150	0	20
Carbazole	2.00	2.33		ug/L		117	68 - 142	0	20
Chrysene	2.00	2.04		ug/L		102	57 - 131	1	20
Dibenz(a,h)anthracene	2.00	1.57		ug/L		78	56 - 124	3	20
Dibenzofuran	2.00	2.00		ug/L		100	60 - 125	2	20
Diethyl phthalate	2.00	2.10		ug/L		105	60 - 134	3	20
Dimethyl phthalate	2.00	2.21		ug/L		110	65 - 134	3	20
Di-n-butyl phthalate	2.00	2.51		ug/L		126	67 - 140	2	20
Di-n-octyl phthalate	2.00	2.07		ug/L		103	55 - 150	2	20
Fluoranthene	2.00	2.27		ug/L		113	70 - 135	1	20
Fluorene	2.00	2.00		ug/L		100	57 - 125	3	20
Hexachlorobenzene	2.00	1.80		ug/L		90	55 - 135	2	20
Hexachlorobutadiene	2.00	1.90		ug/L		95	25 - 125	4	31
Hexachlorocyclopentadiene	2.00	1.01	J	ug/L		51	20 - 110	24	35
Hexachloroethane	2.00	1.81		ug/L		91	24 - 125	9	35
Indeno[1,2,3-cd]pyrene	2.00	1.87		ug/L		93	54 - 124	3	20
Isophorone	2.00	1.99		ug/L		99	64 - 125	4	20
Naphthalene	2.00	1.87		ug/L		93	56 - 119	0	20
Nitrobenzene	2.00	1.97		ug/L		98	62 - 125	6	20
N-Nitrosodi-n-propylamine	2.00	1.84		ug/L		92	54 - 120	4	20
N-Nitrosodiphenylamine	2.00	1.71		ug/L		86	40 - 124	2	20
Pentachlorophenol	4.00	2.47		ug/L		62	30 - 122	7	35
Phenanthrene	2.00	1.99		ug/L		99	57 - 125	1	20
Phenol	2.00	1.85		ug/L		92	53 - 113	0	20
Pyrene	2.00	2.23		ug/L		111	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*84*		*57 - 132*
2-Fluorobiphenyl	*82*		*50 - 120*
2-Fluorophenol	*82*		*50 - 113*
Nitrobenzene-d5	*84*		*59 - 120*
Phenol-d5	*86*		*52 - 120*
Terphenyl-d14	*104*		*72 - 140*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-10924/2-A
Matrix: Water
Analysis Batch: 10926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		03/02/17 09:11	03/02/17 11:07	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-10924/3-A
Matrix: Water
Analysis Batch: 10926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10924

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.125	0.129		ug/L		103	60 - 140

Lab Sample ID: LCSD 590-10924/4-A
Matrix: Water
Analysis Batch: 10926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10924

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.125		ug/L		100	60 - 140	4	20

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-239427/1-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239427

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.030	0.0060	ug/L		02/28/17 10:48	02/28/17 21:06	1
4,4'-DDE	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
4,4'-DDT	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
Aldrin	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 21:06	1
alpha-BHC	ND		0.030	0.0070	ug/L		02/28/17 10:48	02/28/17 21:06	1
alpha-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
beta-BHC	ND		0.050	0.012	ug/L		02/28/17 10:48	02/28/17 21:06	1
delta-BHC	ND		0.050	0.010	ug/L		02/28/17 10:48	02/28/17 21:06	1
Dieldrin	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan I	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan II	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endosulfan sulfate	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin aldehyde	ND		0.20	0.034	ug/L		02/28/17 10:48	02/28/17 21:06	1
Endrin ketone	ND		0.020	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
gamma-BHC (Lindane)	ND		0.030	0.0050	ug/L		02/28/17 10:48	02/28/17 21:06	1
gamma-Chlordane	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Heptachlor	ND		0.020	0.0040	ug/L		02/28/17 10:48	02/28/17 21:06	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		02/28/17 10:48	02/28/17 21:06	1
Methoxychlor	ND		0.10	0.0020	ug/L		02/28/17 10:48	02/28/17 21:06	1
Toxaphene	ND		1.0	0.22	ug/L		02/28/17 10:48	02/28/17 21:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*22 - 150*	*02/28/17 10:48*	*02/28/17 21:06*	*1*
Tetrachloro-m-xylene	*97*		*40 - 113*	*02/28/17 10:48*	*02/28/17 21:06*	*1*

Lab Sample ID: LCS 580-239427/2-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239427

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.207		ug/L		104	32 - 133

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-239427/2-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDE			0.200	0.207		ug/L		103	30 - 138		
4,4'-DDT			0.200	0.190		ug/L		95	34 - 131		
Aldrin			0.200	0.183		ug/L		92	35 - 124		
alpha-BHC			0.200	0.197		ug/L		99	39 - 126		
alpha-Chlordane			0.200	0.188		ug/L		94	37 - 133		
beta-BHC			0.200	0.185		ug/L		93	38 - 114		
delta-BHC			0.200	0.208		ug/L		104	20 - 138		
Dieldrin			0.200	0.190		ug/L		95	39 - 140		
Endosulfan I			0.200	0.189		ug/L		95	23 - 142		
Endosulfan II			0.200	0.209		ug/L		105	20 - 150		
Endosulfan sulfate			0.200	0.184		ug/L		92	36 - 130		
Endrin			0.200	0.211		ug/L		105	32 - 130		
Endrin aldehyde			0.200	0.270		ug/L		135	37 - 139		
Endrin ketone			0.200	0.195		ug/L		98	32 - 136		
gamma-BHC (Lindane)			0.200	0.208		ug/L		104	40 - 121		
gamma-Chlordane			0.200	0.190		ug/L		95	38 - 136		
Heptachlor			0.200	0.180		ug/L		90	39 - 129		
Heptachlor epoxide			0.200	0.188		ug/L		94	34 - 135		
Methoxychlor			0.200	0.184		ug/L		92	33 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*22 - 150*
Tetrachloro-m-xylene	*105*		*40 - 113*

Lab Sample ID: LCSD 580-239427/3-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.200	0.207		ug/L		104	32 - 133	0	35
4,4'-DDE			0.200	0.200		ug/L		100	30 - 138	3	35
4,4'-DDT			0.200	0.194		ug/L		97	34 - 131	2	35
Aldrin			0.200	0.176		ug/L		88	35 - 124	4	35
alpha-BHC			0.200	0.200		ug/L		100	39 - 126	1	35
alpha-Chlordane			0.200	0.175		ug/L		88	37 - 133	7	35
beta-BHC			0.200	0.187		ug/L		93	38 - 114	1	35
delta-BHC			0.200	0.209		ug/L		105	20 - 138	1	35
Dieldrin			0.200	0.187		ug/L		94	39 - 140	1	35
Endosulfan I			0.200	0.184		ug/L		92	23 - 142	3	35
Endosulfan II			0.200	0.208		ug/L		104	20 - 150	1	35
Endosulfan sulfate			0.200	0.185		ug/L		92	36 - 130	0	35
Endrin			0.200	0.206		ug/L		103	32 - 130	2	35
Endrin aldehyde			0.200	0.270		ug/L		135	37 - 139	0	35
Endrin ketone			0.200	0.195		ug/L		97	32 - 136	0	35
gamma-BHC (Lindane)			0.200	0.208		ug/L		104	40 - 121	0	35
gamma-Chlordane			0.200	0.186		ug/L		93	38 - 136	2	35
Heptachlor			0.200	0.186		ug/L		93	39 - 129	4	35
Heptachlor epoxide			0.200	0.187		ug/L		94	34 - 135	1	35

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-239427/3-A
Matrix: Water
Analysis Batch: 239470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239427

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methoxychlor			0.200	0.187		ug/L		93	33 - 139	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*97*		*22 - 150*
Tetrachloro-m-xylene	*106*		*40 - 113*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-10858/1-A
Matrix: Water
Analysis Batch: 10856

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10858

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10	0.062	ug/L		02/24/17 15:26	02/24/17 16:00	1
PCB-1221	ND		0.10	0.062	ug/L		02/24/17 15:26	02/24/17 16:00	1
PCB-1232	ND		0.10	0.062	ug/L		02/24/17 15:26	02/24/17 16:00	1
PCB-1242	ND		0.10	0.062	ug/L		02/24/17 15:26	02/24/17 16:00	1
PCB-1248	ND		0.10	0.062	ug/L		02/24/17 15:26	02/24/17 16:00	1
PCB-1254	ND		0.10	0.062	ug/L		02/24/17 15:26	02/24/17 16:00	1
PCB-1260	ND		0.10	0.043	ug/L		02/24/17 15:26	02/24/17 16:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*20 - 120*	*02/24/17 15:26*	*02/24/17 16:00*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*36 - 138*	*02/24/17 15:26*	*02/24/17 16:00*	*1*

Lab Sample ID: LCS 590-10858/2-A
Matrix: Water
Analysis Batch: 10856

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10858

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016			1.60	1.30		ug/L		81	23 - 140
PCB-1260			1.60	1.00		ug/L		62	22 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*80*		*20 - 120*
DCB Decachlorobiphenyl (Surr)	*94*		*36 - 138*

Lab Sample ID: LCSD 590-10858/3-A
Matrix: Water
Analysis Batch: 10856

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10858

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.60	1.13		ug/L		71	23 - 140	14	35
PCB-1260			1.60	0.902		ug/L		56	22 - 139	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*68*		*20 - 120*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 590-10858/3-A
Matrix: Water
Analysis Batch: 10856

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10858

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	88		36 - 138

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-363590/1-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363590

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 18:43	1
Azinphos-methyl	ND		2.5	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Bolstar	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 18:43	1
Chlorpyrifos	ND		1.5	0.36	ug/L		02/27/17 19:29	03/15/17 18:43	1
Coumaphos	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Demeton, Total	ND		3.0	0.21	ug/L		02/27/17 19:29	03/15/17 18:43	1
Diazinon	ND		0.50	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Dichlorvos	ND		0.50	0.16	ug/L		02/27/17 19:29	03/15/17 18:43	1
Dimethoate	ND		1.5	0.45	ug/L		02/27/17 19:29	03/15/17 18:43	1
Disulfoton	ND		1.0	0.32	ug/L		02/27/17 19:29	03/15/17 18:43	1
EPN	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Famphur	ND		1.0	0.18	ug/L		02/27/17 19:29	03/15/17 18:43	1
Fensulfothion	ND		2.5	0.54	ug/L		02/27/17 19:29	03/15/17 18:43	1
Fenthion	ND		2.5	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Malathion	ND		2.0	0.13	ug/L		02/27/17 19:29	03/15/17 18:43	1
Merphos	ND		5.0	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Methyl parathion	ND		4.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Mevinphos	ND		6.2	0.46	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ethyl Parathion	ND		1.0	0.14	ug/L		02/27/17 19:29	03/15/17 18:43	1
Phorate	ND		1.2	0.15	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ronnel	ND		10	0.12	ug/L		02/27/17 19:29	03/15/17 18:43	1
Simazine	ND		10	0.22	ug/L		02/27/17 19:29	03/15/17 18:43	1
Sulfotepp	ND		1.5	0.17	ug/L		02/27/17 19:29	03/15/17 18:43	1
Thionazin	ND		1.0	0.31	ug/L		02/27/17 19:29	03/15/17 18:43	1
Tokuthion	ND		1.6	0.12	ug/L		02/27/17 19:29	03/15/17 18:43	1
Trichloronate	ND		1.5	0.24	ug/L		02/27/17 19:29	03/15/17 18:43	1
Ethoprop	ND		1.5	0.18	ug/L		02/27/17 19:29	03/15/17 18:43	1
Propazine	ND		10	0.29	ug/L		02/27/17 19:29	03/15/17 18:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	25	X	49 - 171	02/27/17 19:29	03/15/17 18:43	1
Triphenylphosphate	81		60 - 154	02/27/17 19:29	03/15/17 18:43	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-363590/2-A
Matrix: Water
Analysis Batch: 365610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	4.00	2.95	J	ug/L		74	52 - 115
Azinphos-methyl	4.00	3.67		ug/L		92	59 - 115
Chlorpyrifos	4.00	3.38		ug/L		84	54 - 115
Coumaphos	4.00	3.85		ug/L		96	63 - 118
Demeton, Total	4.00	2.34	J	ug/L		58	44 - 115
Diazinon	4.00	3.35		ug/L		84	47 - 115
Dichlorvos	4.00	3.02		ug/L		76	53 - 128
Dimethoate	4.00	2.32		ug/L		58	42 - 115
Disulfoton	4.00	2.86		ug/L		72	45 - 115
EPN	4.00	3.16		ug/L		79	56 - 115
Famphur	4.00	3.19		ug/L		80	62 - 115
Fensulfothion	4.00	2.86		ug/L		71	50 - 115
Fenthion	4.00	3.00		ug/L		75	55 - 115
Malathion	4.00	2.91		ug/L		73	52 - 115
Merphos	4.00	3.28	J	ug/L		82	31 - 115
Methyl parathion	4.00	3.15	J	ug/L		79	58 - 115
Mevinphos	4.00	2.60	J	ug/L		65	42 - 115
Ethyl Parathion	4.00	3.23		ug/L		81	55 - 115
Phorate	4.00	2.59		ug/L		65	40 - 115
Ronnel	4.00	3.36	J	ug/L		84	55 - 115
Simazine	4.00	2.15	J	ug/L		54	39 - 115
Sulfotepp	4.00	3.22		ug/L		81	53 - 115
Thionazin	4.00	3.06		ug/L		77	54 - 115
Trichloronate	4.00	3.32		ug/L		83	48 - 115
Ethoprop	4.00	3.23		ug/L		81	50 - 115
BolstarFamphur	8.00	6.46		ug/L		81	

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Chlormefos	*74*		*49 - 171*
Triphenylphosphate	*85*		*60 - 154*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-363884/1-A
Matrix: Water
Analysis Batch: 365316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.19	ug/L		03/01/17 11:11	03/14/17 01:06	1
2,4-D	ND		4.0	0.21	ug/L		03/01/17 11:11	03/14/17 01:06	1
2,4-DB	ND		4.0	0.36	ug/L		03/01/17 11:11	03/14/17 01:06	1
Dalapon	ND		2.0	0.91	ug/L		03/01/17 11:11	03/14/17 01:06	1
Dicamba	ND		2.0	0.15	ug/L		03/01/17 11:11	03/14/17 01:06	1
Dichlorprop	ND		4.0	0.65	ug/L		03/01/17 11:11	03/14/17 01:06	1
MCPA	ND		400	17	ug/L		03/01/17 11:11	03/14/17 01:06	1
MCPP	ND		400	33	ug/L		03/01/17 11:11	03/14/17 01:06	1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: MB 280-363884/1-A
Matrix: Water
Analysis Batch: 365316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	ND		1.0	0.17	ug/L		03/01/17 11:11	03/14/17 01:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*90*		*39 - 135*	*03/01/17 11:11*	*03/14/17 01:06*	*1*

Lab Sample ID: LCS 280-363884/2-A
Matrix: Water
Analysis Batch: 365316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363884

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	2.72		ug/L		54	45 - 135		
2,4-D			5.00	2.86	J	ug/L		57	46 - 126		
2,4-DB			5.00	4.09		ug/L		82	18 - 135		
Dalapon			5.00	2.97		ug/L		59	52 - 119		
Dicamba			5.00	2.75		ug/L		55	50 - 128		
Dichlorprop			5.00	2.76	J	ug/L		55	44 - 121		
MCPA			500	369	J	ug/L		74	43 - 118		
MCPP			500	389	J	ug/L		78	45 - 121		
Silvex (2,4,5-TP)			5.00	3.20		ug/L		64	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*77*		*39 - 135*

Lab Sample ID: LCSD 280-363884/3-A
Matrix: Water
Analysis Batch: 365316

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363884

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	2.49		ug/L		50	45 - 135	9	30
2,4-D			5.00	2.62	J	ug/L		52	46 - 126	9	30
2,4-DB			5.00	3.01	J	ug/L		60	18 - 135	30	30
Dalapon			5.00	2.62		ug/L		52	52 - 119	12	30
Dicamba			5.00	2.52		ug/L		50	50 - 128	9	30
Dichlorprop			5.00	2.56	J	ug/L		51	44 - 121	8	30
MCPA			500	299	J	ug/L		60	43 - 118	21	30
MCPP			500	321	J	ug/L		64	45 - 121	19	30
Silvex (2,4,5-TP)			5.00	2.94		ug/L		59	48 - 127	9	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*71*		*39 - 135*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-10887/1-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12	0.040	mg/L		02/28/17 09:16	02/28/17 11:37	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20	0.060	mg/L		02/28/17 09:16	02/28/17 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*02/28/17 09:16*	*02/28/17 11:37*	*1*

Lab Sample ID: LCS 590-10887/2-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.35		mg/L		84	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.36		mg/L		85	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*104*		*50 - 150*
n-Triacontane-d62	*106*		*50 - 150*

Lab Sample ID: LCSD 590-10887/3-A
Matrix: Water
Analysis Batch: 10889

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 10887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.60	1.25		mg/L		78	50 - 150	7	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.32		mg/L		82	50 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*101*		*50 - 150*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-10849/1011
Matrix: Water
Analysis Batch: 10849

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			02/24/17 10:15	1
Sulfate	ND		0.50	0.13	mg/L			02/24/17 10:15	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 590-10849/1010
Matrix: Water
Analysis Batch: 10849

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5	12.7		mg/L		101	90 - 110
Sulfate	12.5	12.6		mg/L		101	90 - 110

Lab Sample ID: 590-5564-1 MS
Matrix: Water
Analysis Batch: 10849

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		12.5	22.7		mg/L		90	80 - 120
Sulfate	16		12.5	26.5		mg/L		85	80 - 120

Lab Sample ID: 590-5564-1 MSD
Matrix: Water
Analysis Batch: 10849

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		12.5	22.7		mg/L		89	80 - 120	0	10
Sulfate	16		12.5	26.6		mg/L		86	80 - 120	0	10

Lab Sample ID: 590-5564-1 DU
Matrix: Water
Analysis Batch: 10849

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	12		11.6		mg/L		0.8	18.8
Sulfate	16		16.0		mg/L		1	15.7

Lab Sample ID: MB 590-10850/1011
Matrix: Water
Analysis Batch: 10850

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			02/24/17 10:15	1
Nitrite as N	ND		0.20	0.069	mg/L			02/24/17 10:15	1

Lab Sample ID: LCS 590-10850/1010
Matrix: Water
Analysis Batch: 10850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.99		mg/L		100	90 - 110
Nitrite as N	5.00	4.78		mg/L		96	90 - 110

Lab Sample ID: 590-5564-1 MS
Matrix: Water
Analysis Batch: 10850

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.4		5.00	6.21		mg/L		96	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 590-5564-1 MS
Matrix: Water
Analysis Batch: 10850

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	ND		5.00	4.67		mg/L		93	80 - 120

Lab Sample ID: 590-5564-1 MSD
Matrix: Water
Analysis Batch: 10850

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.4		5.00	6.30		mg/L		98	80 - 120	1	12.1
Nitrite as N	ND		5.00	4.65		mg/L		93	80 - 120	0	10

Lab Sample ID: 590-5564-1 DU
Matrix: Water
Analysis Batch: 10850

Client Sample ID: SW-1:022317
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.4		1.36		mg/L		3	13.1
Nitrite as N	ND		ND		mg/L		NC	10

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-154275/1-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154275

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.18	pg/L		03/10/17 08:23	03/13/17 18:03	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8-PeCDD	ND		50	0.24	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8-PeCDF	ND		50	0.18	pg/L		03/10/17 08:23	03/13/17 18:03	1
2,3,4,7,8-PeCDF	ND		50	0.19	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,7,8-HxCDD	ND		50	0.23	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,6,7,8-HxCDD	ND		50	0.19	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8,9-HxCDD	ND		50	0.17	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,7,8-HxCDF	ND		50	0.23	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,6,7,8-HxCDF	ND		50	0.19	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,7,8,9-HxCDF	ND		50	0.21	pg/L		03/10/17 08:23	03/13/17 18:03	1
2,3,4,6,7,8-HxCDF	ND		50	0.21	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.54	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,6,7,8-HpCDF	0.200	J q	50	0.14	pg/L		03/10/17 08:23	03/13/17 18:03	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.16	pg/L		03/10/17 08:23	03/13/17 18:03	1
OCDD	1.63	J q	100	0.23	pg/L		03/10/17 08:23	03/13/17 18:03	1
OCDF	0.920	J q	100	0.28	pg/L		03/10/17 08:23	03/13/17 18:03	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,7,8-PeCDD	*83*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*
13C-1,2,3,6,7,8-HxCDD	*101*		*40 - 135*	*03/10/17 08:23*	*03/13/17 18:03*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-154275/1-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154275

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDF	77		40 - 135	03/10/17 08:23	03/13/17 18:03	1
13C-1,2,3,4,6,7,8-HpCDD	82		40 - 135	03/10/17 08:23	03/13/17 18:03	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135	03/10/17 08:23	03/13/17 18:03	1
13C-OCDD	77		40 - 135	03/10/17 08:23	03/13/17 18:03	1

Lab Sample ID: LCS 320-154275/2-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	200		pg/L		100	64 - 142
2,3,7,8-TCDF	200	197		pg/L		99	71 - 142
1,2,3,7,8-PeCDD	1000	1030		pg/L		103	71 - 140
1,2,3,7,8-PeCDF	1000	997		pg/L		100	76 - 135
2,3,4,7,8-PeCDF	1000	1020		pg/L		102	74 - 137
1,2,3,4,7,8-HxCDD	1000	1060		pg/L		106	56 - 146
1,2,3,6,7,8-HxCDD	1000	1040		pg/L		104	73 - 144
1,2,3,7,8,9-HxCDD	1000	896		pg/L		90	71 - 151
1,2,3,4,7,8-HxCDF	1000	1050		pg/L		105	75 - 131
1,2,3,6,7,8-HxCDF	1000	1140		pg/L		114	76 - 133
1,2,3,7,8,9-HxCDF	1000	1050		pg/L		105	77 - 142
2,3,4,6,7,8-HxCDF	1000	1150		pg/L		115	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	967		pg/L		97	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	995		pg/L		99	79 - 133
1,2,3,4,7,8,9-HpCDF	1000	919		pg/L		92	83 - 130
OCDD	2000	1860		pg/L		93	80 - 132
OCDF	2000	1870		pg/L		94	72 - 140

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	95		40 - 135
13C-2,3,7,8-TCDF	89		40 - 135
13C-1,2,3,7,8-PeCDD	101		40 - 135
13C-1,2,3,7,8-PeCDF	97		40 - 135
13C-1,2,3,6,7,8-HxCDD	104		40 - 135
13C-1,2,3,4,7,8-HxCDF	84		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135
13C-OCDD	88		40 - 135

Lab Sample ID: LCSD 320-154275/3-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154275

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	200	206		pg/L		103	64 - 142	3	20
2,3,7,8-TCDF	200	196		pg/L		98	71 - 142	0	20
1,2,3,7,8-PeCDD	1000	1060		pg/L		106	71 - 140	3	20
1,2,3,7,8-PeCDF	1000	1070		pg/L		107	76 - 135	7	20
2,3,4,7,8-PeCDF	1000	983		pg/L		98	74 - 137	4	20

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-154275/3-A
Matrix: Water
Analysis Batch: 154960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154275

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,7,8-HxCDD			1000	1030		pg/L		103	56 - 146	3	20
1,2,3,6,7,8-HxCDD			1000	1050		pg/L		105	73 - 144	1	20
1,2,3,7,8,9-HxCDD			1000	959		pg/L		96	71 - 151	7	20
1,2,3,4,7,8-HxCDF			1000	1060		pg/L		106	75 - 131	1	20
1,2,3,6,7,8-HxCDF			1000	1190		pg/L		119	76 - 133	3	20
1,2,3,7,8,9-HxCDF			1000	1160		pg/L		116	77 - 142	10	20
2,3,4,6,7,8-HxCDF			1000	1240		pg/L		124	80 - 137	7	20
1,2,3,4,6,7,8-HpCDD			1000	1010		pg/L		101	78 - 139	4	20
1,2,3,4,6,7,8-HpCDF			1000	1030		pg/L		103	79 - 133	3	20
1,2,3,4,7,8,9-HpCDF			1000	971		pg/L		97	83 - 130	5	20
OCDD			2000	1930		pg/L		96	80 - 132	3	20
OCDF			2000	1890		pg/L		94	72 - 140	1	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*85*		*40 - 135*
13C-2,3,7,8-TCDF	*80*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*81*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*75*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*
13C-OCDD	*85*		*40 - 135*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-239745/20-A
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239745

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			0.100	0.101		mg/L		101	85 - 115
Antimony			0.100	0.0953		mg/L		95	85 - 115
Barium			0.100	0.0966		mg/L		97	85 - 115
Beryllium			0.100	0.0964		mg/L		96	85 - 115
Cadmium			0.100	0.101		mg/L		101	85 - 115
Chromium			0.100	0.0969		mg/L		97	85 - 115
Copper			0.100	0.101		mg/L		101	85 - 115
Iron			10.0	9.42		mg/L		94	85 - 115
Lead			0.100	0.0987		mg/L		99	85 - 115
Manganese			0.100	0.0961		mg/L		96	85 - 115
Nickel			0.100	0.0995		mg/L		100	85 - 115
Selenium			0.100	0.102		mg/L		102	85 - 115
Silver			0.100	0.0988		mg/L		99	85 - 115
Thallium			0.100	0.0947		mg/L		95	85 - 115
Vanadium			0.100	0.0946		mg/L		95	85 - 115
Zinc			0.100	0.105		mg/L		105	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-239745/21-A
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239745

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0979		mg/L		98	85 - 115	3	20
Antimony	0.100	0.0926		mg/L		93	85 - 115	3	20
Barium	0.100	0.0943		mg/L		94	85 - 115	2	20
Beryllium	0.100	0.0950		mg/L		95	85 - 115	1	20
Cadmium	0.100	0.0968		mg/L		97	85 - 115	4	20
Chromium	0.100	0.0952		mg/L		95	85 - 115	2	20
Copper	0.100	0.0987		mg/L		99	85 - 115	2	20
Iron	10.0	9.18		mg/L		92	85 - 115	3	20
Lead	0.100	0.0967		mg/L		97	85 - 115	2	20
Manganese	0.100	0.0936		mg/L		94	85 - 115	3	20
Nickel	0.100	0.0973		mg/L		97	85 - 115	2	20
Selenium	0.100	0.0985		mg/L		98	85 - 115	3	20
Silver	0.100	0.0955		mg/L		95	85 - 115	3	20
Thallium	0.100	0.0935		mg/L		93	85 - 115	1	20
Vanadium	0.100	0.0925		mg/L		92	85 - 115	2	20
Zinc	0.100	0.102		mg/L		102	85 - 115	2	20

Lab Sample ID: MB 580-240170/14-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/10/17 09:08	03/10/17 15:30	1
Antimony	ND		0.00040	0.000080	mg/L		03/10/17 09:08	03/10/17 15:30	1
Barium	ND		0.0012	0.000054	mg/L		03/10/17 09:08	03/10/17 15:30	1
Beryllium	ND		0.00040	0.00010	mg/L		03/10/17 09:08	03/10/17 15:30	1
Cadmium	ND		0.00040	0.000028	mg/L		03/10/17 09:08	03/10/17 15:30	1
Chromium	ND		0.00040	0.00014	mg/L		03/10/17 09:08	03/10/17 15:30	1
Copper	ND		0.0020	0.00060	mg/L		03/10/17 09:08	03/10/17 15:30	1
Iron	ND		0.040	0.0058	mg/L		03/10/17 09:08	03/10/17 15:30	1
Lead	ND		0.00040	0.000034	mg/L		03/10/17 09:08	03/10/17 15:30	1
Manganese	ND		0.0020	0.00035	mg/L		03/10/17 09:08	03/10/17 15:30	1
Nickel	ND		0.0030	0.00040	mg/L		03/10/17 09:08	03/10/17 15:30	1
Selenium	ND		0.0010	0.00030	mg/L		03/10/17 09:08	03/10/17 15:30	1
Silver	ND		0.00040	0.000030	mg/L		03/10/17 09:08	03/10/17 15:30	1
Thallium	ND		0.0010	0.00014	mg/L		03/10/17 09:08	03/10/17 15:30	1
Vanadium	ND		0.0040	0.00098	mg/L		03/10/17 09:08	03/10/17 15:30	1
Zinc	ND		0.0070	0.0019	mg/L		03/10/17 09:08	03/10/17 15:30	1

Lab Sample ID: LCS 580-240170/15-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.101		mg/L		101	85 - 115
Antimony	0.100	0.0997		mg/L		100	85 - 115
Barium	0.100	0.0993		mg/L		99	85 - 115
Beryllium	0.100	0.101		mg/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-240170/15-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.100	0.0998		mg/L		100	85 - 115
Chromium	0.100	0.0990		mg/L		99	85 - 115
Copper	0.100	0.0977		mg/L		98	85 - 115
Iron	10.0	9.65		mg/L		96	85 - 115
Lead	0.100	0.100		mg/L		100	85 - 115
Manganese	0.100	0.0966		mg/L		97	85 - 115
Nickel	0.100	0.0982		mg/L		98	85 - 115
Selenium	0.100	0.0978		mg/L		98	85 - 115
Silver	0.100	0.0984		mg/L		98	85 - 115
Thallium	0.100	0.0979		mg/L		98	85 - 115
Vanadium	0.100	0.0979		mg/L		98	85 - 115
Zinc	0.100	0.0969		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-240170/16-A
Matrix: Water
Analysis Batch: 240305

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0999		mg/L		100	85 - 115	1	20
Antimony	0.100	0.0960		mg/L		96	85 - 115	4	20
Barium	0.100	0.0945		mg/L		94	85 - 115	5	20
Beryllium	0.100	0.0976		mg/L		98	85 - 115	3	20
Cadmium	0.100	0.0974		mg/L		97	85 - 115	2	20
Chromium	0.100	0.0968		mg/L		97	85 - 115	2	20
Copper	0.100	0.0967		mg/L		97	85 - 115	1	20
Iron	10.0	9.48		mg/L		95	85 - 115	2	20
Lead	0.100	0.0973		mg/L		97	85 - 115	3	20
Manganese	0.100	0.0939		mg/L		94	85 - 115	3	20
Nickel	0.100	0.0978		mg/L		98	85 - 115	0	20
Selenium	0.100	0.0974		mg/L		97	85 - 115	0	20
Silver	0.100	0.0970		mg/L		97	85 - 115	1	20
Thallium	0.100	0.0946		mg/L		95	85 - 115	3	20
Vanadium	0.100	0.0956		mg/L		96	85 - 115	2	20
Zinc	0.100	0.0965		mg/L		97	85 - 115	0	20

Lab Sample ID: 590-5564-1 MS
Matrix: Water
Analysis Batch: 240305

Client Sample ID: SW-1:022317
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0020		0.100	0.102		mg/L		99	70 - 130
Antimony	0.00021	J	0.100	0.0995		mg/L		99	70 - 130
Barium	0.043		0.100	0.142		mg/L		99	70 - 130
Beryllium	ND		0.100	0.101		mg/L		101	70 - 130
Cadmium	ND		0.100	0.0989		mg/L		99	70 - 130
Chromium	0.00047		0.100	0.0993		mg/L		99	70 - 130
Copper	0.00065	J	0.100	0.0948		mg/L		94	70 - 130
Iron	0.26		10.0	9.91		mg/L		96	70 - 130
Lead	0.00033	J	0.100	0.0990		mg/L		99	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5564-1 MS
Matrix: Water
Analysis Batch: 240305

Client Sample ID: SW-1:022317
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.019		0.100	0.114		mg/L		95	70 - 130
Nickel	0.00040	J	0.100	0.0954		mg/L		95	70 - 130
Selenium	0.00030	J	0.100	0.0975		mg/L		97	70 - 130
Silver	ND		0.100	0.0983		mg/L		98	70 - 130
Thallium	ND		0.100	0.0980		mg/L		98	70 - 130
Vanadium	0.010		0.100	0.109		mg/L		98	70 - 130
Zinc	ND		0.100	0.0950		mg/L		95	70 - 130

Lab Sample ID: 590-5564-1 MSD
Matrix: Water
Analysis Batch: 240305

Client Sample ID: SW-1:022317
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0020		0.100	0.103		mg/L		101	70 - 130	1	20
Antimony	0.00021	J	0.100	0.0997		mg/L		99	70 - 130	0	20
Barium	0.043		0.100	0.141		mg/L		98	70 - 130	0	20
Beryllium	ND		0.100	0.102		mg/L		102	70 - 130	2	20
Cadmium	ND		0.100	0.101		mg/L		101	70 - 130	2	20
Chromium	0.00047		0.100	0.101		mg/L		100	70 - 130	1	20
Copper	0.00065	J	0.100	0.0959		mg/L		95	70 - 130	1	20
Iron	0.26		10.0	10.1		mg/L		98	70 - 130	2	20
Lead	0.00033	J	0.100	0.0996		mg/L		99	70 - 130	1	20
Manganese	0.019		0.100	0.116		mg/L		97	70 - 130	1	20
Nickel	0.00040	J	0.100	0.0960		mg/L		96	70 - 130	1	20
Selenium	0.00030	J	0.100	0.0985		mg/L		99	70 - 130	1	20
Silver	ND		0.100	0.101		mg/L		101	70 - 130	2	20
Thallium	ND		0.100	0.0972		mg/L		97	70 - 130	1	20
Vanadium	0.010		0.100	0.110		mg/L		100	70 - 130	1	20
Zinc	ND		0.100	0.0970		mg/L		97	70 - 130	2	20

Lab Sample ID: 590-5564-1 DU
Matrix: Water
Analysis Batch: 240305

Client Sample ID: SW-1:022317
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0020		0.00195		mg/L		5	20
Antimony	0.00021	J	0.000194	J	mg/L		6	20
Barium	0.043		0.0417		mg/L		3	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.00047		0.000400		mg/L		15	20
Copper	0.00065	J	0.000610	J	mg/L		6	20
Iron	0.26		0.262		mg/L		0.6	20
Lead	0.00033	J	0.000128	J F5	mg/L		87	20
Manganese	0.019		0.0188		mg/L		0.6	20
Nickel	0.00040	J	ND		mg/L		NC	20
Selenium	0.00030	J	ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-5564-1 DU
Matrix: Water
Analysis Batch: 240305

Client Sample ID: SW-1:022317
Prep Type: Total/NA
Prep Batch: 240170

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Vanadium	0.010		0.0101		mg/L		2	20
Zinc	ND		ND		mg/L		NC	20

Lab Sample ID: MB 580-239239/13-B
Matrix: Water
Analysis Batch: 239807

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 239745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		03/03/17 19:04	03/06/17 10:49	1
Antimony	ND		0.00040	0.000080	mg/L		03/03/17 19:04	03/06/17 10:49	1
Barium	ND		0.0012	0.000054	mg/L		03/03/17 19:04	03/06/17 10:49	1
Beryllium	ND		0.00040	0.00010	mg/L		03/03/17 19:04	03/06/17 10:49	1
Cadmium	ND		0.00040	0.000028	mg/L		03/03/17 19:04	03/06/17 10:49	1
Chromium	ND		0.00040	0.00014	mg/L		03/03/17 19:04	03/06/17 10:49	1
Copper	ND		0.0020	0.00060	mg/L		03/03/17 19:04	03/06/17 10:49	1
Iron	ND		0.040	0.0058	mg/L		03/03/17 19:04	03/06/17 10:49	1
Lead	ND		0.00040	0.000034	mg/L		03/03/17 19:04	03/06/17 10:49	1
Manganese	ND		0.0020	0.00035	mg/L		03/03/17 19:04	03/06/17 10:49	1
Nickel	ND		0.0030	0.00040	mg/L		03/03/17 19:04	03/06/17 10:49	1
Selenium	ND		0.0010	0.00030	mg/L		03/03/17 19:04	03/06/17 10:49	1
Silver	ND		0.00040	0.000030	mg/L		03/03/17 19:04	03/06/17 10:49	1
Thallium	ND		0.0010	0.00014	mg/L		03/03/17 19:04	03/06/17 10:49	1
Vanadium	ND		0.0040	0.00098	mg/L		03/03/17 19:04	03/06/17 10:49	1
Zinc	ND		0.0070	0.0019	mg/L		03/03/17 19:04	03/06/17 10:49	1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-240062/17-A
Matrix: Water
Analysis Batch: 240138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240062

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 08:55	03/09/17 12:34	1

Lab Sample ID: LCS 580-240062/18-A
Matrix: Water
Analysis Batch: 240138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240062

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00182		mg/L		91	85 - 115

Lab Sample ID: LCSD 580-240062/19-A
Matrix: Water
Analysis Batch: 240138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240062

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00183		mg/L		92	85 - 115	1	20

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-240098/15-A
Matrix: Water
Analysis Batch: 240164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00218		mg/L		109	85 - 115

Lab Sample ID: LCSD 580-240098/16-A
Matrix: Water
Analysis Batch: 240164

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240098

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00223		mg/L		111	85 - 115	2	20

Lab Sample ID: MB 580-239239/13-C
Matrix: Water
Analysis Batch: 240164

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 240098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		03/09/17 11:58	03/09/17 15:03	1

Lab Sample ID: 590-5564-1 MS
Matrix: Water
Analysis Batch: 240164

Client Sample ID: SW-1:022317
Prep Type: Dissolved
Prep Batch: 240098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00173		mg/L		87	70 - 130

Lab Sample ID: 590-5564-1 MSD
Matrix: Water
Analysis Batch: 240164

Client Sample ID: SW-1:022317
Prep Type: Dissolved
Prep Batch: 240098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00163		mg/L		82	70 - 130	6	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-410978/1-A
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0070	mg/L		02/28/17 11:20	03/01/17 15:01	1

Lab Sample ID: LCS 490-410978/2-A
Matrix: Water
Analysis Batch: 411373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.104		mg/L		104	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 490-410933/1-A
Matrix: Water
Analysis Batch: 412339

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410933

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.10	0.060	mg/L		02/28/17 10:11	03/06/17 09:42	1

Lab Sample ID: LCS 490-410933/2-A
Matrix: Water
Analysis Batch: 412339

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410933

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia (as N)			5.00	5.19		mg/L		104	90 - 110		

Method: 410.4 - COD

Lab Sample ID: MB 490-411754/3
Matrix: Water
Analysis Batch: 411754

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	4.0	mg/L			03/02/17 18:11	1

Lab Sample ID: LCS 490-411754/4
Matrix: Water
Analysis Batch: 411754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			50.0	48.4		mg/L		97	90 - 110		

Lab Sample ID: LCSD 490-411754/5
Matrix: Water
Analysis Batch: 411754

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand			50.0	49.2		mg/L		98	90 - 110	2	20

Method: SM 5310C - TOC

Lab Sample ID: LB 490-410091/1-A
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			03/01/17 19:25	1

Lab Sample ID: MB 490-411595/2
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.50	mg/L			03/01/17 14:31	1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 490-411595/6
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.96		mg/L		100	90 - 110
TOC Result 1	10.0	10.1		mg/L		101	90 - 110
TOC Result 2	10.0	9.87		mg/L		99	90 - 110

Lab Sample ID: LCSD 490-411595/7
Matrix: Water
Analysis Batch: 411595

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	10.0	9.81		mg/L		98	90 - 110	2	20
TOC Result 1	10.0	9.86		mg/L		99	90 - 110	2	20
TOC Result 2	10.0	9.75		mg/L		98	90 - 110	1	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Client Sample ID: SW-1:022317

Date Collected: 02/23/17 13:50
Date Received: 02/23/17 15:15

Lab Sample ID: 590-5564-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	10912	03/01/17 19:22	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	10911	03/01/17 19:22	MRS	TAL SPK
Total/NA	Prep	3520C			1027.1 mL	2 mL	239396	02/27/17 16:44	DSO	TAL SEA
Total/NA	Analysis	8270D		1			239702	03/04/17 00:46	W1T	TAL SEA
Total/NA	Prep	8011			80 mL	2 mL	10924	03/02/17 09:11	NMI	TAL SPK
Total/NA	Analysis	8011		1			10926	03/02/17 16:26	NMI	TAL SPK
Total/NA	Prep	3510C			264.9 mL	2.5 mL	239427	02/28/17 10:48	JCV	TAL SEA
Total/NA	Analysis	8081B		1			239470	03/01/17 01:33	DCV	TAL SEA
Total/NA	Prep	3510C			266.2 mL	2 mL	10858	02/24/17 15:26	NMI	TAL SPK
Total/NA	Analysis	8082A		1			10856	02/24/17 17:02	NMI	TAL SPK
Total/NA	Prep	3510C			1042.6 mL	2 mL	363590	02/27/17 19:29	BJA	TAL DEN
Total/NA	Analysis	8141B		1	0.25 mL	0.25 mL	365610	03/16/17 03:06	AMB1	TAL DEN
Total/NA	Prep	8151A			1044.8 mL	10 mL	363884	03/01/17 11:11	DFB1	TAL DEN
Total/NA	Analysis	8151A		1			365316	03/14/17 09:29	AMB1	TAL DEN
Silica Gel Cleanup	Prep	3510C SGC			237.6 mL	2 mL	10887	02/28/17 09:16	NMI	TAL SPK
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			10889	02/28/17 18:21	NMI	TAL SPK
Total/NA	Analysis	300.0		1			10849	02/24/17 08:38	CBW	TAL SPK
Total/NA	Analysis	300.0		1			10850	02/24/17 08:38	CBW	TAL SPK
Total/NA	Prep	8290			1048.1 mL	20 uL	154275	03/10/17 11:17	DXD	TAL SAC
Total/NA	Analysis	8290A		1			154964	03/14/17 13:38	SMA	TAL SAC
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	239745	03/03/17 19:04	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	239807	03/06/17 12:24	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	240170	03/10/17 09:08	ADB	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	240305	03/10/17 15:35	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			200 mL	200 mL	239239	02/24/17 12:45	PAB	TAL SEA
Dissolved	Prep	245.1			50 mL	50 mL	240098	03/09/17 11:58	ADB	TAL SEA
Dissolved	Analysis	245.1		1			240164	03/09/17 15:10	PAB	TAL SEA
Total/NA	Prep	245.1			50 mL	50 mL	240062	03/09/17 08:55	ADB	TAL SEA
Total/NA	Analysis	245.1		1			240138	03/09/17 13:05	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50 mL	50 mL	410978	02/28/17 11:31	LDT	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	411373	03/01/17 15:23	SDL	TAL NSH
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	410933	02/28/17 10:11	GRM	TAL NSH
Total/NA	Analysis	350.1		1	50 mL	50 mL	412339	03/06/17 09:50	PEK	TAL NSH
Total/NA	Analysis	410.4		1	2 mL	2 mL	411754	03/02/17 18:11	MSJ	TAL NSH
Total/NA	Analysis	SM 5310C		1	50 mL	50 mL	411595	03/01/17 22:11	JAB	TAL NSH
Total/NA	Analysis	SM 9223B		1			10848	02/23/17 16:10	SJK	TAL SPK

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Laboratory: TestAmerica Spokane

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-071	10-31-17
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C583	08-02-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Fenthion
8141B	3510C	Water	Propazine

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C789	07-19-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis (2-chloroisopropyl) ether

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SPK
8081B	Organochlorine Pesticides (GC)	SW846	TAL SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH
350.1	Nitrogen, Ammonia	MCAWW	TAL NSH
410.4	COD	MCAWW	TAL NSH
SM 5310C	TOC	SM	TAL NSH
SM 9223B	Coliforms, Total, and E.Coli	SM	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
NWTPH = Northwest Total Petroleum Hydrocarbon
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141A - OP Pesticides	8151A - Herbicide (Aqueous)	8290A - Dioxins 17 Isomers List	350.1, 410.4	5310C - Total Organic Carbon (TOC)	335.4 - Cyanide, Total	8081A - Chlorinated Pesticides	200.8_CWA, 245.1	8260C, NWTPH_Gx_MS	8270C - Semivolatiles	200.8_CWA, 245.1	8082A - (MOD) PCBs - Standard List	300_ORGFM_28D, 300_ORGFMS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	S	B	N	D	A	N	N	N	N		
SW-1:022317	2/23/17	1350	G	Water	N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	
				Water																	
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590-5564 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 2/23/17 1515	Company: GEI	Received by: Sheila Hall	Date/Time: 2/23/17 1515	Company: TA-Spok
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.8 °C IR0021

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2241-784.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone: 509-363-3125	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site: Marshall Levee #11	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9223_ColiQT_WW - Quantitray TC/E.coli	8011 - 1,2-Dibromoethane (EDB)	NWTPH_Dx - DRO and RRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	N	A		
SW-1:022317	2/23/2017	1350	G	Water	N		X	X	X	23	
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	2/23/17 1515	GEI	Sheila Mal	2/23/17 1515	TA Spok
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.8 °C IR004

3/17/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2499.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5564-1
Address: 4955 Yarrow Street,	Due Date Requested: 3/7/2017			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8141B/3510C Standard 8141 list	8151A/8151A_AP Herbicide (Aqueous)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SW-1:022317 (590-5564-1)	2/23/17	13:50 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Sheila Kad	2/23/17 1550	TA Spdc			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2500.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5564-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/13/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SW-1:022317 (590-5564-1)	2/23/17	13:50 Pacific		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Kral	2/23/17 1600	TA-SPOK		2-24-0950	TA-SPOK
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.9

3/17/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-5564 Chain of Custody

Cooler Received/Opened On 02-25-2017 @ 09:20

Time Samples Removed From Cooler 1025 Time Samples Placed In Storage 1216 (2 Hour Window)

1. Tracking # 5252 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470366 pH Strip Lot HC689799 Chlorine Strip Lot 0871166 1C

2. Temperature of rep. sample or temp blank when opened: 0.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) KA

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (initial) 2-25-17

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA 2-25-17

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial)

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial)

I certify that I attached a label with the unique LIMS number to each container (initial)

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 12/15/15

Loc: 590
5564

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

3/17/2017

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	COC No: 590-2502.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington	Job #: 590-5564-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 3/7/2017		
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	410.4/ Chemical Oxygen Demand (COD)	5310C/ Total Organic Carbon (TOC)	335.4/Distill_CN Total Cyanide	350.1/Distill_Ammonia Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
SW-1:022317 (590-5564-1)	2/23/17	13:50 Pacific		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Sheila Kratz	Date/Time: 2/24/17 1510	Company TA Spok	Received by:		Date/Time: 2-25-17 6926	Company TA W	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2498.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-5564-1
Address: 5755 8th Street East,	Due Date Requested: 3/7/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT (MOD) Template for building analyte list	200.8_CWA/FILTRATION (MOD) Template for building analyte list	245.1/245.1_Prep Total Mercury - Seattle	245.1/FILTRATION Dissolved Mercury - Seattle	8081B/3510C_LVI Standard Reporting List	8270D/3520C Standard Reporting List	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
SW-1.022317 (590-5564-1)	2/23/17	13:50 Pacific		Water			X	X	X	X	X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Hack	2/23/17 1520	TA-Sea	M. Powell/Lotcamente	2/24/17 0925	TA-Sea
2						
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

IR5 0.8 /1.0 w/cs

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5564-1

Login Number: 5564
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5564-1

Login Number: 5564
List Number: 3
Creator: True, Joshua A

List Source: TestAmerica Denver
List Creation: 02/24/17 03:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5564-1

Login Number: 5564
List Number: 4
Creator: West, Derrick D

List Source: TestAmerica Nashville
List Creation: 02/25/17 11:42 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5564-1

Login Number: 5564
List Number: 5
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 02/25/17 03:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5564-1

Login Number: 5564
List Number: 2
Creator: Ponce-McDermott, Monica

List Source: TestAmerica Seattle
List Creation: 02/24/17 11:18 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR5 0.8/1.0 w/cs
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-5564-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5564-1	SW-1:022317	89	88	97	92	114	92	101	102
LCS 320-154275/2-A	Lab Control Sample	95	89	101	97	104	84	91	92
LCSD 320-154275/3-A	Lab Control Sample Dup	85	80	85	81	95	75	89	87
MB 320-154275/1-A	Method Blank	83	81	83	78	101	77	82	86

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5564-1	SW-1:022317	96
LCS 320-154275/2-A	Lab Control Sample	88
LCSD 320-154275/3-A	Lab Control Sample Dup	85
MB 320-154275/1-A	Method Blank	77

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

Project:	Marshall Landfill Site December 2017 Samples
GEI File No:	00504-104-00
Date:	January 24, 2018

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA, 2009) of analytical data from the analyses of water samples collected as part of the December 2017 sampling events, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Marshall Landfill site located in Spokane County, Washington.

In summary and in our opinion, the quality and accuracy of the analytical data are acceptable for the intended use, with the qualifications applied from the data validation. The primary data validation qualifiers were: (1) GeoEngineers, Inc. (GeoEngineers) qualified selected data as non-detected (U) because of method blank contamination; and (2) GeoEngineers qualified selected data as estimated (J) because of accuracy and precision outliers.

The evaluation criteria and qualifications are discussed in greater detail below; a summary of qualified samples is listed in Table 2.

Objective and Quality Control Elements

GeoEngineers, Inc. completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA, 2016a) and Inorganic Superfund Data Review (EPA, 2016b) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Remedial Investigation/Feasibility Study Work Plan (GeoEngineers, 2015), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries
- Method and Trip Blanks
- Matrix Spikes/Matrix Spike Duplicates

- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory and Field Duplicates

Validated Sample Delivery Groups

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-7671-1	MW-4A:120617, MW-8A:120617, MW-8B:120617, MW-16A:120617, Trip Blank
590-7675-1	MW-2A-120717, MW-3-120717, MW-5A-120717, MW-5-120717, MW-4-120717, MW-12A-120717, MW-14-120717, MW-16-120717, Trip Blank
590-7679-1	MW-2, MW-15, Trip Blank
590-7685-1	MW-1A:121117, MW-11A:121117, MW-15A:121117, Trip Blank
590-7700-1	MW-7B:121217, Dup:121217, MW-7D:121217, Trip Blank
590-7713-1	MW-5A:121317, MW-9A:121317, MW-16:121317, Trip Blank

Chemical Analysis Performed

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

- Volatile Organic Compounds (VOCs) by Methods SW8260C;
- Semi-volatile Organic Compounds (SVOCs) by Method SW8270D;
- 1,4-Dioxane by Method SW8270D-SIM;
- Chlorinated Herbicides by Method SW8151A;
- Total and Dissolved Metals by Method EPA200.8;
- Anions by Method EPA300.0; and
- Total Cyanide by Method EPA335.4

Data Validation Summary

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory, with the following exceptions:

SDG 590-7675-1: The laboratory noted that for Samples MW-5A-120717 and MW-16-120717 the sample vials for VOCs analysis were received with significant headspace. The VOCs analysis for these samples were cancelled at the request of GeoEngineers.

SDG 590-7700-1: The laboratory noted that for Sample Trip Blank the sample vials for VOCs analysis were received with significant headspace.

SDG 590-7713-1: The laboratory noted that Sample Trip Blank was not received by the laboratory on 12/13/2017 as listed on the COC. The laboratory notified GeoEngineers and the sample was received by the laboratory on 12/14/2017.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

SDG 590-7671-1: The sample cooler temperature recorded at the laboratory was 0.4 degrees Celsius. Since the samples were not frozen, this temperature should likely not affect the sample analytical results.

SDG 590-7679-1: The sample cooler temperature recorded at the laboratory was 0.7 degrees Celsius. Since the samples were not frozen, this temperature should likely not affect the sample analytical results.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits.

Method and Trip Blanks

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exceptions:

SDG 590-7671-1: (Dissolved Metals) There was a positive result for dissolved antimony detected above the method detection limit, but below the reporting limit in the method blank digested on 12/13/2017. The positive results for dissolved antimony were qualified as non-detected (U) in Samples MW-4A:120617, MW-8A:120617, MW-8B:120617, and MW-16A:120617.

SDG 590-7675-1: (VOCs) There was a positive result for 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/8/2017. The positive results for 1,2,3-Trichlorobenzene and

1,2,4-Trichlorobenzene were qualified as non-detected (U) in Sample MW-2A-120717. There were no positive results for these target analytes in Samples MW-3-120717, MW-5-120717, MW-4-120717, MW-12A-120717, MW-14-120717, and Trip Blank; therefore, no qualifications were required.

SDG 590-7679-1: (VOCs) There was a positive result for 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/8/2017. There were no positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

SDG 590-7685-1: (VOCs) There was a positive result for 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene detected above the method detection limit, but below the reporting limit in the method blank extracted on 12/13/2017. There were no positive results for these target analytes in the associated field sample; therefore, no qualifications were required.

(Dissolved Metals) There was a positive result for dissolved barium and dissolved thallium detected above the method detection limit, but below the reporting limit in the method blank digested on 12/18/2017. The reported results for dissolved barium were greater than 10X the concentration in the method blank and there were no positive results for dissolved thallium in the associated field samples; therefore, no qualifications were required.

SDG 590-7700-1: (Dissolved Metals) There was a positive result for dissolved barium and dissolved thallium detected above the method detection limit, but below the reporting limit in the method blank digested on 12/18/2017. The positive results for dissolved thallium were qualified as non-detected (U) in Samples MW-7B:121217, Dup:121217, and MW-7D:121217. The reported results for dissolved barium were greater than 10X the concentration in the method blank in the associated field samples; therefore, no qualifications were required.

Trip Blanks

Trip blanks are analyzed to provide an indication as to whether volatile compounds have cross contaminated other like samples within the transportation process to the laboratory. None of the analytes of interest were detected the trip blanks.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-7671-1: (Dissolved Metals) The laboratory performed an MS/MSD sample set on Sample MW-8B:120617. The percent recovery for dissolved barium was less than the control limits in the MSD

digested on 12/13/2017; however, the percent recovery for this target analyte was within the control limits in the corresponding MS. No action was required for this outlier.

SDG 590-7675-1: (Total Cyanide) The laboratory performed a matrix spike on Sample MW-2A-120717. The percent recovery for total cyanide was greater than the control limits in the MS extracted on 12/13/2017. There were no positive results for this target analyte in Sample MW-2A-120717; therefore, no qualification was required.

SDG 590-7685-1: (Total Cyanide) The laboratory performed a matrix spike on Sample MW-15A:121117. The percent recovery for total cyanide was less than the control limits in the MS extracted on 12/15/2017. The reporting limit for total cyanide was qualified as estimated (UJ) in Sample MW-15A:121117.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-7671-1: (SVOCs) The percent recoveries for benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and dibenz(a,h)anthracene were greater than the control limits in the LCSD extracted on 12/11/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

SDG 590-7675-1: (VOCs) The percent recovery for trans-1,2-Dichloroethene was greater than the control limits in the LCSD extracted on 12/8/2017; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier.

(SVOCs) The percent recoveries for benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and dibenz(a,h)anthracene were greater than the control limits in the LCSD extracted on 12/11/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

SDG 590-7679-1: (VOCs) The percent recovery for trans-1,2-Dichloroethene was greater than the control limits in the LCSD extracted on 12/8/2017; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. No action was required for this outlier.

(SVOCs) The percent recoveries for benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and dibenz(a,h)anthracene were greater than the control limits in the LCSD extracted on 12/11/2017; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

SDG 590-7685-1: (VOCs) The percent recoveries for trans-1,2-Dichloroethene were greater than the control limits in the LCS/LCSD sample set extracted on 12/13/2017. There were no positive results for this target analyte in the associated field sample; therefore, no qualification was required.

Additionally, in the same LCS/LCSD sample set, the percent recovery for acetone was greater than the control limits in the LCS and the percent recoveries for 1,1,2-Trichlorotrifluoroethane, dichlorofluoromethane, and hexane were greater than the control limits in the LCSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCSD and LCS, respectively. No action was required for these outliers.

(SVOCs) The percent recoveries for 4-Nitrophenol were greater than the control limits in the LCS/LCSD sample set extracted on 12/14/2017. There were no positive results for this target analyte in the associated field samples; therefore, no qualifications were required.

Additionally, in the same LCS/LCSD sample set, the percent recoveries for benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene were greater than the control limits in the LCSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

SDG 590-7700-1: (SVOCs) The percent recoveries for 4-Nitrophenol were greater than the control limits in the LCS/LCSD sample set extracted on 12/14/2017. There were no positive results for this target analyte in the associated field samples; therefore, no qualifications were required.

Additionally, in the same LCS/LCSD sample set, the percent recoveries for benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene were greater than the control limits in the LCSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

SDG 590-7713-1: (SVOCs) The percent recoveries for 4-Nitrophenol were greater than the control limits in the LCS/LCSD sample set extracted on 12/14/2017. There were no positive results for this target analyte in the associated field sample; therefore, no qualification was required.

Additionally, in the same LCS/LCSD sample set, the percent recoveries for benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene were greater than the control limits in the LCSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding LCS. No action was required for these outliers.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exceptions:

SDG 590-7671-1: (Dissolved Metals) The laboratory performed a laboratory duplicate sample set on Sample MW-8B:120617. The RPD for dissolved chromium was greater than the control limit in the laboratory duplicate sample set digested on 12/13/2017. The positive results for dissolved chromium were qualified as estimated (J) in Samples MW-8A:120617 and MW-8B:120617.

SDG 590-7700-1: (Dissolved Metals) The laboratory performed a laboratory duplicate sample set on Sample Dup:121217. The RPD for dissolved chromium was greater than the control limit in the laboratory duplicate sample set digested on 12/18/2017. The positive results for dissolved chromium were qualified as estimated (J) in Samples MW-7B:121217 and Dup:121217.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 35 percent.

SDG 590-7700-1: One field duplicate sample pair, MW-7B:121217 and Dup:121217, was submitted with this SDG. The precision criteria for all target analytes were met for this sample pair, with the exception of total barium, total chromium, total copper, total iron, total lead, total manganese, total nickel, total silver, and total zinc. The positive results for these target analytes were qualified as estimated (J) in this sample pair.

Overall Assessment

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
MW-2A-120717	1,2,3-Trichlorobenzene	U	Method Blank Contamination
	1,2,4-Trichlorobenzene (VOCs)	U	Method Blank Contamination
MW-4A:120617	Dissolved antimony	U	Method Blank Contamination
MW-7B:121217	Total barium	J	Field Duplicate Precision
	Total chromium	J	Field Duplicate Precision
	Dissolved chromium	J	Laboratory Duplicate RPD
	Total copper	J	Field Duplicate Precision
	Total iron	J	Field Duplicate Precision
	Total lead	J	Field Duplicate Precision
	Total manganese	J	Field Duplicate Precision
	Total nickel	J	Field Duplicate Precision
	Total silver	J	Field Duplicate Precision
	Dissolved thallium	U	Method Blank Contamination
	Total zinc	J	Field Duplicate Precision

Sample ID	Analyte	Qualifier	Reason
Dup:121217	Total barium	J	Field Duplicate Precision
	Total chromium	J	Field Duplicate Precision
	Dissolved chromium	J	Laboratory Duplicate RPD
	Total copper	J	Field Duplicate Precision
	Total iron	J	Field Duplicate Precision
	Total lead	J	Field Duplicate Precision
	Total manganese	J	Field Duplicate Precision
	Total nickel	J	Field Duplicate Precision
	Total silver	J	Field Duplicate Precision
	Dissolved thallium	U	Method Blank Contamination
	Total zinc	J	Field Duplicate Precision
MW-7D:121217	Dissolved thallium	U	Method Blank Contamination
MW-8A:120617	Dissolved antimony	U	Method Blank Contamination
	Dissolved chromium	J	Laboratory Duplicate RPD
MW-8B:120617	Dissolved antimony	U	Method Blank Contamination
	Dissolved chromium	J	Laboratory Duplicate RPD
MW-15A:121117	Total cyanide	UJ	MS Recovery
MW-16A:120617	Dissolved antimony	U	Method Blank Contamination

References

U.S. Environmental Protection Agency (EPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

U.S. Environmental Protection Agency (EPA), 2016a. "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," EPA-540-R-2016-002. September 2016.

U.S. Environmental Protection Agency (EPA), 2016b. "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," EPA-540-R-2016-001. September 2016.

GeoEngineers, Inc. "Remedial Investigation/Feasibility Study Work Plan," prepared for Washington State Department of Ecology. May 14, 2015.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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Tel: (509)924-9200

TestAmerica Job ID: 590-7671-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/27/2017 10:58:30 AM

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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Job ID: 590-7671-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/7/2017 10:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263313 recovered outside acceptance criteria, low biased, for Hexachlorobenzene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The laboratory control sample duplicate (LCSD) for preparation batch 580-263185 and analytical batch 580-263313 recovered outside control limits for the following analytes: Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene and Dibenz(a,h)anthracene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263313 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.8: The method blank for prep batch 580-263362 contained Antimony above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7671-1	MW-8B:120617	Water	12/06/17 11:22	12/07/17 10:25
590-7671-2	MW-8A:120617	Water	12/06/17 12:20	12/07/17 10:25
590-7671-3	MW-4A:120617	Water	12/06/17 14:24	12/07/17 10:25
590-7671-4	MW-16A120617	Water	12/06/17 15:21	12/07/17 10:25
590-7671-5	Trip Blank	Water	12/06/17 12:00	12/07/17 10:25

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Client Sample ID: MW-8B:120617
Date Collected: 12/06/17 11:22
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/07/17 21:57	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/07/17 21:57	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/07/17 21:57	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/07/17 21:57	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/07/17 21:57	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/07/17 21:57	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 21:57	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/07/17 21:57	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/07/17 21:57	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/07/17 21:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/07/17 21:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/07/17 21:57	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/07/17 21:57	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/07/17 21:57	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/07/17 21:57	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/07/17 21:57	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/07/17 21:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/07/17 21:57	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/07/17 21:57	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/07/17 21:57	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/07/17 21:57	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/07/17 21:57	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/07/17 21:57	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/07/17 21:57	1
2-Hexanone	ND		10	0.75	ug/L			12/07/17 21:57	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/07/17 21:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/07/17 21:57	1
Acetone	ND		30	14	ug/L			12/07/17 21:57	1
Benzene	ND		0.40	0.093	ug/L			12/07/17 21:57	1
Bromobenzene	ND		1.0	0.28	ug/L			12/07/17 21:57	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/07/17 21:57	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/07/17 21:57	1
Bromoform	ND		5.0	1.6	ug/L			12/07/17 21:57	1
Bromomethane	ND		5.0	0.22	ug/L			12/07/17 21:57	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/07/17 21:57	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/07/17 21:57	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/07/17 21:57	1
Chloroethane	ND		2.0	0.16	ug/L			12/07/17 21:57	1
Chloroform	ND		1.0	0.91	ug/L			12/07/17 21:57	1
Chloromethane	ND		3.0	0.22	ug/L			12/07/17 21:57	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/07/17 21:57	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/07/17 21:57	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/07/17 21:57	1
Dibromomethane	ND		2.0	0.50	ug/L			12/07/17 21:57	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/07/17 21:57	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/07/17 21:57	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/07/17 21:57	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/07/17 21:57	1
Hexane	ND		1.0	0.084	ug/L			12/07/17 21:57	1

Client Sample ID: MW-8B:120617
Date Collected: 12/06/17 11:22
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/07/17 21:57	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/07/17 21:57	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/07/17 21:57	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/07/17 21:57	1
Naphthalene	ND		2.0	0.63	ug/L			12/07/17 21:57	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/07/17 21:57	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/07/17 21:57	1
o-Xylene	ND		1.0	0.16	ug/L			12/07/17 21:57	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/07/17 21:57	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/07/17 21:57	1
Styrene	ND		1.0	0.24	ug/L			12/07/17 21:57	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/07/17 21:57	1
Tetrachloroethene	**0.77**	**J**	1.0	0.22	ug/L			12/07/17 21:57	1
Toluene	ND		1.0	0.31	ug/L			12/07/17 21:57	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 21:57	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/07/17 21:57	1
Trichloroethene	ND		1.0	0.20	ug/L			12/07/17 21:57	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/07/17 21:57	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/07/17 21:57	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/07/17 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/07/17 21:57*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/07/17 21:57*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/07/17 21:57*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/07/17 21:57*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 13:18	1
2,4-D	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 13:18	1
2,4-DB	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 13:18	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 13:18	1
Dicamba	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 13:18	1
Dichlorprop	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 13:18	1
MCPA	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 13:18	1
Silvex (2,4,5-TP)	ND		0.28	0.055	ug/L		12/11/17 10:47	12/13/17 13:18	1
MCPP	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*96*		*51 - 150*	*12/11/17 10:47*	*12/13/17 13:18*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.1**		0.099	0.011	ug/L		12/11/17 13:08	12/19/17 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*59 - 120*	*12/11/17 13:08*	*12/19/17 14:47*	*1*
Terphenyl-d14	*87*		*17 - 149*	*12/11/17 13:08*	*12/19/17 14:47*	*1*
2-Fluorobiphenyl	*78*		*50 - 120*	*12/11/17 13:08*	*12/19/17 14:47*	*1*
2,4,6-Tribromophenol	*80*		*43 - 122*	*12/11/17 13:08*	*12/19/17 14:47*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 17:37	1
1,2-Dichlorobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 17:37	1
1,4-Dichlorobenzene	ND		0.40	0.059	ug/L		12/11/17 13:08	12/13/17 17:37	1
1-Methylnaphthalene	ND		0.99	0.030	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,4,5-Trichlorophenol	ND		0.40	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,4,6-Trichlorophenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,4-Dichlorophenol	ND		4.0	0.90	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,4-Dimethylphenol	ND		4.0	0.82	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,4-Dinitrophenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,4-Dinitrotoluene	ND		0.99	0.24	ug/L		12/11/17 13:08	12/13/17 17:37	1
2,6-Dinitrotoluene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
2-Chloronaphthalene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
2-Chlorophenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
2-Methylphenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
2-Nitroaniline	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
2-Nitrophenol	ND		0.99	0.24	ug/L		12/11/17 13:08	12/13/17 17:37	1
3 & 4 Methylphenol	ND		0.79	0.040	ug/L		12/11/17 13:08	12/13/17 17:37	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/13/17 17:37	1
3-Nitroaniline	ND		3.0	0.72	ug/L		12/11/17 13:08	12/13/17 17:37	1
4,6-Dinitro-2-methylphenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/13/17 17:37	1
4-Bromophenyl phenyl ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
4-Chloro-3-methylphenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
4-Chloroaniline	ND		9.9	2.1	ug/L		12/11/17 13:08	12/13/17 17:37	1
4-Chlorophenyl phenyl ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
4-Nitroaniline	ND		2.0	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
4-Nitrophenol	ND		15	3.7	ug/L		12/11/17 13:08	12/13/17 17:37	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Acenaphthylene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Anthracene	ND		0.040	0.0099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzo[a]anthracene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzo[a]pyrene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzo[b]fluoranthene	ND	*	0.99	0.050	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzo[g,h,i]perylene	ND	*	0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzo[k]fluoranthene	ND	*	0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzoic acid	ND		3.0	0.59	ug/L		12/11/17 13:08	12/13/17 17:37	1
Benzyl alcohol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Bis(2-chloroethoxy)methane	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Bis(2-chloroethyl)ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/11/17 13:08	12/13/17 17:37	1
bis(chloroisopropyl) ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Butyl benzyl phthalate	ND		9.9	0.73	ug/L		12/11/17 13:08	12/13/17 17:37	1
Carbazole	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Chrysene	ND		0.59	0.0099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Dibenz(a,h)anthracene	ND	*	0.59	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Dibenzofuran	ND		0.40	0.059	ug/L		12/11/17 13:08	12/13/17 17:37	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 17:37	1
Dimethyl phthalate	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Di-n-butyl phthalate	ND		3.0	0.54	ug/L		12/11/17 13:08	12/13/17 17:37	1
Di-n-octyl phthalate	ND		0.99	0.18	ug/L		12/11/17 13:08	12/13/17 17:37	1
Fluoranthene	ND		3.0	0.0099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1

Client Sample ID: MW-8B:120617
Date Collected: 12/06/17 11:22
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Hexachlorobutadiene	ND		0.99	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/13/17 17:37	1
Hexachloroethane	ND		0.99	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Indeno[1,2,3-cd]pyrene	ND		0.99	0.050	ug/L		12/11/17 13:08	12/13/17 17:37	1
Isophorone	ND		0.40	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Naphthalene	ND		0.40	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Nitrobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
N-Nitrosodi-n-propylamine	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
N-Nitrosodiphenylamine	ND		3.0	0.099	ug/L		12/11/17 13:08	12/13/17 17:37	1
Pentachlorophenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/13/17 17:37	1
Phenanthrene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 17:37	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/13/17 17:37	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/13/17 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*48 - 125*	*12/11/17 13:08*	*12/13/17 17:37*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*12/11/17 13:08*	*12/13/17 17:37*	*1*
2-Fluorophenol (Surr)	*71*		*50 - 120*	*12/11/17 13:08*	*12/13/17 17:37*	*1*
Nitrobenzene-d5 (Surr)	*86*		*52 - 120*	*12/11/17 13:08*	*12/13/17 17:37*	*1*
Phenol-d5 (Surr)	*74*		*52 - 120*	*12/11/17 13:08*	*12/13/17 17:37*	*1*
Terphenyl-d14 (Surr)	*95*		*49 - 133*	*12/11/17 13:08*	*12/13/17 17:37*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.5**		0.20	0.039	mg/L			12/07/17 11:57	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/21/17 14:05	12/22/17 08:58	1
Antimony	**0.00016**	**J**	0.00040	0.00011	mg/L		12/21/17 14:05	12/22/17 08:58	1
Barium	**0.17**		0.0012	0.000054	mg/L		12/21/17 14:05	12/22/17 08:58	1
Beryllium	**0.000072**	**J**	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 08:58	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 14:05	12/22/17 08:58	1
Chromium	**0.0011**		0.00040	0.00014	mg/L		12/21/17 14:05	12/22/17 08:58	1
Copper	**0.0022**		0.0020	0.00060	mg/L		12/21/17 14:05	12/22/17 08:58	1
Iron	**2.0**		0.20	0.036	mg/L		12/21/17 14:05	12/22/17 08:58	1
Lead	**0.0011**		0.00080	0.00020	mg/L		12/21/17 14:05	12/22/17 08:58	1
Manganese	**0.045**		0.0020	0.00046	mg/L		12/21/17 14:05	12/22/17 08:58	1
Nickel	**0.0023**	**J**	0.0030	0.00011	mg/L		12/21/17 14:05	12/22/17 08:58	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 14:05	12/22/17 08:58	1
Silver	**0.000096**	**J**	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 08:58	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 14:05	12/22/17 08:58	1
Vanadium	**0.0056**		0.0040	0.00046	mg/L		12/21/17 14:05	12/22/17 08:58	1
Zinc	**0.010**		0.0070	0.0019	mg/L		12/21/17 14:05	12/22/17 08:58	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0010**		0.0010	0.00027	mg/L		12/13/17 11:25	12/14/17 18:20	1
Antimony	**0.00030**	**J B**	0.00040	0.00011	mg/L		12/13/17 11:25	12/14/17 18:20	1

Client Sample ID: MW-8B:120617

Lab Sample ID: 590-7671-1

Date Collected: 12/06/17 11:22

Matrix: Water

Date Received: 12/07/17 10:25

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.14**	**F1**	0.0012	0.000054	mg/L		12/13/17 11:25	12/14/17 18:20	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 18:20	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 11:25	12/14/17 18:20	1
Chromium	**0.0020**		0.00040	0.00014	mg/L		12/13/17 11:25	12/14/17 18:20	1
Copper	**0.00094**	**J**	0.0020	0.00060	mg/L		12/13/17 11:25	12/14/17 18:20	1
Iron	ND		0.20	0.036	mg/L		12/13/17 11:25	12/14/17 18:20	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 11:25	12/14/17 18:20	1
Manganese	**0.0025**		0.0020	0.00046	mg/L		12/13/17 11:25	12/14/17 18:20	1
Nickel	**0.0022**	**J**	0.0030	0.00011	mg/L		12/13/17 11:25	12/14/17 18:20	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 11:25	12/14/17 18:20	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 18:20	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 11:25	12/14/17 18:20	1
Vanadium	**0.0017**	**J**	0.0040	0.00046	mg/L		12/13/17 11:25	12/14/17 18:20	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 11:25	12/14/17 18:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:17	1

Client Sample ID: MW-8A:120617

Lab Sample ID: 590-7671-2

Date Collected: 12/06/17 12:20

Matrix: Water

Date Received: 12/07/17 10:25

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/07/17 22:18	1
1,1,1-Trichloroethane	**0.31**	**J**	1.0	0.17	ug/L			12/07/17 22:18	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/07/17 22:18	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/07/17 22:18	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/07/17 22:18	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/07/17 22:18	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:18	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/07/17 22:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/07/17 22:18	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/07/17 22:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/07/17 22:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/07/17 22:18	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/07/17 22:18	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/07/17 22:18	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/07/17 22:18	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/07/17 22:18	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/07/17 22:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/07/17 22:18	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/07/17 22:18	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/07/17 22:18	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/07/17 22:18	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/07/17 22:18	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/07/17 22:18	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/07/17 22:18	1
2-Hexanone	ND		10	0.75	ug/L			12/07/17 22:18	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Client Sample ID: MW-8A:120617
Date Collected: 12/06/17 12:20
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/07/17 22:18	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/07/17 22:18	1
Acetone	ND		30	14	ug/L			12/07/17 22:18	1
Benzene	ND		0.40	0.093	ug/L			12/07/17 22:18	1
Bromobenzene	ND		1.0	0.28	ug/L			12/07/17 22:18	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/07/17 22:18	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/07/17 22:18	1
Bromoform	ND		5.0	1.6	ug/L			12/07/17 22:18	1
Bromomethane	ND		5.0	0.22	ug/L			12/07/17 22:18	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/07/17 22:18	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/07/17 22:18	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/07/17 22:18	1
Chloroethane	ND		2.0	0.16	ug/L			12/07/17 22:18	1
Chloroform	ND		1.0	0.91	ug/L			12/07/17 22:18	1
Chloromethane	ND		3.0	0.22	ug/L			12/07/17 22:18	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/07/17 22:18	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/07/17 22:18	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/07/17 22:18	1
Dibromomethane	ND		2.0	0.50	ug/L			12/07/17 22:18	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/07/17 22:18	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/07/17 22:18	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/07/17 22:18	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/07/17 22:18	1
Hexane	ND		1.0	0.084	ug/L			12/07/17 22:18	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/07/17 22:18	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/07/17 22:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/07/17 22:18	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/07/17 22:18	1
Naphthalene	ND		2.0	0.63	ug/L			12/07/17 22:18	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/07/17 22:18	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/07/17 22:18	1
o-Xylene	ND		1.0	0.16	ug/L			12/07/17 22:18	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/07/17 22:18	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/07/17 22:18	1
Styrene	ND		1.0	0.24	ug/L			12/07/17 22:18	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/07/17 22:18	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/07/17 22:18	1
Toluene	ND		1.0	0.31	ug/L			12/07/17 22:18	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:18	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/07/17 22:18	1
Trichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:18	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/07/17 22:18	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/07/17 22:18	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/07/17 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*12/07/17 22:18*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/07/17 22:18*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/07/17 22:18*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/07/17 22:18*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 13:44	1
2,4-D	ND		0.27	0.021	ug/L		12/11/17 10:47	12/13/17 13:44	1
2,4-DB	ND		0.27	0.021	ug/L		12/11/17 10:47	12/13/17 13:44	1
Dalapon	ND		0.43	0.11	ug/L		12/11/17 10:47	12/13/17 13:44	1
Dicamba	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 13:44	1
Dichlorprop	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 13:44	1
MCPA	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 13:44	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 13:44	1
MCPP	ND		0.27	0.021	ug/L		12/11/17 10:47	12/13/17 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*97*		*51 - 150*	*12/11/17 10:47*	*12/13/17 13:44*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.080**	**J**	0.097	0.011	ug/L		12/11/17 13:08	12/19/17 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*110*		*59 - 120*	*12/11/17 13:08*	*12/19/17 15:12*	*1*
Terphenyl-d14	*129*		*17 - 149*	*12/11/17 13:08*	*12/19/17 15:12*	*1*
2-Fluorobiphenyl	*111*		*50 - 120*	*12/11/17 13:08*	*12/19/17 15:12*	*1*
2,4,6-Tribromophenol	*99*		*43 - 122*	*12/11/17 13:08*	*12/19/17 15:12*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/11/17 13:08	12/13/17 18:02	1
1,2-Dichlorobenzene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/11/17 13:08	12/13/17 18:02	1
1,4-Dichlorobenzene	ND		0.39	0.058	ug/L		12/11/17 13:08	12/13/17 18:02	1
1-Methylnaphthalene	ND		0.97	0.029	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,4-Dichlorophenol	ND		3.9	0.88	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,4-Dimethylphenol	ND		3.9	0.81	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,4-Dinitrophenol	ND		4.9	0.97	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,4-Dinitrotoluene	ND		0.97	0.23	ug/L		12/11/17 13:08	12/13/17 18:02	1
2,6-Dinitrotoluene	**0.13**	**J**	0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
2-Chloronaphthalene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
2-Chlorophenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
2-Methylnaphthalene	ND		0.39	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
2-Methylphenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
2-Nitroaniline	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
2-Nitrophenol	ND		0.97	0.23	ug/L		12/11/17 13:08	12/13/17 18:02	1
3 & 4 Methylphenol	ND		0.78	0.039	ug/L		12/11/17 13:08	12/13/17 18:02	1
3,3'-Dichlorobenzidine	ND		15	3.0	ug/L		12/11/17 13:08	12/13/17 18:02	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/11/17 13:08	12/13/17 18:02	1
4,6-Dinitro-2-methylphenol	ND		4.9	0.97	ug/L		12/11/17 13:08	12/13/17 18:02	1
4-Bromophenyl phenyl ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
4-Chloro-3-methylphenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
4-Chloroaniline	ND		9.7	2.0	ug/L		12/11/17 13:08	12/13/17 18:02	1
4-Chlorophenyl phenyl ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
4-Nitroaniline	ND		1.9	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
4-Nitrophenol	ND		15	3.6	ug/L		12/11/17 13:08	12/13/17 18:02	1
Acenaphthene	ND		0.39	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1

Client Sample ID: MW-8A:120617
Date Collected: 12/06/17 12:20
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Anthracene	ND		0.039	0.0097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzo[a]anthracene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzo[a]pyrene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzo[b]fluoranthene	ND	*	0.97	0.049	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzo[g,h,i]perylene	ND	*	0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzo[k]fluoranthene	ND	*	0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzoic acid	ND		2.9	0.58	ug/L		12/11/17 13:08	12/13/17 18:02	1
Benzyl alcohol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Bis(2-chloroethoxy)methane	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Bis(2-chloroethyl)ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/11/17 13:08	12/13/17 18:02	1
bis(chloroisopropyl) ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Butyl benzyl phthalate	ND		9.7	0.72	ug/L		12/11/17 13:08	12/13/17 18:02	1
Carbazole	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Chrysene	ND		0.58	0.0097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Dibenz(a,h)anthracene	ND	*	0.58	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Dibenzofuran	ND		0.39	0.058	ug/L		12/11/17 13:08	12/13/17 18:02	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 18:02	1
Dimethyl phthalate	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/11/17 13:08	12/13/17 18:02	1
Di-n-octyl phthalate	ND		0.97	0.17	ug/L		12/11/17 13:08	12/13/17 18:02	1
Fluoranthene	ND		2.9	0.0097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Fluorene	ND		1.9	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Hexachlorobenzene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Hexachlorobutadiene	ND		0.97	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Hexachlorocyclopentadiene	ND		1.9	0.38	ug/L		12/11/17 13:08	12/13/17 18:02	1
Hexachloroethane	ND		0.97	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Indeno[1,2,3-cd]pyrene	ND		0.97	0.049	ug/L		12/11/17 13:08	12/13/17 18:02	1
Isophorone	ND		0.39	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Naphthalene	ND		0.39	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Nitrobenzene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
N-Nitrosodi-n-propylamine	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
N-Nitrosodiphenylamine	ND		2.9	0.097	ug/L		12/11/17 13:08	12/13/17 18:02	1
Pentachlorophenol	ND		4.9	0.97	ug/L		12/11/17 13:08	12/13/17 18:02	1
Phenanthrene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:02	1
Phenol	ND		3.9	0.049	ug/L		12/11/17 13:08	12/13/17 18:02	1
Pyrene	ND		1.9	0.039	ug/L		12/11/17 13:08	12/13/17 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*73*		*48 - 125*	*12/11/17 13:08*	*12/13/17 18:02*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*12/11/17 13:08*	*12/13/17 18:02*	*1*
2-Fluorophenol (Surr)	*77*		*50 - 120*	*12/11/17 13:08*	*12/13/17 18:02*	*1*
Nitrobenzene-d5 (Surr)	*87*		*52 - 120*	*12/11/17 13:08*	*12/13/17 18:02*	*1*
Phenol-d5 (Surr)	*77*		*52 - 120*	*12/11/17 13:08*	*12/13/17 18:02*	*1*
Terphenyl-d14 (Surr)	*87*		*49 - 133*	*12/11/17 13:08*	*12/13/17 18:02*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**1.8**		0.20	0.039	mg/L			12/07/17 12:09	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00071	J	0.0010	0.00027	mg/L		12/21/17 14:05	12/22/17 09:41	1
Antimony	0.00025	J	0.00040	0.00011	mg/L		12/21/17 14:05	12/22/17 09:41	1
Barium	0.035		0.0012	0.000054	mg/L		12/21/17 14:05	12/22/17 09:41	1
Beryllium	0.000078	J	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 09:41	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 14:05	12/22/17 09:41	1
Chromium	0.00050		0.00040	0.00014	mg/L		12/21/17 14:05	12/22/17 09:41	1
Copper	0.0038		0.0020	0.00060	mg/L		12/21/17 14:05	12/22/17 09:41	1
Iron	ND		0.20	0.036	mg/L		12/21/17 14:05	12/22/17 09:41	1
Lead	0.0012		0.00080	0.00020	mg/L		12/21/17 14:05	12/22/17 09:41	1
Manganese	0.00061	J	0.0020	0.00046	mg/L		12/21/17 14:05	12/22/17 09:41	1
Nickel	0.00094	J	0.0030	0.00011	mg/L		12/21/17 14:05	12/22/17 09:41	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 14:05	12/22/17 09:41	1
Silver	0.00011	J	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 09:41	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 14:05	12/22/17 09:41	1
Vanadium	0.0027	J	0.0040	0.00046	mg/L		12/21/17 14:05	12/22/17 09:41	1
Zinc	0.012		0.0070	0.0019	mg/L		12/21/17 14:05	12/22/17 09:41	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00054	J	0.0010	0.00027	mg/L		12/13/17 11:25	12/14/17 19:03	1
Antimony	0.00042	B	0.00040	0.00011	mg/L		12/13/17 11:25	12/14/17 19:03	1
Barium	0.029		0.0012	0.000054	mg/L		12/13/17 11:25	12/14/17 19:03	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 19:03	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 11:25	12/14/17 19:03	1
Chromium	0.00047		0.00040	0.00014	mg/L		12/13/17 11:25	12/14/17 19:03	1
Copper	0.0029		0.0020	0.00060	mg/L		12/13/17 11:25	12/14/17 19:03	1
Iron	ND		0.20	0.036	mg/L		12/13/17 11:25	12/14/17 19:03	1
Lead	0.00031	J	0.00080	0.00020	mg/L		12/13/17 11:25	12/14/17 19:03	1
Manganese	0.0016	J	0.0020	0.00046	mg/L		12/13/17 11:25	12/14/17 19:03	1
Nickel	0.00079	J	0.0030	0.00011	mg/L		12/13/17 11:25	12/14/17 19:03	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 11:25	12/14/17 19:03	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 19:03	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 11:25	12/14/17 19:03	1
Vanadium	0.0018	J	0.0040	0.00046	mg/L		12/13/17 11:25	12/14/17 19:03	1
Zinc	0.0092		0.0070	0.0019	mg/L		12/13/17 11:25	12/14/17 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:18	1

Client Sample ID: MW-4A:120617

Lab Sample ID: 590-7671-3

Date Collected: 12/06/17 14:24

Matrix: Water

Date Received: 12/07/17 10:25

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/07/17 22:38	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/07/17 22:38	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/07/17 22:38	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/07/17 22:38	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/07/17 22:38	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/07/17 22:38	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:38	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/07/17 22:38	1

Client Sample ID: MW-4A:120617
Date Collected: 12/06/17 14:24
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/07/17 22:38	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/07/17 22:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/07/17 22:38	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/07/17 22:38	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/07/17 22:38	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/07/17 22:38	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/07/17 22:38	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/07/17 22:38	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/07/17 22:38	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/07/17 22:38	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/07/17 22:38	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/07/17 22:38	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/07/17 22:38	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/07/17 22:38	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/07/17 22:38	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/07/17 22:38	1
2-Hexanone	ND		10	0.75	ug/L			12/07/17 22:38	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/07/17 22:38	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/07/17 22:38	1
Acetone	ND		30	14	ug/L			12/07/17 22:38	1
Benzene	ND		0.40	0.093	ug/L			12/07/17 22:38	1
Bromobenzene	ND		1.0	0.28	ug/L			12/07/17 22:38	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/07/17 22:38	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/07/17 22:38	1
Bromoform	ND		5.0	1.6	ug/L			12/07/17 22:38	1
Bromomethane	ND		5.0	0.22	ug/L			12/07/17 22:38	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/07/17 22:38	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/07/17 22:38	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/07/17 22:38	1
Chloroethane	ND		2.0	0.16	ug/L			12/07/17 22:38	1
Chloroform	ND		1.0	0.91	ug/L			12/07/17 22:38	1
Chloromethane	ND		3.0	0.22	ug/L			12/07/17 22:38	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/07/17 22:38	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/07/17 22:38	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/07/17 22:38	1
Dibromomethane	ND		2.0	0.50	ug/L			12/07/17 22:38	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/07/17 22:38	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/07/17 22:38	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/07/17 22:38	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/07/17 22:38	1
Hexane	ND		1.0	0.084	ug/L			12/07/17 22:38	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/07/17 22:38	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/07/17 22:38	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/07/17 22:38	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/07/17 22:38	1
Naphthalene	ND		2.0	0.63	ug/L			12/07/17 22:38	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/07/17 22:38	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/07/17 22:38	1
o-Xylene	ND		1.0	0.16	ug/L			12/07/17 22:38	1

Client Sample ID: MW-4A:120617
Date Collected: 12/06/17 14:24
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/07/17 22:38	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/07/17 22:38	1
Styrene	ND		1.0	0.24	ug/L			12/07/17 22:38	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/07/17 22:38	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/07/17 22:38	1
Toluene	ND		1.0	0.31	ug/L			12/07/17 22:38	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:38	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/07/17 22:38	1
Trichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:38	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/07/17 22:38	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/07/17 22:38	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/07/17 22:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/07/17 22:38*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/07/17 22:38*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*12/07/17 22:38*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/07/17 22:38*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.26	0.042	ug/L		12/11/17 10:47	12/13/17 14:10	1
2,4-D	ND		0.26	0.021	ug/L		12/11/17 10:47	12/13/17 14:10	1
2,4-DB	ND		0.26	0.021	ug/L		12/11/17 10:47	12/13/17 14:10	1
Dalapon	ND		0.42	0.11	ug/L		12/11/17 10:47	12/13/17 14:10	1
Dicamba	ND		0.26	0.042	ug/L		12/11/17 10:47	12/13/17 14:10	1
Dichlorprop	ND		0.26	0.042	ug/L		12/11/17 10:47	12/13/17 14:10	1
MCPA	ND		0.26	0.042	ug/L		12/11/17 10:47	12/13/17 14:10	1
Silvex (2,4,5-TP)	ND		0.26	0.053	ug/L		12/11/17 10:47	12/13/17 14:10	1
MCPP	ND		0.26	0.021	ug/L		12/11/17 10:47	12/13/17 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*91*		*51 - 150*	*12/11/17 10:47*	*12/13/17 14:10*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.029**	**J**	0.099	0.011	ug/L		12/11/17 13:08	12/19/17 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*59 - 120*	*12/11/17 13:08*	*12/19/17 15:36*	*1*
Terphenyl-d14	*97*		*17 - 149*	*12/11/17 13:08*	*12/19/17 15:36*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/11/17 13:08*	*12/19/17 15:36*	*1*
2,4,6-Tribromophenol	*82*		*43 - 122*	*12/11/17 13:08*	*12/19/17 15:36*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 18:26	1
1,2-Dichlorobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 18:26	1
1,4-Dichlorobenzene	ND		0.40	0.059	ug/L		12/11/17 13:08	12/13/17 18:26	1
1-Methylnaphthalene	ND		0.99	0.030	ug/L		12/11/17 13:08	12/13/17 18:26	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Client Sample ID: MW-4A:120617
Date Collected: 12/06/17 14:24
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		0.40	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
2,4,6-Trichlorophenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
2,4-Dichlorophenol	ND		4.0	0.90	ug/L		12/11/17 13:08	12/13/17 18:26	1
2,4-Dimethylphenol	ND		4.0	0.82	ug/L		12/11/17 13:08	12/13/17 18:26	1
2,4-Dinitrophenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/13/17 18:26	1
2,4-Dinitrotoluene	ND		0.99	0.24	ug/L		12/11/17 13:08	12/13/17 18:26	1
2,6-Dinitrotoluene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
2-Chloronaphthalene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
2-Chlorophenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
2-Methylphenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
2-Nitroaniline	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
2-Nitrophenol	ND		0.99	0.24	ug/L		12/11/17 13:08	12/13/17 18:26	1
3 & 4 Methylphenol	ND		0.79	0.040	ug/L		12/11/17 13:08	12/13/17 18:26	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/13/17 18:26	1
3-Nitroaniline	ND		3.0	0.72	ug/L		12/11/17 13:08	12/13/17 18:26	1
4,6-Dinitro-2-methylphenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/13/17 18:26	1
4-Bromophenyl phenyl ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
4-Chloro-3-methylphenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
4-Chloroaniline	ND		9.9	2.1	ug/L		12/11/17 13:08	12/13/17 18:26	1
4-Chlorophenyl phenyl ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
4-Nitroaniline	ND		2.0	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
4-Nitrophenol	ND		15	3.7	ug/L		12/11/17 13:08	12/13/17 18:26	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Acenaphthylene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Anthracene	ND		0.040	0.0099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzo[a]anthracene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzo[a]pyrene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzo[b]fluoranthene	ND	*	0.99	0.050	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzo[g,h,i]perylene	ND	*	0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzo[k]fluoranthene	ND	*	0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzoic acid	ND		3.0	0.59	ug/L		12/11/17 13:08	12/13/17 18:26	1
Benzyl alcohol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Bis(2-chloroethoxy)methane	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Bis(2-chloroethyl)ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Bis(2-ethylhexyl) phthalate	**2.7**	**J**	15	2.2	ug/L		12/11/17 13:08	12/13/17 18:26	1
bis(chloroisopropyl) ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Butyl benzyl phthalate	ND		9.9	0.73	ug/L		12/11/17 13:08	12/13/17 18:26	1
Carbazole	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Chrysene	ND		0.59	0.0099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Dibenz(a,h)anthracene	ND	*	0.59	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Dibenzofuran	ND		0.40	0.059	ug/L		12/11/17 13:08	12/13/17 18:26	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 18:26	1
Dimethyl phthalate	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Di-n-butyl phthalate	ND		3.0	0.54	ug/L		12/11/17 13:08	12/13/17 18:26	1
Di-n-octyl phthalate	ND		0.99	0.18	ug/L		12/11/17 13:08	12/13/17 18:26	1
Fluoranthene	ND		3.0	0.0099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Hexachlorobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1

Client Sample ID: MW-4A:120617

Date Collected: 12/06/17 14:24
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.99	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/13/17 18:26	1
Hexachloroethane	ND		0.99	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Indeno[1,2,3-cd]pyrene	ND		0.99	0.050	ug/L		12/11/17 13:08	12/13/17 18:26	1
Isophorone	ND		0.40	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Naphthalene	ND		0.40	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Nitrobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
N-Nitrosodi-n-propylamine	ND		0.59	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
N-Nitrosodiphenylamine	ND		3.0	0.099	ug/L		12/11/17 13:08	12/13/17 18:26	1
Pentachlorophenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/13/17 18:26	1
Phenanthrene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/13/17 18:26	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/13/17 18:26	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/13/17 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*48 - 125*	*12/11/17 13:08*	*12/13/17 18:26*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*12/11/17 13:08*	*12/13/17 18:26*	*1*
2-Fluorophenol (Surr)	*74*		*50 - 120*	*12/11/17 13:08*	*12/13/17 18:26*	*1*
Nitrobenzene-d5 (Surr)	*94*		*52 - 120*	*12/11/17 13:08*	*12/13/17 18:26*	*1*
Phenol-d5 (Surr)	*76*		*52 - 120*	*12/11/17 13:08*	*12/13/17 18:26*	*1*
Terphenyl-d14 (Surr)	*96*		*49 - 133*	*12/11/17 13:08*	*12/13/17 18:26*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**3.6**		0.20	0.039	mg/L			12/07/17 12:22	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		12/21/17 14:05	12/22/17 09:45	1
Antimony	**0.00012**	**J**	0.00040	0.00011	mg/L		12/21/17 14:05	12/22/17 09:45	1
Barium	**0.037**		0.0012	0.000054	mg/L		12/21/17 14:05	12/22/17 09:45	1
Beryllium	**0.000051**	**J**	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 09:45	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 14:05	12/22/17 09:45	1
Chromium	**0.00054**		0.00040	0.00014	mg/L		12/21/17 14:05	12/22/17 09:45	1
Copper	**0.0037**		0.0020	0.00060	mg/L		12/21/17 14:05	12/22/17 09:45	1
Iron	**0.69**		0.20	0.036	mg/L		12/21/17 14:05	12/22/17 09:45	1
Lead	**0.0017**		0.00080	0.00020	mg/L		12/21/17 14:05	12/22/17 09:45	1
Manganese	**0.0081**		0.0020	0.00046	mg/L		12/21/17 14:05	12/22/17 09:45	1
Nickel	**0.00076**	**J**	0.0030	0.00011	mg/L		12/21/17 14:05	12/22/17 09:45	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 14:05	12/22/17 09:45	1
Silver	**0.000043**	**J**	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 09:45	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 14:05	12/22/17 09:45	1
Vanadium	**0.0057**		0.0040	0.00046	mg/L		12/21/17 14:05	12/22/17 09:45	1
Zinc	ND		0.0070	0.0019	mg/L		12/21/17 14:05	12/22/17 09:45	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0012**		0.0010	0.00027	mg/L		12/13/17 11:25	12/14/17 19:07	1
Antimony	**0.00028**	**J B**	0.00040	0.00011	mg/L		12/13/17 11:25	12/14/17 19:07	1
Barium	**0.029**		0.0012	0.000054	mg/L		12/13/17 11:25	12/14/17 19:07	1

Client Sample ID: MW-4A:120617

Lab Sample ID: 590-7671-3

Date Collected: 12/06/17 14:24

Matrix: Water

Date Received: 12/07/17 10:25

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 19:07	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 11:25	12/14/17 19:07	1
Chromium	**0.00018**	**J**	0.00040	0.00014	mg/L		12/13/17 11:25	12/14/17 19:07	1
Copper	**0.0023**		0.0020	0.00060	mg/L		12/13/17 11:25	12/14/17 19:07	1
Iron	ND		0.20	0.036	mg/L		12/13/17 11:25	12/14/17 19:07	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 11:25	12/14/17 19:07	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 11:25	12/14/17 19:07	1
Nickel	**0.00050**	**J**	0.0030	0.00011	mg/L		12/13/17 11:25	12/14/17 19:07	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 11:25	12/14/17 19:07	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 19:07	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 11:25	12/14/17 19:07	1
Vanadium	**0.0041**		0.0040	0.00046	mg/L		12/13/17 11:25	12/14/17 19:07	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 11:25	12/14/17 19:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:19	1

Client Sample ID: MW-16A120617

Lab Sample ID: 590-7671-4

Date Collected: 12/06/17 15:21

Matrix: Water

Date Received: 12/07/17 10:25

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/07/17 22:58	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/07/17 22:58	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/07/17 22:58	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/07/17 22:58	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/07/17 22:58	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/07/17 22:58	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:58	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/07/17 22:58	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/07/17 22:58	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/07/17 22:58	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/07/17 22:58	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/07/17 22:58	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/07/17 22:58	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/07/17 22:58	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/07/17 22:58	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/07/17 22:58	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/07/17 22:58	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/07/17 22:58	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/07/17 22:58	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/07/17 22:58	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/07/17 22:58	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/07/17 22:58	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/07/17 22:58	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/07/17 22:58	1
2-Hexanone	ND		10	0.75	ug/L			12/07/17 22:58	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/07/17 22:58	1

Client Sample ID: MW-16A120617
Date Collected: 12/06/17 15:21
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/07/17 22:58	1
Acetone	ND		30	14	ug/L			12/07/17 22:58	1
Benzene	ND		0.40	0.093	ug/L			12/07/17 22:58	1
Bromobenzene	ND		1.0	0.28	ug/L			12/07/17 22:58	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/07/17 22:58	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/07/17 22:58	1
Bromoform	ND		5.0	1.6	ug/L			12/07/17 22:58	1
Bromomethane	ND		5.0	0.22	ug/L			12/07/17 22:58	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/07/17 22:58	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/07/17 22:58	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/07/17 22:58	1
Chloroethane	ND		2.0	0.16	ug/L			12/07/17 22:58	1
Chloroform	ND		1.0	0.91	ug/L			12/07/17 22:58	1
Chloromethane	ND		3.0	0.22	ug/L			12/07/17 22:58	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/07/17 22:58	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/07/17 22:58	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/07/17 22:58	1
Dibromomethane	ND		2.0	0.50	ug/L			12/07/17 22:58	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/07/17 22:58	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/07/17 22:58	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/07/17 22:58	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/07/17 22:58	1
Hexane	ND		1.0	0.084	ug/L			12/07/17 22:58	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/07/17 22:58	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/07/17 22:58	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/07/17 22:58	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/07/17 22:58	1
Naphthalene	ND		2.0	0.63	ug/L			12/07/17 22:58	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/07/17 22:58	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/07/17 22:58	1
o-Xylene	ND		1.0	0.16	ug/L			12/07/17 22:58	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/07/17 22:58	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/07/17 22:58	1
Styrene	ND		1.0	0.24	ug/L			12/07/17 22:58	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/07/17 22:58	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/07/17 22:58	1
Toluene	ND		1.0	0.31	ug/L			12/07/17 22:58	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:58	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/07/17 22:58	1
Trichloroethene	ND		1.0	0.20	ug/L			12/07/17 22:58	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/07/17 22:58	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/07/17 22:58	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/07/17 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 125*		*12/07/17 22:58*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/07/17 22:58*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/07/17 22:58*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/07/17 22:58*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Client Sample ID: MW-16A120617

Date Collected: 12/06/17 15:21
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-4

Matrix: Water

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 14:36	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 14:36	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 14:36	1
Dalapon	ND		0.43	0.11	ug/L		12/11/17 10:47	12/13/17 14:36	1
Dicamba	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 14:36	1
Dichlorprop	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 14:36	1
MCPA	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 14:36	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 14:36	1
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*111*		*51 - 150*	*12/11/17 10:47*	*12/13/17 14:36*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.044**	**J**	0.097	0.011	ug/L		12/11/17 13:08	12/19/17 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*78*		*59 - 120*	*12/11/17 13:08*	*12/19/17 16:01*	*1*
Terphenyl-d14	*93*		*17 - 149*	*12/11/17 13:08*	*12/19/17 16:01*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/11/17 13:08*	*12/19/17 16:01*	*1*
2,4,6-Tribromophenol	*81*		*43 - 122*	*12/11/17 13:08*	*12/19/17 16:01*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/11/17 13:08	12/13/17 18:51	1
1,2-Dichlorobenzene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/11/17 13:08	12/13/17 18:51	1
1,4-Dichlorobenzene	ND		0.39	0.058	ug/L		12/11/17 13:08	12/13/17 18:51	1
1-Methylnaphthalene	ND		0.97	0.029	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,4-Dichlorophenol	ND		3.9	0.88	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,4-Dimethylphenol	ND		3.9	0.81	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,4-Dinitrophenol	ND		4.9	0.97	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,4-Dinitrotoluene	ND		0.97	0.23	ug/L		12/11/17 13:08	12/13/17 18:51	1
2,6-Dinitrotoluene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
2-Chloronaphthalene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
2-Chlorophenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
2-Methylnaphthalene	ND		0.39	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
2-Methylphenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
2-Nitroaniline	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
2-Nitrophenol	ND		0.97	0.23	ug/L		12/11/17 13:08	12/13/17 18:51	1
3 & 4 Methylphenol	ND		0.78	0.039	ug/L		12/11/17 13:08	12/13/17 18:51	1
3,3'-Dichlorobenzidine	ND		15	3.0	ug/L		12/11/17 13:08	12/13/17 18:51	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/11/17 13:08	12/13/17 18:51	1
4,6-Dinitro-2-methylphenol	ND		4.9	0.97	ug/L		12/11/17 13:08	12/13/17 18:51	1
4-Bromophenyl phenyl ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
4-Chloro-3-methylphenol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
4-Chloroaniline	ND		9.7	2.0	ug/L		12/11/17 13:08	12/13/17 18:51	1

Client Sample ID: MW-16A120617
Date Collected: 12/06/17 15:21
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
4-Nitroaniline	ND		1.9	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
4-Nitrophenol	ND		15	3.6	ug/L		12/11/17 13:08	12/13/17 18:51	1
Acenaphthene	ND		0.39	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Acenaphthylene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Anthracene	ND		0.039	0.0097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzo[a]anthracene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzo[a]pyrene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzo[b]fluoranthene	ND	*	0.97	0.049	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzo[g,h,i]perylene	ND	*	0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzo[k]fluoranthene	ND	*	0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzoic acid	**0.59**	**J**	2.9	0.58	ug/L		12/11/17 13:08	12/13/17 18:51	1
Benzyl alcohol	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Bis(2-chloroethoxy)methane	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Bis(2-chloroethyl)ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/11/17 13:08	12/13/17 18:51	1
bis(chloroisopropyl) ether	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Butyl benzyl phthalate	ND		9.7	0.72	ug/L		12/11/17 13:08	12/13/17 18:51	1
Carbazole	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Chrysene	ND		0.58	0.0097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Dibenz(a,h)anthracene	ND	*	0.58	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Dibenzofuran	ND		0.39	0.058	ug/L		12/11/17 13:08	12/13/17 18:51	1
Diethyl phthalate	ND		12	2.7	ug/L		12/11/17 13:08	12/13/17 18:51	1
Dimethyl phthalate	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/11/17 13:08	12/13/17 18:51	1
Di-n-octyl phthalate	ND		0.97	0.17	ug/L		12/11/17 13:08	12/13/17 18:51	1
Fluoranthene	ND		2.9	0.0097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Fluorene	ND		1.9	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Hexachlorobenzene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Hexachlorobutadiene	ND		0.97	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Hexachlorocyclopentadiene	ND		1.9	0.38	ug/L		12/11/17 13:08	12/13/17 18:51	1
Hexachloroethane	ND		0.97	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Indeno[1,2,3-cd]pyrene	ND		0.97	0.049	ug/L		12/11/17 13:08	12/13/17 18:51	1
Isophorone	ND		0.39	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Naphthalene	ND		0.39	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Nitrobenzene	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
N-Nitrosodi-n-propylamine	ND		0.58	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
N-Nitrosodiphenylamine	ND		2.9	0.097	ug/L		12/11/17 13:08	12/13/17 18:51	1
Pentachlorophenol	ND		4.9	0.97	ug/L		12/11/17 13:08	12/13/17 18:51	1
Phenanthrene	ND		0.97	0.019	ug/L		12/11/17 13:08	12/13/17 18:51	1
Phenol	ND		3.9	0.049	ug/L		12/11/17 13:08	12/13/17 18:51	1
Pyrene	ND		1.9	0.039	ug/L		12/11/17 13:08	12/13/17 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*	*12/11/17 13:08*	*12/13/17 18:51*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/11/17 13:08*	*12/13/17 18:51*	*1*
2-Fluorophenol (Surr)	*75*		*50 - 120*	*12/11/17 13:08*	*12/13/17 18:51*	*1*
Nitrobenzene-d5 (Surr)	*82*		*52 - 120*	*12/11/17 13:08*	*12/13/17 18:51*	*1*
Phenol-d5 (Surr)	*75*		*52 - 120*	*12/11/17 13:08*	*12/13/17 18:51*	*1*
Terphenyl-d14 (Surr)	*87*		*49 - 133*	*12/11/17 13:08*	*12/13/17 18:51*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.5		0.20	0.039	mg/L			12/07/17 12:34	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0021		0.0010	0.00027	mg/L		12/21/17 14:05	12/22/17 09:49	1
Antimony	0.00011	J	0.00040	0.00011	mg/L		12/21/17 14:05	12/22/17 09:49	1
Barium	0.033		0.0012	0.000054	mg/L		12/21/17 14:05	12/22/17 09:49	1
Beryllium	0.000071	J	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 09:49	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 14:05	12/22/17 09:49	1
Chromium	0.00023	J	0.00040	0.00014	mg/L		12/21/17 14:05	12/22/17 09:49	1
Copper	0.0026		0.0020	0.00060	mg/L		12/21/17 14:05	12/22/17 09:49	1
Iron	0.037	J	0.20	0.036	mg/L		12/21/17 14:05	12/22/17 09:49	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 14:05	12/22/17 09:49	1
Manganese	0.00073	J	0.0020	0.00046	mg/L		12/21/17 14:05	12/22/17 09:49	1
Nickel	0.0016	J	0.0030	0.00011	mg/L		12/21/17 14:05	12/22/17 09:49	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 14:05	12/22/17 09:49	1
Silver	0.000046	J	0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 09:49	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 14:05	12/22/17 09:49	1
Vanadium	0.0055		0.0040	0.00046	mg/L		12/21/17 14:05	12/22/17 09:49	1
Zinc	ND		0.0070	0.0019	mg/L		12/21/17 14:05	12/22/17 09:49	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0017		0.0010	0.00027	mg/L		12/13/17 11:25	12/14/17 19:10	1
Antimony	0.00018	J B	0.00040	0.00011	mg/L		12/13/17 11:25	12/14/17 19:10	1
Barium	0.029		0.0012	0.000054	mg/L		12/13/17 11:25	12/14/17 19:10	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 19:10	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 11:25	12/14/17 19:10	1
Chromium	0.00020	J	0.00040	0.00014	mg/L		12/13/17 11:25	12/14/17 19:10	1
Copper	0.0023		0.0020	0.00060	mg/L		12/13/17 11:25	12/14/17 19:10	1
Iron	ND		0.20	0.036	mg/L		12/13/17 11:25	12/14/17 19:10	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 11:25	12/14/17 19:10	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 11:25	12/14/17 19:10	1
Nickel	0.0011	J	0.0030	0.00011	mg/L		12/13/17 11:25	12/14/17 19:10	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 11:25	12/14/17 19:10	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 19:10	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 11:25	12/14/17 19:10	1
Vanadium	0.0046		0.0040	0.00046	mg/L		12/13/17 11:25	12/14/17 19:10	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 11:25	12/14/17 19:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:20	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-7671-5

Date Collected: 12/06/17 12:00

Matrix: Water

Date Received: 12/07/17 10:25

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/07/17 23:18	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/07/17 23:18	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/07/17 23:18	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/07/17 23:18	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Client Sample ID: Trip Blank
Date Collected: 12/06/17 12:00
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/07/17 23:18	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/07/17 23:18	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 23:18	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/07/17 23:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/07/17 23:18	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/07/17 23:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/07/17 23:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/07/17 23:18	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/07/17 23:18	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/07/17 23:18	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/07/17 23:18	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/07/17 23:18	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/07/17 23:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/07/17 23:18	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/07/17 23:18	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/07/17 23:18	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/07/17 23:18	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/07/17 23:18	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/07/17 23:18	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/07/17 23:18	1
2-Hexanone	ND		10	0.75	ug/L			12/07/17 23:18	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/07/17 23:18	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/07/17 23:18	1
Acetone	ND		30	14	ug/L			12/07/17 23:18	1
Benzene	ND		0.40	0.093	ug/L			12/07/17 23:18	1
Bromobenzene	ND		1.0	0.28	ug/L			12/07/17 23:18	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/07/17 23:18	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/07/17 23:18	1
Bromoform	ND		5.0	1.6	ug/L			12/07/17 23:18	1
Bromomethane	ND		5.0	0.22	ug/L			12/07/17 23:18	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/07/17 23:18	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/07/17 23:18	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/07/17 23:18	1
Chloroethane	ND		2.0	0.16	ug/L			12/07/17 23:18	1
Chloroform	ND		1.0	0.91	ug/L			12/07/17 23:18	1
Chloromethane	ND		3.0	0.22	ug/L			12/07/17 23:18	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/07/17 23:18	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/07/17 23:18	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/07/17 23:18	1
Dibromomethane	ND		2.0	0.50	ug/L			12/07/17 23:18	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/07/17 23:18	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/07/17 23:18	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/07/17 23:18	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/07/17 23:18	1
Hexane	ND		1.0	0.084	ug/L			12/07/17 23:18	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/07/17 23:18	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/07/17 23:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/07/17 23:18	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/07/17 23:18	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Client Sample ID: Trip Blank
Date Collected: 12/06/17 12:00
Date Received: 12/07/17 10:25

Lab Sample ID: 590-7671-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.0	0.63	ug/L			12/07/17 23:18	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/07/17 23:18	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/07/17 23:18	1
o-Xylene	ND		1.0	0.16	ug/L			12/07/17 23:18	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/07/17 23:18	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/07/17 23:18	1
Styrene	ND		1.0	0.24	ug/L			12/07/17 23:18	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/07/17 23:18	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/07/17 23:18	1
Toluene	ND		1.0	0.31	ug/L			12/07/17 23:18	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 23:18	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/07/17 23:18	1
Trichloroethene	ND		1.0	0.20	ug/L			12/07/17 23:18	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/07/17 23:18	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/07/17 23:18	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/07/17 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*12/07/17 23:18*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/07/17 23:18*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/07/17 23:18*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/07/17 23:18*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-14991/6
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/07/17 14:24	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/07/17 14:24	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/07/17 14:24	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/07/17 14:24	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/07/17 14:24	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/07/17 14:24	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 14:24	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/07/17 14:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/07/17 14:24	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/07/17 14:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/07/17 14:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/07/17 14:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/07/17 14:24	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/07/17 14:24	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/07/17 14:24	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/07/17 14:24	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/07/17 14:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/07/17 14:24	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/07/17 14:24	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/07/17 14:24	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/07/17 14:24	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/07/17 14:24	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/07/17 14:24	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/07/17 14:24	1
2-Hexanone	ND		10	0.75	ug/L			12/07/17 14:24	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/07/17 14:24	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/07/17 14:24	1
Acetone	ND		30	14	ug/L			12/07/17 14:24	1
Benzene	ND		0.40	0.093	ug/L			12/07/17 14:24	1
Bromobenzene	ND		1.0	0.28	ug/L			12/07/17 14:24	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/07/17 14:24	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/07/17 14:24	1
Bromoform	ND		5.0	1.6	ug/L			12/07/17 14:24	1
Bromomethane	ND		5.0	0.22	ug/L			12/07/17 14:24	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/07/17 14:24	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/07/17 14:24	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/07/17 14:24	1
Chloroethane	ND		2.0	0.16	ug/L			12/07/17 14:24	1
Chloroform	ND		1.0	0.91	ug/L			12/07/17 14:24	1
Chloromethane	ND		3.0	0.22	ug/L			12/07/17 14:24	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/07/17 14:24	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/07/17 14:24	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/07/17 14:24	1
Dibromomethane	ND		2.0	0.50	ug/L			12/07/17 14:24	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/07/17 14:24	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/07/17 14:24	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/07/17 14:24	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/07/17 14:24	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-14991/6
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/07/17 14:24	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/07/17 14:24	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/07/17 14:24	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/07/17 14:24	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/07/17 14:24	1
Naphthalene	ND		2.0	0.63	ug/L			12/07/17 14:24	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/07/17 14:24	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/07/17 14:24	1
o-Xylene	ND		1.0	0.16	ug/L			12/07/17 14:24	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/07/17 14:24	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/07/17 14:24	1
Styrene	ND		1.0	0.24	ug/L			12/07/17 14:24	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/07/17 14:24	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/07/17 14:24	1
Toluene	ND		1.0	0.31	ug/L			12/07/17 14:24	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/07/17 14:24	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/07/17 14:24	1
Trichloroethene	ND		1.0	0.20	ug/L			12/07/17 14:24	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/07/17 14:24	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/07/17 14:24	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/07/17 14:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/07/17 14:24*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/07/17 14:24*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/07/17 14:24*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/07/17 14:24*	*1*

Lab Sample ID: LCS 590-14991/1004
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	11.0		ug/L		110	75 - 124
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	66 - 122
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	10.9		ug/L		109	70 - 127
1,1-Dichloroethane	10.0	10.1		ug/L		101	79 - 121
1,1-Dichloroethene	10.0	11.0		ug/L		110	69 - 127
1,1-Dichloropropene	10.0	11.5		ug/L		115	76 - 125
1,2,3-Trichlorobenzene	10.0	10.3		ug/L		103	60 - 125
1,2,3-Trichloropropane	10.0	11.2		ug/L		112	60 - 124
1,2,4-Trichlorobenzene	10.0	10.5		ug/L		105	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	10.1		ug/L		101	36 - 140
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	78 - 120
1,2-Dichloroethane	10.0	10.5		ug/L		105	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-14991/1004
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.6		ug/L		106	76 - 121
1,3,5-Trimethylbenzene	10.0	10.7		ug/L		107	75 - 122
1,3-Dichlorobenzene	10.0	10.9		ug/L		109	77 - 120
1,3-Dichloropropane	10.0	10.6		ug/L		106	75 - 120
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	77 - 121
2,2-Dichloropropane	10.0	10.1		ug/L		101	49 - 147
2-Butanone (MEK)	50.0	57.9		ug/L		116	40 - 150
2-Chlorotoluene	10.0	11.1		ug/L		111	75 - 121
2-Hexanone	50.0	54.9		ug/L		110	46 - 146
4-Chlorotoluene	10.0	11.0		ug/L		110	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	53.1		ug/L		106	60 - 127
Acetone	50.0	59.3		ug/L		119	20 - 150
Benzene	10.0	11.4		ug/L		114	80 - 120
Bromobenzene	10.0	10.3		ug/L		103	74 - 121
Bromochloromethane	10.0	10.5		ug/L		105	70 - 126
Bromodichloromethane	10.0	10.9		ug/L		109	67 - 125
Bromoform	10.0	10.2		ug/L		102	60 - 122
Bromomethane	10.0	10.2		ug/L		102	45 - 150
Carbon disulfide	10.0	11.1		ug/L		111	67 - 129
Carbon tetrachloride	10.0	10.1		ug/L		101	68 - 134
Chlorobenzene	10.0	10.5		ug/L		105	79 - 125
Chloroethane	10.0	10.9		ug/L		109	48 - 150
Chloroform	10.0	10.5		ug/L		105	73 - 126
Chloromethane	10.0	10.9		ug/L		109	51 - 150
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	76 - 121
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	72 - 120
Dibromochloromethane	10.0	10.3		ug/L		103	72 - 120
Dibromomethane	10.0	9.96		ug/L		100	71 - 120
Dichlorodifluoromethane	10.0	9.44		ug/L		94	32 - 150
Dichlorofluoromethane	10.0	9.67		ug/L		97	60 - 140
Ethylbenzene	10.0	11.2		ug/L		112	80 - 120
Hexachlorobutadiene	10.0	10.1		ug/L		101	62 - 132
Hexane	10.0	11.6		ug/L		116	68 - 125
Isopropylbenzene	10.0	10.7		ug/L		107	77 - 123
m,p-Xylene	10.0	11.0		ug/L		110	80 - 120
Methyl tert-butyl ether	10.0	11.3		ug/L		113	71 - 128
Methylene Chloride	10.0	10.5		ug/L		105	20 - 150
Naphthalene	10.0	10.2		ug/L		102	63 - 124
n-Butylbenzene	10.0	11.1		ug/L		111	71 - 120
N-Propylbenzene	10.0	10.8		ug/L		108	76 - 120
o-Xylene	10.0	11.0		ug/L		110	80 - 120
p-Isopropyltoluene	10.0	10.7		ug/L		107	77 - 120
sec-Butylbenzene	10.0	10.7		ug/L		107	74 - 121
Styrene	10.0	10.7		ug/L		107	73 - 120
tert-Butylbenzene	10.0	10.8		ug/L		108	79 - 120
Tetrachloroethene	10.0	10.8		ug/L		108	71 - 132
Toluene	10.0	10.9		ug/L		109	80 - 123
trans-1,2-Dichloroethene	10.0	11.4		ug/L		114	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-14991/1004
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.4		ug/L		104	70 - 121
Trichloroethene	10.0	10.9		ug/L		109	75 - 129
Trichlorofluoromethane	10.0	10.1		ug/L		101	60 - 140
Vinyl chloride	10.0	10.3		ug/L		103	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: LCSD 590-14991/7
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	11.0		ug/L		110	75 - 124	1	15
1,1,1-Trichloroethane	10.0	11.0		ug/L		110	71 - 130	6	25
1,1,2,2-Tetrachloroethane	10.0	10.9		ug/L		109	66 - 122	2	15
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	76 - 120	0	15
1,1,2-Trichlorotrifluoroethane	10.0	11.7		ug/L		117	70 - 127	7	25
1,1-Dichloroethane	10.0	10.7		ug/L		107	79 - 121	5	25
1,1-Dichloroethene	10.0	11.4		ug/L		114	69 - 127	4	14
1,1-Dichloropropene	10.0	11.7		ug/L		117	76 - 125	2	15
1,2,3-Trichlorobenzene	10.0	10.5		ug/L		105	60 - 125	2	15
1,2,3-Trichloropropane	10.0	10.6		ug/L		106	60 - 124	6	15
1,2,4-Trichlorobenzene	10.0	10.8		ug/L		108	66 - 124	3	15
1,2,4-Trimethylbenzene	10.0	10.8		ug/L		108	77 - 120	3	15
1,2-Dibromo-3-Chloropropane	10.0	11.0		ug/L		110	36 - 140	8	15
1,2-Dichlorobenzene	10.0	11.1		ug/L		111	78 - 120	4	15
1,2-Dichloroethane	10.0	10.9		ug/L		109	68 - 127	4	12
1,2-Dichloropropane	10.0	11.1		ug/L		111	76 - 121	5	15
1,3,5-Trimethylbenzene	10.0	10.8		ug/L		108	75 - 122	1	15
1,3-Dichlorobenzene	10.0	10.6		ug/L		106	77 - 120	3	15
1,3-Dichloropropane	10.0	10.4		ug/L		104	75 - 120	2	15
1,4-Dichlorobenzene	10.0	10.8		ug/L		108	77 - 121	3	15
2,2-Dichloropropane	10.0	10.6		ug/L		106	49 - 147	5	25
2-Butanone (MEK)	50.0	51.7		ug/L		103	40 - 150	11	25
2-Chlorotoluene	10.0	10.6		ug/L		106	75 - 121	5	15
2-Hexanone	50.0	52.3		ug/L		105	46 - 146	5	15
4-Chlorotoluene	10.0	10.9		ug/L		109	74 - 120	1	15
4-Methyl-2-pentanone (MIBK)	50.0	52.7		ug/L		105	60 - 127	1	15
Acetone	50.0	46.7		ug/L		93	20 - 150	24	25
Benzene	10.0	11.7		ug/L		117	80 - 120	3	25
Bromobenzene	10.0	10.5		ug/L		105	74 - 121	2	15
Bromochloromethane	10.0	10.6		ug/L		106	70 - 126	0	25
Bromodichloromethane	10.0	11.0		ug/L		110	67 - 125	0	15
Bromoform	10.0	10.6		ug/L		106	60 - 122	4	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-14991/7
Matrix: Water
Analysis Batch: 14991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			10.0	11.2		ug/L		112	45 - 150	9	25
Carbon disulfide			10.0	11.7		ug/L		117	67 - 129	6	25
Carbon tetrachloride			10.0	10.8		ug/L		108	68 - 134	6	25
Chlorobenzene			10.0	10.6		ug/L		106	79 - 125	1	25
Chloroethane			10.0	11.0		ug/L		110	48 - 150	1	25
Chloroform			10.0	10.8		ug/L		108	73 - 126	3	25
Chloromethane			10.0	11.4		ug/L		114	51 - 150	5	15
cis-1,2-Dichloroethene			10.0	10.9		ug/L		109	76 - 121	4	25
cis-1,3-Dichloropropene			10.0	10.4		ug/L		104	72 - 120	0	15
Dibromochloromethane			10.0	9.88		ug/L		99	72 - 120	4	15
Dibromomethane			10.0	10.6		ug/L		106	71 - 120	6	15
Dichlorodifluoromethane			10.0	9.44		ug/L		94	32 - 150	0	25
Dichlorofluoromethane			10.0	10.8		ug/L		108	60 - 140	11	25
Ethylbenzene			10.0	10.9		ug/L		109	80 - 120	3	25
Hexachlorobutadiene			10.0	10.4		ug/L		104	62 - 132	3	15
Hexane			10.0	11.6		ug/L		116	68 - 125	0	15
Isopropylbenzene			10.0	10.7		ug/L		107	77 - 123	0	15
m,p-Xylene			10.0	11.1		ug/L		111	80 - 120	1	25
Methyl tert-butyl ether			10.0	11.6		ug/L		116	71 - 128	3	12
Methylene Chloride			10.0	10.9		ug/L		109	20 - 150	4	25
Naphthalene			10.0	10.4		ug/L		104	63 - 124	2	25
n-Butylbenzene			10.0	11.2		ug/L		112	71 - 120	1	15
N-Propylbenzene			10.0	10.8		ug/L		108	76 - 120	0	15
o-Xylene			10.0	11.0		ug/L		110	80 - 120	0	25
p-Isopropyltoluene			10.0	10.9		ug/L		109	77 - 120	2	15
sec-Butylbenzene			10.0	10.6		ug/L		106	74 - 121	1	15
Styrene			10.0	10.6		ug/L		106	73 - 120	0	15
tert-Butylbenzene			10.0	11.0		ug/L		110	79 - 120	2	15
Tetrachloroethene			10.0	10.8		ug/L		108	71 - 132	1	15
Toluene			10.0	10.8		ug/L		108	80 - 123	1	25
trans-1,2-Dichloroethene			10.0	12.2		ug/L		122	75 - 124	6	25
trans-1,3-Dichloropropene			10.0	10.3		ug/L		103	70 - 121	0	15
Trichloroethene			10.0	11.1		ug/L		111	75 - 129	2	25
Trichlorofluoromethane			10.0	10.8		ug/L		108	60 - 140	7	25
Vinyl chloride			10.0	11.0		ug/L		110	42 - 150	7	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8151A - Herbicides (GC/MS)

Lab Sample ID: MB 580-263171/1-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263171

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
2,4-D	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1
2,4-DB	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dalapon	ND		0.40	0.10	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dicamba	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dichlorprop	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
MCPA	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
Silvex (2,4,5-TP)	ND		0.25	0.050	ug/L		12/11/17 10:47	12/13/17 09:26	1
MCPP	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*88*		*51 - 150*	*12/11/17 10:47*	*12/13/17 09:26*	*1*

Lab Sample ID: LCS 580-263171/2-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263171

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	3.63		ug/L		73	20 - 150		
2,4-D			5.00	3.76		ug/L		75	20 - 150		
2,4-DB			5.00	5.15		ug/L		103	50 - 150		
Dalapon			5.00	2.55		ug/L		51	20 - 120		
Dicamba			5.00	3.55		ug/L		71	20 - 150		
Dichlorprop			5.00	4.71		ug/L		94	23 - 150		
MCPA			5.00	3.72		ug/L		74	21 - 150		
Silvex (2,4,5-TP)			5.00	4.73		ug/L		95	24 - 150		
MCPP			5.00	5.17		ug/L		103	51 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*116*		*51 - 150*

Lab Sample ID: LCSD 580-263171/3-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263171

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.03		ug/L		81	20 - 150	10	35
2,4-D			5.00	4.45		ug/L		89	20 - 150	17	35
2,4-DB			5.00	5.26		ug/L		105	50 - 150	2	35
Dalapon			5.00	3.57		ug/L		71	20 - 120	34	35
Dicamba			5.00	4.54		ug/L		91	20 - 150	25	35
Dichlorprop			5.00	5.56		ug/L		111	23 - 150	16	35
MCPA			5.00	4.30		ug/L		86	21 - 150	15	35
Silvex (2,4,5-TP)			5.00	5.51		ug/L		110	24 - 150	15	35
MCPP			5.00	5.48		ug/L		110	51 - 150	6	35

Method: 8151A - Herbicides (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263171/3-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263171

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*111*		*51 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 15:36	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dichlorophenol	ND		4.0	0.91	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 15:36	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/13/17 15:36	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/11/17 13:08	12/13/17 15:36	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chloroaniline	ND		10	2.1	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Nitrophenol	ND		15	3.7	ug/L		12/11/17 13:08	12/13/17 15:36	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Anthracene	ND		0.040	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[b]fluoranthene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[g,h,i]perylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[k]fluoranthene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzoic acid	ND		3.0	0.60	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/11/17 13:08	12/13/17 15:36	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/11/17 13:08	12/13/17 15:36	1
Carbazole	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Chrysene	ND		0.60	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dibenz(a,h)anthracene	ND		0.60	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 15:36	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/11/17 13:08	12/13/17 15:36	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/11/17 13:08	12/13/17 15:36	1
Fluoranthene	ND		3.0	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Isophorone	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Naphthalene	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
Phenanthrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*66*		*48 - 125*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
2-Fluorophenol (Surr)	*76*		*50 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Nitrobenzene-d5 (Surr)	*83*		*52 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Phenol-d5 (Surr)	*76*		*52 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Terphenyl-d14 (Surr)	*84*		*49 - 133*	*12/11/17 13:08*	*12/13/17 15:36*	*1*

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.45		ug/L		73	46 - 120
1,2-Dichlorobenzene	2.00	1.60		ug/L		80	44 - 120
1,3-Dichlorobenzene	2.00	1.39		ug/L		70	34 - 121
1,4-Dichlorobenzene	2.00	1.42		ug/L		71	40 - 120
1-Methylnaphthalene	2.00	1.63		ug/L		82	65 - 120
2,4,5-Trichlorophenol	2.00	1.77		ug/L		89	56 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2.00	2.14		ug/L		107	55 - 129
2,4-Dichlorophenol	2.00	1.88	J	ug/L		94	60 - 140
2,4-Dimethylphenol	2.00	1.49	J	ug/L		74	20 - 129
2,4-Dinitrophenol	4.00	2.41	J	ug/L		60	20 - 132
2,4-Dinitrotoluene	2.00	1.93		ug/L		96	53 - 143
2,6-Dinitrotoluene	2.00	1.90		ug/L		95	59 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	64 - 125
2-Chlorophenol	2.00	1.84		ug/L		92	69 - 125
2-Methylnaphthalene	2.00	1.55		ug/L		77	56 - 120
2-Methylphenol	2.00	1.68		ug/L		84	53 - 120
2-Nitroaniline	10.0	8.07		ug/L		81	58 - 142
2-Nitrophenol	2.00	1.90		ug/L		95	20 - 143
3 & 4 Methylphenol	2.00	1.71		ug/L		85	54 - 120
3,3'-Dichlorobenzidine	12.0	11.3	J	ug/L		95	20 - 146
3-Nitroaniline	10.0	7.90		ug/L		79	22 - 139
4,6-Dinitro-2-methylphenol	4.00	3.53	J	ug/L		88	20 - 144
4-Bromophenyl phenyl ether	2.00	1.76		ug/L		88	70 - 123
4-Chloro-3-methylphenol	2.00	1.48		ug/L		74	63 - 126
4-Chloroaniline	10.0	7.75	J	ug/L		78	20 - 120
4-Chlorophenyl phenyl ether	2.00	1.83		ug/L		92	69 - 125
4-Nitroaniline	10.0	7.67		ug/L		77	40 - 130
4-Nitrophenol	4.00	ND		ug/L		81	27 - 150
Acenaphthene	2.00	1.63		ug/L		82	62 - 120
Acenaphthylene	2.00	1.52		ug/L		76	24 - 141
Anthracene	2.00	1.59		ug/L		79	20 - 140
Benzo[a]anthracene	2.00	1.76		ug/L		88	59 - 123
Benzo[a]pyrene	2.00	2.39		ug/L		119	20 - 133
Benzo[b]fluoranthene	2.00	2.49		ug/L		124	72 - 129
Benzo[g,h,i]perylene	2.00	2.65		ug/L		133	67 - 133
Benzo[k]fluoranthene	2.00	2.40		ug/L		120	72 - 120
Benzoic acid	4.00	0.830	J	ug/L		21	20 - 145
Benzyl alcohol	2.00	1.55		ug/L		77	42 - 129
Bis(2-chloroethoxy)methane	2.00	1.68		ug/L		84	59 - 125
Bis(2-chloroethyl)ether	2.00	1.64		ug/L		82	64 - 120
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		92	58 - 150
bis(chloroisopropyl) ether	2.00	1.45		ug/L		72	53 - 133
Butyl benzyl phthalate	2.00	2.03	J	ug/L		102	72 - 150
Carbazole	2.00	1.87		ug/L		94	80 - 135
Chrysene	2.00	1.66		ug/L		83	74 - 120
Dibenz(a,h)anthracene	2.00	2.60		ug/L		130	56 - 135
Dibenzofuran	2.00	1.72		ug/L		86	70 - 125
Diethyl phthalate	2.00	ND		ug/L		88	66 - 139
Dimethyl phthalate	2.00	1.73		ug/L		87	74 - 128
Di-n-butyl phthalate	2.00	1.83	J	ug/L		91	74 - 140
Di-n-octyl phthalate	2.00	2.39		ug/L		119	65 - 150
Fluoranthene	2.00	1.84	J	ug/L		92	70 - 135
Fluorene	2.00	1.85	J	ug/L		93	70 - 125
Hexachlorobenzene	2.00	1.46		ug/L		73	55 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	2.00	1.22		ug/L		61	20 - 125
Hexachlorocyclopentadiene	10.0	3.63		ug/L		36	20 - 120
Hexachloroethane	2.00	1.32		ug/L		66	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.53		ug/L		127	64 - 133
Isophorone	2.00	1.75		ug/L		87	64 - 125
Naphthalene	2.00	1.59		ug/L		80	56 - 120
Nitrobenzene	2.00	1.73		ug/L		87	54 - 133
N-Nitrosodi-n-propylamine	10.0	7.21		ug/L		72	54 - 120
N-Nitrosodiphenylamine	11.4	7.87		ug/L		69	22 - 135
Pentachlorophenol	4.00	2.05	J	ug/L		51	20 - 135
Phenanthrene	2.00	1.64		ug/L		82	71 - 120
Phenol	2.00	1.57	J	ug/L		79	53 - 126
Pyrene	2.00	1.87	J	ug/L		93	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*77*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*84*		*52 - 120*
Phenol-d5 (Surr)	*79*		*52 - 120*
Terphenyl-d14 (Surr)	*83*		*49 - 133*

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.68		ug/L		84	46 - 120	14	20
1,2-Dichlorobenzene	2.00	1.73		ug/L		86	44 - 120	8	20
1,3-Dichlorobenzene	2.00	1.56		ug/L		78	34 - 121	11	29
1,4-Dichlorobenzene	2.00	1.55		ug/L		77	40 - 120	8	25
1-Methylnaphthalene	2.00	1.87		ug/L		93	65 - 120	13	20
2,4,5-Trichlorophenol	2.00	1.87		ug/L		93	56 - 122	5	25
2,4,6-Trichlorophenol	2.00	2.12		ug/L		106	55 - 129	1	20
2,4-Dichlorophenol	2.00	2.04	J	ug/L		102	60 - 140	8	26
2,4-Dimethylphenol	2.00	1.53	J	ug/L		76	20 - 129	3	35
2,4-Dinitrophenol	4.00	2.68	J	ug/L		67	20 - 132	11	35
2,4-Dinitrotoluene	2.00	2.04		ug/L		102	53 - 143	6	29
2,6-Dinitrotoluene	2.00	2.06		ug/L		103	59 - 134	8	24
2-Chloronaphthalene	2.00	1.59		ug/L		80	64 - 125	5	20
2-Chlorophenol	2.00	1.92		ug/L		96	69 - 125	4	20
2-Methylnaphthalene	2.00	1.77		ug/L		89	56 - 120	14	20
2-Methylphenol	2.00	1.68		ug/L		84	53 - 120	0	33
2-Nitroaniline	10.0	8.11		ug/L		81	58 - 142	1	20
2-Nitrophenol	2.00	2.18		ug/L		109	20 - 143	14	35
3 & 4 Methylphenol	2.00	1.76		ug/L		88	54 - 120	3	20
3,3'-Dichlorobenzidine	12.0	11.9	J	ug/L		99	20 - 146	5	35
3-Nitroaniline	10.0	8.20		ug/L		82	22 - 139	4	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263185/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 263313 — **Prep Batch: 263185**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	4.00	3.60	J	ug/L		90	20 - 144	2	35
4-Bromophenyl phenyl ether	2.00	1.88		ug/L		94	70 - 123	7	20
4-Chloro-3-methylphenol	2.00	1.57		ug/L		79	63 - 126	6	20
4-Chloroaniline	10.0	8.56	J	ug/L		86	20 - 120	10	35
4-Chlorophenyl phenyl ether	2.00	1.92		ug/L		96	69 - 125	5	20
4-Nitroaniline	10.0	8.04		ug/L		80	40 - 130	5	35
4-Nitrophenol	4.00	ND		ug/L		78	27 - 150	4	23
Acenaphthene	2.00	1.68		ug/L		84	62 - 120	3	20
Acenaphthylene	2.00	1.56		ug/L		78	24 - 141	3	20
Anthracene	2.00	1.60		ug/L		80	20 - 140	1	26
Benzo[a]anthracene	2.00	1.86		ug/L		93	59 - 123	5	20
Benzo[a]pyrene	2.00	2.46		ug/L		123	20 - 133	3	35
Benzo[b]fluoranthene	2.00	2.60	*	ug/L		130	72 - 129	4	20
Benzo[g,h,i]perylene	2.00	2.79	*	ug/L		139	67 - 133	5	20
Benzo[k]fluoranthene	2.00	2.72	*	ug/L		136	72 - 120	13	20
Benzoic acid	4.00	0.969	J	ug/L		24	20 - 145	16	35
Benzyl alcohol	2.00	1.61		ug/L		80	42 - 129	4	35
Bis(2-chloroethoxy)methane	2.00	1.71		ug/L		86	59 - 125	2	26
Bis(2-chloroethyl)ether	2.00	1.68		ug/L		84	64 - 120	3	20
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		101	58 - 150	9	35
bis(chloroisopropyl) ether	2.00	1.51		ug/L		75	53 - 133	4	20
Butyl benzyl phthalate	2.00	2.15	J	ug/L		107	72 - 150	6	20
Carbazole	2.00	1.96		ug/L		98	80 - 135	5	20
Chrysene	2.00	1.82		ug/L		91	74 - 120	9	20
Dibenz(a,h)anthracene	2.00	2.76	*	ug/L		138	56 - 135	6	20
Dibenzofuran	2.00	1.81		ug/L		90	70 - 125	5	20
Diethyl phthalate	2.00	ND		ug/L		94	66 - 139	6	20
Dimethyl phthalate	2.00	1.79		ug/L		89	74 - 128	3	20
Di-n-butyl phthalate	2.00	1.86	J	ug/L		93	74 - 140	2	20
Di-n-octyl phthalate	2.00	2.36		ug/L		118	65 - 150	1	20
Fluoranthene	2.00	1.93	J	ug/L		96	70 - 135	4	20
Fluorene	2.00	1.96	J	ug/L		98	70 - 125	6	20
Hexachlorobenzene	2.00	1.54		ug/L		77	55 - 122	5	20
Hexachlorobutadiene	2.00	1.50		ug/L		75	20 - 125	21	31
Hexachlorocyclopentadiene	10.0	4.35		ug/L		44	20 - 120	18	35
Hexachloroethane	2.00	1.45		ug/L		73	24 - 125	10	35
Indeno[1,2,3-cd]pyrene	2.00	2.60		ug/L		130	64 - 133	2	20
Isophorone	2.00	1.84		ug/L		92	64 - 125	5	20
Naphthalene	2.00	1.81		ug/L		90	56 - 120	13	20
Nitrobenzene	2.00	1.77		ug/L		89	54 - 133	2	20
N-Nitrosodi-n-propylamine	10.0	7.60		ug/L		76	54 - 120	5	20
N-Nitrosodiphenylamine	11.4	8.37		ug/L		73	22 - 135	6	29
Pentachlorophenol	4.00	2.15	J	ug/L		54	20 - 135	5	35
Phenanthrene	2.00	1.78		ug/L		89	71 - 120	8	20
Phenol	2.00	1.63	J	ug/L		81	53 - 126	4	26
Pyrene	2.00	1.93	J	ug/L		97	64 - 128	3	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*81*		*48 - 125*
2-Fluorobiphenyl	*77*		*50 - 120*
2-Fluorophenol (Surr)	*79*		*50 - 120*
Nitrobenzene-d5 (Surr)	*89*		*52 - 120*
Phenol-d5 (Surr)	*81*		*52 - 120*
Terphenyl-d14 (Surr)	*83*		*49 - 133*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.10	0.011	ug/L		12/11/17 13:08	12/19/17 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*59 - 120*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
Terphenyl-d14	*90*		*17 - 149*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
2,4,6-Tribromophenol	*64*		*43 - 122*	*12/11/17 13:08*	*12/19/17 12:09*	*1*

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.81		ug/L		90	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*85*		*59 - 120*
Terphenyl-d14	*92*		*17 - 149*
2-Fluorobiphenyl	*81*		*50 - 120*
2,4,6-Tribromophenol	*99*		*43 - 122*

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.77		ug/L		88	40 - 140	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*80*		*59 - 120*
Terphenyl-d14	*82*		*17 - 149*
2-Fluorobiphenyl	*77*		*50 - 120*
2,4,6-Tribromophenol	*91*		*43 - 122*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-14982/1013
Matrix: Water
Analysis Batch: 14982

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/07/17 11:45	1

Lab Sample ID: LCS 590-14982/1012
Matrix: Water
Analysis Batch: 14982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.11		mg/L		102	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-263362/9-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0948		mg/L		95	85 - 115
Antimony	0.100	0.0934		mg/L		93	85 - 115
Barium	0.100	0.0951		mg/L		95	85 - 115
Beryllium	0.100	0.0955		mg/L		95	85 - 115
Cadmium	0.100	0.0921		mg/L		92	85 - 115
Chromium	0.100	0.0989		mg/L		99	85 - 115
Copper	0.100	0.0962		mg/L		96	85 - 115
Iron	10.0	9.71		mg/L		97	85 - 115
Lead	0.100	0.0964		mg/L		96	85 - 115
Manganese	0.100	0.0964		mg/L		96	85 - 115
Nickel	0.100	0.0979		mg/L		98	85 - 115
Selenium	0.100	0.0904		mg/L		90	85 - 115
Silver	0.100	0.0943		mg/L		94	85 - 115
Thallium	0.100	0.0948		mg/L		95	85 - 115
Vanadium	0.100	0.0964		mg/L		96	85 - 115
Zinc	0.100	0.0944		mg/L		94	85 - 115

Lab Sample ID: LCSD 580-263362/10-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0951		mg/L		95	85 - 115	0	20
Antimony	0.100	0.0912		mg/L		91	85 - 115	2	20
Barium	0.100	0.0942		mg/L		94	85 - 115	1	20
Beryllium	0.100	0.0953		mg/L		95	85 - 115	0	20
Cadmium	0.100	0.0913		mg/L		91	85 - 115	1	20
Chromium	0.100	0.0978		mg/L		98	85 - 115	1	20
Copper	0.100	0.0956		mg/L		96	85 - 115	1	20
Iron	10.0	9.74		mg/L		97	85 - 115	0	20
Lead	0.100	0.0951		mg/L		95	85 - 115	1	20
Manganese	0.100	0.0964		mg/L		96	85 - 115	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-263362/10-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nickel	0.100	0.0964		mg/L		96	85 - 115	1	20
Selenium	0.100	0.0912		mg/L		91	85 - 115	1	20
Silver	0.100	0.0938		mg/L		94	85 - 115	0	20
Thallium	0.100	0.0939		mg/L		94	85 - 115	1	20
Vanadium	0.100	0.0956		mg/L		96	85 - 115	1	20
Zinc	0.100	0.0936		mg/L		94	85 - 115	1	20

Lab Sample ID: MB 580-263971/14-A
Matrix: Water
Analysis Batch: 264041

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/21/17 14:05	12/22/17 08:50	1
Antimony	ND		0.00040	0.00011	mg/L		12/21/17 14:05	12/22/17 08:50	1
Barium	ND		0.0012	0.000054	mg/L		12/21/17 14:05	12/22/17 08:50	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 08:50	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 14:05	12/22/17 08:50	1
Chromium	ND		0.00040	0.00014	mg/L		12/21/17 14:05	12/22/17 08:50	1
Copper	ND		0.0020	0.00060	mg/L		12/21/17 14:05	12/22/17 08:50	1
Iron	ND		0.20	0.036	mg/L		12/21/17 14:05	12/22/17 08:50	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 14:05	12/22/17 08:50	1
Manganese	ND		0.0020	0.00046	mg/L		12/21/17 14:05	12/22/17 08:50	1
Nickel	ND		0.0030	0.00011	mg/L		12/21/17 14:05	12/22/17 08:50	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 14:05	12/22/17 08:50	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 14:05	12/22/17 08:50	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 14:05	12/22/17 08:50	1
Vanadium	ND		0.0040	0.00046	mg/L		12/21/17 14:05	12/22/17 08:50	1
Zinc	ND		0.0070	0.0019	mg/L		12/21/17 14:05	12/22/17 08:50	1

Lab Sample ID: LCS 580-263971/15-A
Matrix: Water
Analysis Batch: 264041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0981		mg/L		98	85 - 115
Antimony	0.100	0.0973		mg/L		97	85 - 115
Barium	0.100	0.0987		mg/L		99	85 - 115
Beryllium	0.100	0.0981		mg/L		98	85 - 115
Cadmium	0.100	0.0972		mg/L		97	85 - 115
Chromium	0.100	0.0986		mg/L		99	85 - 115
Copper	0.100	0.0963		mg/L		96	85 - 115
Iron	10.0	9.74		mg/L		97	85 - 115
Lead	0.100	0.0977		mg/L		98	85 - 115
Manganese	0.100	0.0943		mg/L		94	85 - 115
Nickel	0.100	0.0955		mg/L		95	85 - 115
Selenium	0.100	0.0963		mg/L		96	85 - 115
Silver	0.100	0.0980		mg/L		98	85 - 115
Thallium	0.100	0.0948		mg/L		95	85 - 115
Vanadium	0.100	0.0966		mg/L		97	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-263971/15-A
Matrix: Water
Analysis Batch: 264041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.100	0.0961		mg/L		96	85 - 115

Lab Sample ID: LCSD 580-263971/16-A
Matrix: Water
Analysis Batch: 264041

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263971

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0992		mg/L		99	85 - 115	1	20
Antimony	0.100	0.0958		mg/L		96	85 - 115	2	20
Barium	0.100	0.0958		mg/L		96	85 - 115	3	20
Beryllium	0.100	0.0972		mg/L		97	85 - 115	1	20
Cadmium	0.100	0.0953		mg/L		95	85 - 115	2	20
Chromium	0.100	0.0984		mg/L		98	85 - 115	0	20
Copper	0.100	0.0963		mg/L		96	85 - 115	0	20
Iron	10.0	9.84		mg/L		98	85 - 115	1	20
Lead	0.100	0.0967		mg/L		97	85 - 115	1	20
Manganese	0.100	0.0953		mg/L		95	85 - 115	1	20
Nickel	0.100	0.0965		mg/L		96	85 - 115	1	20
Selenium	0.100	0.0983		mg/L		98	85 - 115	2	20
Silver	0.100	0.0960		mg/L		96	85 - 115	2	20
Thallium	0.100	0.0938		mg/L		94	85 - 115	1	20
Vanadium	0.100	0.0968		mg/L		97	85 - 115	0	20
Zinc	0.100	0.0985		mg/L		98	85 - 115	2	20

Lab Sample ID: 590-7671-1 MS
Matrix: Water
Analysis Batch: 264041

Client Sample ID: MW-8B:120617
Prep Type: Total/NA
Prep Batch: 263971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0018		0.100	0.0965		mg/L		95	70 - 130
Antimony	0.00016	J	0.100	0.0924		mg/L		92	70 - 130
Barium	0.17		0.100	0.265		mg/L		97	70 - 130
Beryllium	0.000072	J	0.100	0.0950		mg/L		95	70 - 130
Cadmium	ND		0.100	0.0943		mg/L		94	70 - 130
Chromium	0.0011		0.100	0.0950		mg/L		94	70 - 130
Copper	0.0022		0.100	0.0916		mg/L		89	70 - 130
Iron	2.0		10.0	11.1		mg/L		91	70 - 130
Lead	0.0011		0.100	0.0935		mg/L		92	70 - 130
Manganese	0.045		0.100	0.134		mg/L		89	70 - 130
Nickel	0.0023	J	0.100	0.0917		mg/L		89	70 - 130
Selenium	ND		0.100	0.0927		mg/L		93	70 - 130
Silver	0.000096	J	0.100	0.0944		mg/L		94	70 - 130
Thallium	ND		0.100	0.0899		mg/L		90	70 - 130
Vanadium	0.0056		0.100	0.0986		mg/L		93	70 - 130
Zinc	0.010		0.100	0.0973		mg/L		87	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7671-1 MSD
Matrix: Water
Analysis Batch: 264041

Client Sample ID: MW-8B:120617
Prep Type: Total/NA
Prep Batch: 263971

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0018		0.100	0.0972		mg/L		95	70 - 130	1	20
Antimony	0.00016	J	0.100	0.0924		mg/L		92	70 - 130	0	20
Barium	0.17		0.100	0.267		mg/L		99	70 - 130	1	20
Beryllium	0.000072	J	0.100	0.0973		mg/L		97	70 - 130	2	20
Cadmium	ND		0.100	0.0952		mg/L		95	70 - 130	1	20
Chromium	0.0011		0.100	0.0980		mg/L		97	70 - 130	3	20
Copper	0.0022		0.100	0.0937		mg/L		92	70 - 130	2	20
Iron	2.0		10.0	11.4		mg/L		94	70 - 130	3	20
Lead	0.0011		0.100	0.0942		mg/L		93	70 - 130	1	20
Manganese	0.045		0.100	0.138		mg/L		93	70 - 130	3	20
Nickel	0.0023	J	0.100	0.0945		mg/L		92	70 - 130	3	20
Selenium	ND		0.100	0.0943		mg/L		94	70 - 130	2	20
Silver	0.000096	J	0.100	0.0954		mg/L		95	70 - 130	1	20
Thallium	ND		0.100	0.0907		mg/L		91	70 - 130	1	20
Vanadium	0.0056		0.100	0.100		mg/L		95	70 - 130	2	20
Zinc	0.010		0.100	0.0977		mg/L		87	70 - 130	0	20

Lab Sample ID: 590-7671-1 DU
Matrix: Water
Analysis Batch: 264041

Client Sample ID: MW-8B:120617
Prep Type: Total/NA
Prep Batch: 263971

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0018		0.00175		mg/L		4	20
Antimony	0.00016	J	0.000131	J	mg/L		19	20
Barium	0.17		0.172		mg/L		2	20
Beryllium	0.000072	J	0.0000638	J	mg/L		12	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.0011		0.00117		mg/L		3	20
Copper	0.0022		0.00221		mg/L		0.7	20
Iron	2.0		2.06		mg/L		0.7	20
Lead	0.0011		0.00110		mg/L		1	20
Manganese	0.045		0.0460		mg/L		2	20
Nickel	0.0023	J	0.00226	J	mg/L		3	20
Selenium	ND		ND		mg/L		NC	20
Silver	0.000096	J	0.0000915	J	mg/L		5	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0056		0.00569		mg/L		2	20
Zinc	0.010		0.00583	J F5	mg/L		56	20

Lab Sample ID: MB 580-263089/5-B
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 263362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/13/17 11:25	12/14/17 18:16	1
Antimony	0.000141	J	0.00040	0.00011	mg/L		12/13/17 11:25	12/14/17 18:16	1
Barium	ND		0.0012	0.000054	mg/L		12/13/17 11:25	12/14/17 18:16	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 18:16	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-263089/5-B
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 263362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 11:25	12/14/17 18:16	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/17 11:25	12/14/17 18:16	1
Copper	ND		0.0020	0.00060	mg/L		12/13/17 11:25	12/14/17 18:16	1
Iron	ND		0.20	0.036	mg/L		12/13/17 11:25	12/14/17 18:16	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 11:25	12/14/17 18:16	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 11:25	12/14/17 18:16	1
Nickel	ND		0.0030	0.00011	mg/L		12/13/17 11:25	12/14/17 18:16	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 11:25	12/14/17 18:16	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 11:25	12/14/17 18:16	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 11:25	12/14/17 18:16	1
Vanadium	ND		0.0040	0.00046	mg/L		12/13/17 11:25	12/14/17 18:16	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 11:25	12/14/17 18:16	1

Lab Sample ID: 590-7671-1 MS
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-8B:120617
Prep Type: Dissolved
Prep Batch: 263362

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0010		0.100	0.0775		mg/L		76	70 - 130
Antimony	0.00030	J B	0.100	0.0733		mg/L		73	70 - 130
Barium	0.14	F1	0.100	0.205		mg/L		70	70 - 130
Beryllium	ND		0.100	0.0743		mg/L		74	70 - 130
Cadmium	ND		0.100	0.0737		mg/L		74	70 - 130
Chromium	0.0020		0.100	0.0774		mg/L		75	70 - 130
Copper	0.00094	J	0.100	0.0743		mg/L		73	70 - 130
Iron	ND		10.0	7.60		mg/L		76	70 - 130
Lead	ND		0.100	0.0776		mg/L		78	70 - 130
Manganese	0.0025		0.100	0.0757		mg/L		73	70 - 130
Nickel	0.0022	J	0.100	0.0761		mg/L		74	70 - 130
Selenium	ND		0.100	0.0705		mg/L		71	70 - 130
Silver	ND		0.100	0.0742		mg/L		74	70 - 130
Thallium	ND		0.100	0.0762		mg/L		76	70 - 130
Vanadium	0.0017	J	0.100	0.0788		mg/L		77	70 - 130
Zinc	ND		0.100	0.0719		mg/L		72	70 - 130

Lab Sample ID: 590-7671-1 MSD
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-8B:120617
Prep Type: Dissolved
Prep Batch: 263362

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0010		0.100	0.0773		mg/L		76	70 - 130	0	20
Antimony	0.00030	J B	0.100	0.0737		mg/L		73	70 - 130	1	20
Barium	0.14	F1	0.100	0.204	F1	mg/L		69	70 - 130	1	20
Beryllium	ND		0.100	0.0733		mg/L		73	70 - 130	1	20
Cadmium	ND		0.100	0.0736		mg/L		74	70 - 130	0	20
Chromium	0.0020		0.100	0.0769		mg/L		75	70 - 130	1	20
Copper	0.00094	J	0.100	0.0743		mg/L		73	70 - 130	0	20
Iron	ND		10.0	7.56		mg/L		76	70 - 130	1	20
Lead	ND		0.100	0.0764		mg/L		76	70 - 130	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7671-1 MSD
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-8B:120617
Prep Type: Dissolved
Prep Batch: 263362

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	0.0025		0.100	0.0743		mg/L		72	70 - 130	2	20
Nickel	0.0022	J	0.100	0.0744		mg/L		72	70 - 130	2	20
Selenium	ND		0.100	0.0701		mg/L		70	70 - 130	1	20
Silver	ND		0.100	0.0748		mg/L		75	70 - 130	1	20
Thallium	ND		0.100	0.0741		mg/L		74	70 - 130	3	20
Vanadium	0.0017	J	0.100	0.0781		mg/L		76	70 - 130	1	20
Zinc	ND		0.100	0.0712		mg/L		71	70 - 130	1	20

Lab Sample ID: 590-7671-1 DU
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-8B:120617
Prep Type: Dissolved
Prep Batch: 263362

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0010		0.00112		mg/L		10	20
Antimony	0.00030	J B	0.000197	J F5	mg/L		42	20
Barium	0.14	F1	0.128		mg/L		5	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.0020		0.000257	J F3	mg/L		155	20
Copper	0.00094	J	0.000767	J	mg/L		20	20
Iron	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	0.0025		ND		mg/L		NC	20
Nickel	0.0022	J	0.00127	J F5	mg/L		55	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0017	J	0.00172	J	mg/L		0.7	20
Zinc	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-483088/1-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:11	1

Lab Sample ID: LCS 490-483088/2-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.103		mg/L		103	90 - 110

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCSD 490-483088/3-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 483088

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total			0.100	0.110		mg/L		110	90 - 110	7	20

Lab Sample ID: 590-7671-1 MS
Matrix: Water
Analysis Batch: 483913

Client Sample ID: MW-8B:120617
Prep Type: Total/NA
Prep Batch: 483088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		0.100	0.103		mg/L		103	90 - 110		

Client Sample ID: MW-8B:120617

Lab Sample ID: 590-7671-1

Date Collected: 12/06/17 11:22

Matrix: Water

Date Received: 12/07/17 10:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	14991	12/07/17 21:57	MRS	TAL SPK
Total/NA	Prep	8151A			903.9 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 13:18	ERZ	TAL SEA
Total/NA	Prep	3520C			1009.9 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 17:37	TL1	TAL SEA
Total/NA	Prep	3520C			1009.9 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 14:47	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14982	12/07/17 11:57	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263089	12/08/17 13:23	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263362	12/13/17 11:25	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 18:20	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263971	12/21/17 14:05	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264041	12/22/17 08:58	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:17	SDL	TAL NSH

Client Sample ID: MW-8A:120617

Lab Sample ID: 590-7671-2

Date Collected: 12/06/17 12:20

Matrix: Water

Date Received: 12/07/17 10:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	14991	12/07/17 22:18	MRS	TAL SPK
Total/NA	Prep	8151A			934 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 13:44	ERZ	TAL SEA
Total/NA	Prep	3520C			1028.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 18:02	TL1	TAL SEA
Total/NA	Prep	3520C			1028.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 15:12	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14982	12/07/17 12:09	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263089	12/08/17 13:23	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263362	12/13/17 11:25	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 19:03	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263971	12/21/17 14:05	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264041	12/22/17 09:41	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:18	SDL	TAL NSH

Client Sample ID: MW-4A:120617

Lab Sample ID: 590-7671-3

Date Collected: 12/06/17 14:24

Matrix: Water

Date Received: 12/07/17 10:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	14991	12/07/17 22:38	MRS	TAL SPK

Client Sample ID: MW-4A:120617

Lab Sample ID: 590-7671-3

Date Collected: 12/06/17 14:24

Matrix: Water

Date Received: 12/07/17 10:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			952.3 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 14:10	ERZ	TAL SEA
Total/NA	Prep	3520C			1009.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 18:26	TL1	TAL SEA
Total/NA	Prep	3520C			1009.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 15:36	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14982	12/07/17 12:22	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263089	12/08/17 13:23	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263362	12/13/17 11:25	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 19:07	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263971	12/21/17 14:05	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264041	12/22/17 09:45	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:19	SDL	TAL NSH

Client Sample ID: MW-16A120617

Lab Sample ID: 590-7671-4

Date Collected: 12/06/17 15:21

Matrix: Water

Date Received: 12/07/17 10:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	14991	12/07/17 22:58	MRS	TAL SPK
Total/NA	Prep	8151A			920.1 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 14:36	ERZ	TAL SEA
Total/NA	Prep	3520C			1029.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 18:51	TL1	TAL SEA
Total/NA	Prep	3520C			1029.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 16:01	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14982	12/07/17 12:34	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263089	12/08/17 13:23	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263362	12/13/17 11:25	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 19:10	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263971	12/21/17 14:05	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264041	12/22/17 09:49	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:20	SDL	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 590-7671-5

Date Collected: 12/06/17 12:00

Matrix: Water

Date Received: 12/07/17 10:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	14991	12/07/17 23:18	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Laboratory: TestAmerica Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-071	12-31-17
Oregon	NELAP Primary AB	10	4137	12-07-18
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C789	07-19-18

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis(chloroisopropyl) ether
8270D SIM	3520C	Water	1,4-Dioxane

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7671-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
8151A	Herbicides (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: MJP / JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3266-1070.2
Client Contact: Josh Lee	Phone: 425-293-9560	E-Mail: randee.arrington@testamericainc.com		Page: Page ~~2 of 2~~ 1 of 1
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4 - Total Cyanide	200.8_CWA - Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8151A_MS, 8270D	8270D_SIM_AK - 1,4-Dioxane only	200.8_CWA - Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	300_ORGFMS - Nitrate only	8260C - 8260C - Volatiles	Total Number of containers	Special Instructions/Note:
			Preservation Code:				B	D	N	N	N	N	A		
MW-8B:120617	12/6/17	1122	G	Water	N		X	X	X	X	X	X	X	12	
MW-8A:120617	↓	1220	↓	Water	N		X	X	X	X	X	X	X	↓	
MW-4A:120617		1424		Water	N		X	X	X	X	X	X	X		
MW-16A:120617		1521		Water	N		X	X	X	X	X	X	X		
Trip Blank				Water									X		
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											

590-7671 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Josh Lee	12/6/17 1700	GEI	[signature]	12/6/17 1700	GEI
[signature]	12/6/17 1025	GEI	[signature] Matt Sinde	12/7/17 1025	TestAmericaInc

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0.4°C IR#4

Ver: 08/04/2016

12/27/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

590-7671 Chain of Custody

12-8-17 1115 COOLER RECEIPT FOR

Cooler Received/Opened On 12/8/2017 @0935

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9613 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 14740456 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 0.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ES

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ES

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ES

I certify that I attached a label with the unique LIMS number to each container (intial) ES

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# ES

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-7671

TestAmerica ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Washington
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington	Page 1 of 1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/19/2017		Job #: 590-7671-1
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8B:120617 (590-7671-1)	12/6/17	11:22 Pacific		Water			X	1	
MW-8A:120617 (590-7671-2)	12/6/17	12:20 Pacific		Water			X	1	
MW-4A:120617 (590-7671-3)	12/6/17	14:24 Pacific		Water			X	1	
MW-16A120617 (590-7671-4)	12/6/17	15:21 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	
Relinquished by: Linda Arrington	Date/Time: 12/7/17 1542	Company TestAmerica	Received by:	Date/Time: 12-8-17 1115 Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.8

Ver: 09/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3248.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-7671-1
Address: 5755 8th Street East,	Due Date Requested: 12/19/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	200.8_CWA/200.8_P_TOT Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8270D_SIM_AK/3520C (MOD) 1,4-Dioxane only	8151A_MS/8151A_AP Herbicide (Aqueous)	8270D/3510C Semivolatiles, standard list	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MW-8B:120617 (590-7671-1)	12/6/17	11:22 Pacific		Water			X	X	X	X	X	8	
MW-8A:120617 (590-7671-2)	12/6/17	12:20 Pacific		Water			X	X	X	X	X	8	
MW-4A:120617 (590-7671-3)	12/6/17	14:24 Pacific		Water			X	X	X	X	X	8	
MW-16A120617 (590-7671-4)	12/6/17	15:21 Pacific		Water			X	X	X	X	X	8	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Matt Swain	Date/Time: 12.7.17 1530	Company: TestAmerica Inc	Received by: B. Hall	Date/Time: 12.8.17 0930	Company: SEA TM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: A2 = -0.4/0.3 w/(c.).

A2 = -0.1/0.6 w/(c.). A2 = -0.1/0.7 w/(c.)

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7671-1

Login Number: 7671
List Number: 1
Creator: Suda, Matt R

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7671-1

Login Number: 7671
List Number: 2
Creator: Hobbs, Kenneth F

List Source: TestAmerica Seattle
List Creation: 12/08/17 11:48 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-7675-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/27/2017 11:00:03 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-7675-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/7/2017 4:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.5º C.

Receipt Exceptions
The following volatile samples were received with significant headspace in the sample containers: MW-5A-120717 (590-7675-3) and MW-16-120717 (590-7675-8). Significant headspace is defined as a bubble greater than 6 mm in diameter. The client was notifed and the samples were canceled.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-15000 recovered above the upper control limit for acetone and trans-1,2-dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-2A-120717 (590-7675-1), MW-3-120717 (590-7675-2), MW-5A-120717 (590-7675-3), MW-5-120717 (590-7675-4), MW-4-120717 (590-7675-5), MW-12A-120717 (590-7675-6), MW-14-120717 (590-7675-7), MW-16-120717 (590-7675-8) and Trip Blank (590-7675-9).

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 590-15000 recovered outside control limits for the following analytes: trans-1,2-Dichloroethene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The method blank for batch 590-15000 contained 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263313 recovered outside acceptance criteria, low biased, for Hexachlorobenzene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The laboratory control sample duplicate (LCSD) for preparation batch 580-263185 and analytical batch 580-263313 recovered outside control limits for the following analytes: Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene and Dibenz(a,h)anthracene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263313 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263442 recovered above the upper control limit for 2,4-Dimethylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-12A-120717 (590-7675-6), MW-14-120717 (590-7675-7), MW-16-120717 (590-7675-8) and (CCVIS 580-263442/3).

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263442 recovered outside acceptance criteria, low biased, for 2,2'-oxybis[1-chloropropane], Phenol, N-Nitrosodi-n-propylamine and Benzyl alcohol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263442 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Job ID: 590-7675-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7675-1	MW-2A-120717	Water	12/07/17 14:51	12/07/17 16:40
590-7675-2	MW-3-120717	Water	12/07/17 13:11	12/07/17 16:40
590-7675-3	MW-5A-120717	Water	12/07/17 10:07	12/07/17 16:40
590-7675-4	MW-5-120717	Water	12/07/17 11:16	12/07/17 16:40
590-7675-5	MW-4-120717	Water	12/07/17 10:05	12/07/17 16:40
590-7675-6	MW-12A-120717	Water	12/07/17 14:22	12/07/17 16:40
590-7675-7	MW-14-120717	Water	12/07/17 13:18	12/07/17 16:40
590-7675-8	MW-16-120717	Water	12/07/17 11:31	12/07/17 16:40
590-7675-9	Trip Blank	Water	12/07/17 00:01	12/07/17 16:40

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-2A-120717
Date Collected: 12/07/17 14:51
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 14:29	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 14:29	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 14:29	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 14:29	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 14:29	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 14:29	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 14:29	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 14:29	1
1,2,3-Trichlorobenzene	**0.57**	**J B**	1.0	0.33	ug/L			12/08/17 14:29	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 14:29	1
1,2,4-Trichlorobenzene	**0.20**	**J B**	1.0	0.16	ug/L			12/08/17 14:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 14:29	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 14:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 14:29	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 14:29	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 14:29	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 14:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 14:29	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 14:29	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 14:29	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 14:29	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 14:29	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 14:29	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 14:29	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 14:29	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 14:29	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 14:29	1
Acetone	ND		30	14	ug/L			12/08/17 14:29	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 14:29	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 14:29	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 14:29	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 14:29	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 14:29	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 14:29	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 14:29	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 14:29	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 14:29	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 14:29	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 14:29	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 14:29	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 14:29	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 14:29	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 14:29	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 14:29	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 14:29	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 14:29	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 14:29	1
Hexachlorobutadiene	**0.39**	**J**	2.0	0.21	ug/L			12/08/17 14:29	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 14:29	1

Client Sample ID: MW-2A-120717
Date Collected: 12/07/17 14:51
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 14:29	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 14:29	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 14:29	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 14:29	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 14:29	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 14:29	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 14:29	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 14:29	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 14:29	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 14:29	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 14:29	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 14:29	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 14:29	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 14:29	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 14:29	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 14:29	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 14:29	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 14:29	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 14:29	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*		*12/08/17 14:29*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/08/17 14:29*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/08/17 14:29*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/08/17 14:29*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 15:02	1
2,4-D	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 15:02	1
2,4-DB	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 15:02	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 15:02	1
Dicamba	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 15:02	1
Dichlorprop	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 15:02	1
MCPA	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 15:02	1
Silvex (2,4,5-TP)	ND		0.28	0.055	ug/L		12/11/17 10:47	12/13/17 15:02	1
MCPP	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*106*		*51 - 150*	*12/11/17 10:47*	*12/13/17 15:02*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.042**	**J**	0.10	0.011	ug/L		12/11/17 13:08	12/19/17 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*82*		*59 - 120*	*12/11/17 13:08*	*12/19/17 16:26*	*1*
Terphenyl-d14	*94*		*17 - 149*	*12/11/17 13:08*	*12/19/17 16:26*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/11/17 13:08*	*12/19/17 16:26*	*1*
2,4,6-Tribromophenol	*84*		*43 - 122*	*12/11/17 13:08*	*12/19/17 16:26*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.42	0.042	ug/L		12/11/17 13:08	12/13/17 19:15	1
1,2-Dichlorobenzene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
1,3-Dichlorobenzene	ND		0.42	0.042	ug/L		12/11/17 13:08	12/13/17 19:15	1
1,4-Dichlorobenzene	ND		0.42	0.062	ug/L		12/11/17 13:08	12/13/17 19:15	1
1-Methylnaphthalene	ND		1.0	0.031	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,4,5-Trichlorophenol	ND		0.42	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,4,6-Trichlorophenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,4-Dichlorophenol	ND		4.2	0.95	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,4-Dimethylphenol	ND		4.2	0.86	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,4-Dinitrophenol	ND		5.2	1.0	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,4-Dinitrotoluene	ND		1.0	0.25	ug/L		12/11/17 13:08	12/13/17 19:15	1
2,6-Dinitrotoluene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
2-Chloronaphthalene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
2-Chlorophenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
2-Methylnaphthalene	ND		0.42	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
2-Methylphenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
2-Nitroaniline	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
2-Nitrophenol	ND		1.0	0.25	ug/L		12/11/17 13:08	12/13/17 19:15	1
3 & 4 Methylphenol	ND		0.83	0.042	ug/L		12/11/17 13:08	12/13/17 19:15	1
3,3'-Dichlorobenzidine	ND		16	3.2	ug/L		12/11/17 13:08	12/13/17 19:15	1
3-Nitroaniline	ND		3.1	0.76	ug/L		12/11/17 13:08	12/13/17 19:15	1
4,6-Dinitro-2-methylphenol	ND		5.2	1.0	ug/L		12/11/17 13:08	12/13/17 19:15	1
4-Bromophenyl phenyl ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
4-Chloro-3-methylphenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
4-Chloroaniline	ND		10	2.2	ug/L		12/11/17 13:08	12/13/17 19:15	1
4-Chlorophenyl phenyl ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
4-Nitroaniline	ND		2.1	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
4-Nitrophenol	ND		16	3.9	ug/L		12/11/17 13:08	12/13/17 19:15	1
Acenaphthene	ND		0.42	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Acenaphthylene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Anthracene	ND		0.042	0.010	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzo[a]anthracene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzo[a]pyrene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzo[b]fluoranthene	ND	*	1.0	0.052	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzo[g,h,i]perylene	ND	*	1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzo[k]fluoranthene	ND	*	1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzoic acid	**0.66**	**J**	3.1	0.62	ug/L		12/11/17 13:08	12/13/17 19:15	1
Benzyl alcohol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Bis(2-chloroethoxy)methane	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Bis(2-chloroethyl)ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Bis(2-ethylhexyl) phthalate	ND		16	2.3	ug/L		12/11/17 13:08	12/13/17 19:15	1
bis(chloroisopropyl) ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Butyl benzyl phthalate	ND		10	0.77	ug/L		12/11/17 13:08	12/13/17 19:15	1
Carbazole	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Chrysene	ND		0.62	0.010	ug/L		12/11/17 13:08	12/13/17 19:15	1
Dibenz(a,h)anthracene	ND	*	0.62	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Dibenzofuran	ND		0.42	0.062	ug/L		12/11/17 13:08	12/13/17 19:15	1
Diethyl phthalate	ND		12	2.9	ug/L		12/11/17 13:08	12/13/17 19:15	1
Dimethyl phthalate	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Di-n-butyl phthalate	ND		3.1	0.57	ug/L		12/11/17 13:08	12/13/17 19:15	1
Di-n-octyl phthalate	ND		1.0	0.19	ug/L		12/11/17 13:08	12/13/17 19:15	1
Fluoranthene	ND		3.1	0.010	ug/L		12/11/17 13:08	12/13/17 19:15	1
Fluorene	ND		2.1	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1

Client Sample ID: MW-2A-120717

Date Collected: 12/07/17 14:51
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Hexachlorocyclopentadiene	ND		2.1	0.41	ug/L		12/11/17 13:08	12/13/17 19:15	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.052	ug/L		12/11/17 13:08	12/13/17 19:15	1
Isophorone	ND		0.42	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Naphthalene	ND		0.42	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Nitrobenzene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
N-Nitrosodi-n-propylamine	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
N-Nitrosodiphenylamine	ND		3.1	0.10	ug/L		12/11/17 13:08	12/13/17 19:15	1
Pentachlorophenol	ND		5.2	1.0	ug/L		12/11/17 13:08	12/13/17 19:15	1
Phenanthrene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:15	1
Phenol	ND		4.2	0.052	ug/L		12/11/17 13:08	12/13/17 19:15	1
Pyrene	ND		2.1	0.042	ug/L		12/11/17 13:08	12/13/17 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*48 - 125*	*12/11/17 13:08*	*12/13/17 19:15*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/11/17 13:08*	*12/13/17 19:15*	*1*
2-Fluorophenol (Surr)	*78*		*50 - 120*	*12/11/17 13:08*	*12/13/17 19:15*	*1*
Nitrobenzene-d5 (Surr)	*90*		*52 - 120*	*12/11/17 13:08*	*12/13/17 19:15*	*1*
Phenol-d5 (Surr)	*78*		*52 - 120*	*12/11/17 13:08*	*12/13/17 19:15*	*1*
Terphenyl-d14 (Surr)	*95*		*49 - 133*	*12/11/17 13:08*	*12/13/17 19:15*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**1.9**		0.20	0.039	mg/L			12/08/17 09:47	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 16:08	1
Antimony	**0.00013**	**J**	0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 16:08	1
Barium	**0.034**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 16:08	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:08	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 16:08	1
Chromium	ND		0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 16:08	1
Copper	**0.0028**		0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 16:08	1
Iron	ND		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 16:08	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 16:08	1
Manganese	ND		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 16:08	1
Nickel	**0.00083**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 16:08	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 16:08	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:08	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 16:08	1
Vanadium	**0.0062**		0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 16:08	1
Zinc	**0.0050**	**J**	0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 16:08	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 19:38	1
Antimony	**0.00012**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 19:38	1

Client Sample ID: MW-2A-120717

Lab Sample ID: 590-7675-1
Matrix: Water
Date Collected: 12/07/17 14:51
Date Received: 12/07/17 16:40

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.029**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 19:38	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 19:38	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 19:38	1
Chromium	**0.0025**		0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 19:38	1
Copper	**0.0027**		0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 19:38	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 19:38	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 19:38	1
Manganese	**0.00092**	**J**	0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 19:38	1
Nickel	**0.0011**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 19:38	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 19:38	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 19:38	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 19:38	1
Vanadium	**0.0056**		0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 19:38	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 19:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:21	1

Client Sample ID: MW-3-120717

Lab Sample ID: 590-7675-2
Matrix: Water
Date Collected: 12/07/17 13:11
Date Received: 12/07/17 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 14:50	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 14:50	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 14:50	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 14:50	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 14:50	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 14:50	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 14:50	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 14:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 14:50	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 14:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 14:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 14:50	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 14:50	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 14:50	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 14:50	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 14:50	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 14:50	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 14:50	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 14:50	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 14:50	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 14:50	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 14:50	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 14:50	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 14:50	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 14:50	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-3-120717
Date Collected: 12/07/17 13:11
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 14:50	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 14:50	1
Acetone	ND		30	14	ug/L			12/08/17 14:50	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 14:50	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 14:50	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 14:50	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 14:50	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 14:50	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 14:50	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 14:50	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 14:50	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 14:50	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 14:50	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 14:50	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 14:50	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 14:50	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 14:50	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 14:50	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 14:50	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 14:50	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 14:50	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 14:50	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 14:50	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 14:50	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 14:50	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 14:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 14:50	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 14:50	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 14:50	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 14:50	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 14:50	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 14:50	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 14:50	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 14:50	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 14:50	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 14:50	1
Tetrachloroethene	**0.58**	**J**	1.0	0.22	ug/L			12/08/17 14:50	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 14:50	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 14:50	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 14:50	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 14:50	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 14:50	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 14:50	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*		*12/08/17 14:50*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/08/17 14:50*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/08/17 14:50*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/08/17 14:50*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:28	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 15:28	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 15:28	1
Dalapon	ND		0.43	0.11	ug/L		12/11/17 10:47	12/13/17 15:28	1
Dicamba	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:28	1
Dichlorprop	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:28	1
MCPA	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:28	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 15:28	1
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*111*		*51 - 150*	*12/11/17 10:47*	*12/13/17 15:28*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.041**	**J**	0.10	0.011	ug/L		12/11/17 13:08	12/19/17 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*115*		*59 - 120*	*12/11/17 13:08*	*12/19/17 16:50*	*1*
Terphenyl-d14	*127*		*17 - 149*	*12/11/17 13:08*	*12/19/17 16:50*	*1*
2-Fluorobiphenyl	*115*		*50 - 120*	*12/11/17 13:08*	*12/19/17 16:50*	*1*
2,4,6-Tribromophenol	*118*		*43 - 122*	*12/11/17 13:08*	*12/19/17 16:50*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.41	0.041	ug/L		12/11/17 13:08	12/13/17 19:40	1
1,2-Dichlorobenzene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
1,3-Dichlorobenzene	ND		0.41	0.041	ug/L		12/11/17 13:08	12/13/17 19:40	1
1,4-Dichlorobenzene	ND		0.41	0.062	ug/L		12/11/17 13:08	12/13/17 19:40	1
1-Methylnaphthalene	ND		1.0	0.031	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,4,5-Trichlorophenol	ND		0.41	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,4,6-Trichlorophenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,4-Dichlorophenol	ND		4.1	0.94	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,4-Dimethylphenol	ND		4.1	0.86	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,4-Dinitrophenol	ND		5.2	1.0	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,4-Dinitrotoluene	ND		1.0	0.25	ug/L		12/11/17 13:08	12/13/17 19:40	1
2,6-Dinitrotoluene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
2-Chloronaphthalene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
2-Chlorophenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
2-Methylnaphthalene	ND		0.41	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
2-Methylphenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
2-Nitroaniline	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
2-Nitrophenol	ND		1.0	0.25	ug/L		12/11/17 13:08	12/13/17 19:40	1
3 & 4 Methylphenol	ND		0.83	0.041	ug/L		12/11/17 13:08	12/13/17 19:40	1
3,3'-Dichlorobenzidine	ND		16	3.2	ug/L		12/11/17 13:08	12/13/17 19:40	1
3-Nitroaniline	ND		3.1	0.76	ug/L		12/11/17 13:08	12/13/17 19:40	1
4,6-Dinitro-2-methylphenol	ND		5.2	1.0	ug/L		12/11/17 13:08	12/13/17 19:40	1
4-Bromophenyl phenyl ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
4-Chloro-3-methylphenol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
4-Chloroaniline	ND		10	2.2	ug/L		12/11/17 13:08	12/13/17 19:40	1
4-Chlorophenyl phenyl ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
4-Nitroaniline	ND		2.1	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
4-Nitrophenol	ND		16	3.9	ug/L		12/11/17 13:08	12/13/17 19:40	1
Acenaphthene	ND		0.41	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1

Client Sample ID: MW-3-120717
Date Collected: 12/07/17 13:11
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Anthracene	ND		0.041	0.010	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzo[a]anthracene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzo[a]pyrene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzo[b]fluoranthene	ND	*	1.0	0.052	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzo[g,h,i]perylene	ND	*	1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzo[k]fluoranthene	ND	*	1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzoic acid	ND		3.1	0.62	ug/L		12/11/17 13:08	12/13/17 19:40	1
Benzyl alcohol	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Bis(2-chloroethoxy)methane	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Bis(2-chloroethyl)ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Bis(2-ethylhexyl) phthalate	ND		16	2.3	ug/L		12/11/17 13:08	12/13/17 19:40	1
bis(chloroisopropyl) ether	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Butyl benzyl phthalate	ND		10	0.77	ug/L		12/11/17 13:08	12/13/17 19:40	1
Carbazole	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Chrysene	ND		0.62	0.010	ug/L		12/11/17 13:08	12/13/17 19:40	1
Dibenz(a,h)anthracene	ND	*	0.62	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Dibenzofuran	ND		0.41	0.062	ug/L		12/11/17 13:08	12/13/17 19:40	1
Diethyl phthalate	ND		12	2.9	ug/L		12/11/17 13:08	12/13/17 19:40	1
Dimethyl phthalate	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Di-n-butyl phthalate	ND		3.1	0.57	ug/L		12/11/17 13:08	12/13/17 19:40	1
Di-n-octyl phthalate	ND		1.0	0.19	ug/L		12/11/17 13:08	12/13/17 19:40	1
Fluoranthene	ND		3.1	0.010	ug/L		12/11/17 13:08	12/13/17 19:40	1
Fluorene	ND		2.1	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Hexachlorobenzene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Hexachlorocyclopentadiene	ND		2.1	0.40	ug/L		12/11/17 13:08	12/13/17 19:40	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.052	ug/L		12/11/17 13:08	12/13/17 19:40	1
Isophorone	ND		0.41	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Naphthalene	ND		0.41	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Nitrobenzene	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
N-Nitrosodi-n-propylamine	ND		0.62	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
N-Nitrosodiphenylamine	ND		3.1	0.10	ug/L		12/11/17 13:08	12/13/17 19:40	1
Pentachlorophenol	ND		5.2	1.0	ug/L		12/11/17 13:08	12/13/17 19:40	1
Phenanthrene	ND		1.0	0.021	ug/L		12/11/17 13:08	12/13/17 19:40	1
Phenol	ND		4.1	0.052	ug/L		12/11/17 13:08	12/13/17 19:40	1
Pyrene	ND		2.1	0.041	ug/L		12/11/17 13:08	12/13/17 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*48 - 125*	*12/11/17 13:08*	*12/13/17 19:40*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*12/11/17 13:08*	*12/13/17 19:40*	*1*
2-Fluorophenol (Surr)	*83*		*50 - 120*	*12/11/17 13:08*	*12/13/17 19:40*	*1*
Nitrobenzene-d5 (Surr)	*86*		*52 - 120*	*12/11/17 13:08*	*12/13/17 19:40*	*1*
Phenol-d5 (Surr)	*82*		*52 - 120*	*12/11/17 13:08*	*12/13/17 19:40*	*1*
Terphenyl-d14 (Surr)	*87*		*49 - 133*	*12/11/17 13:08*	*12/13/17 19:40*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.0**		0.20	0.039	mg/L			12/08/17 09:59	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0025**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 16:50	1
Antimony	**0.00020**	**J**	0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 16:50	1
Barium	**0.032**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 16:50	1
Beryllium	**0.000078**	**J**	0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:50	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 16:50	1
Chromium	**0.00033**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 16:50	1
Copper	**0.0024**		0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 16:50	1
Iron	**0.29**		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 16:50	1
Lead	**0.00069**	**J**	0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 16:50	1
Manganese	**0.0078**		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 16:50	1
Nickel	**0.00093**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 16:50	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 16:50	1
Silver	**0.000099**	**J**	0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:50	1
Thallium	**0.00011**	**J**	0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 16:50	1
Vanadium	**0.0069**		0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 16:50	1
Zinc	**0.0027**	**J**	0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 16:50	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:21	1
Antimony	**0.00025**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:21	1
Barium	**0.024**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:21	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:21	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:21	1
Chromium	**0.00021**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:21	1
Copper	**0.0018**	**J**	0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:21	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:21	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:21	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:21	1
Nickel	**0.00081**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:21	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:21	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:21	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:21	1
Vanadium	**0.0049**		0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:21	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:23	1

Client Sample ID: MW-5A-120717

Lab Sample ID: 590-7675-3

Date Collected: 12/07/17 10:07

Matrix: Water

Date Received: 12/07/17 16:40

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:54	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 15:54	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 15:54	1
Dalapon	ND		0.43	0.11	ug/L		12/11/17 10:47	12/13/17 15:54	1
Dicamba	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:54	1
Dichlorprop	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:54	1
MCPA	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 15:54	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 15:54	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-5A-120717
Date Collected: 12/07/17 10:07
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-3
Matrix: Water

Method: 8151A - Herbicides (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*105*		*51 - 150*	*12/11/17 10:47*	*12/13/17 15:54*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.087**	**J**	0.10	0.011	ug/L		12/11/17 13:08	12/19/17 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*59 - 120*	*12/11/17 13:08*	*12/19/17 17:15*	*1*
Terphenyl-d14	*83*		*17 - 149*	*12/11/17 13:08*	*12/19/17 17:15*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/11/17 13:08*	*12/19/17 17:15*	*1*
2,4,6-Tribromophenol	*79*		*43 - 122*	*12/11/17 13:08*	*12/19/17 17:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 20:04	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 20:04	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 20:04	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,4-Dichlorophenol	ND		4.0	0.92	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 20:04	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 20:04	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/11/17 13:08	12/13/17 20:04	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/13/17 20:04	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/11/17 13:08	12/13/17 20:04	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 20:04	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
4-Chloroaniline	ND		10	2.1	ug/L		12/11/17 13:08	12/13/17 20:04	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
4-Nitrophenol	ND		15	3.8	ug/L		12/11/17 13:08	12/13/17 20:04	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Anthracene	ND		0.040	0.010	ug/L		12/11/17 13:08	12/13/17 20:04	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1

Client Sample ID: MW-5A-120717
Date Collected: 12/07/17 10:07
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	*	1.0	0.050	ug/L		12/11/17 13:08	12/13/17 20:04	1
Benzo[g,h,i]perylene	ND	*	1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Benzo[k]fluoranthene	ND	*	1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Benzoic acid	**0.60**	**J**	3.0	0.60	ug/L		12/11/17 13:08	12/13/17 20:04	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/11/17 13:08	12/13/17 20:04	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/11/17 13:08	12/13/17 20:04	1
Carbazole	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Chrysene	ND		0.60	0.010	ug/L		12/11/17 13:08	12/13/17 20:04	1
Dibenz(a,h)anthracene	ND	*	0.60	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 20:04	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 20:04	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/11/17 13:08	12/13/17 20:04	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/11/17 13:08	12/13/17 20:04	1
Fluoranthene	ND		3.0	0.010	ug/L		12/11/17 13:08	12/13/17 20:04	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/13/17 20:04	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 20:04	1
Isophorone	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Naphthalene	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/11/17 13:08	12/13/17 20:04	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 20:04	1
Phenanthrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 20:04	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/13/17 20:04	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/13/17 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*58*		*48 - 125*	*12/11/17 13:08*	*12/13/17 20:04*	*1*
2-Fluorobiphenyl	*68*		*50 - 120*	*12/11/17 13:08*	*12/13/17 20:04*	*1*
2-Fluorophenol (Surr)	*70*		*50 - 120*	*12/11/17 13:08*	*12/13/17 20:04*	*1*
Nitrobenzene-d5 (Surr)	*80*		*52 - 120*	*12/11/17 13:08*	*12/13/17 20:04*	*1*
Phenol-d5 (Surr)	*71*		*52 - 120*	*12/11/17 13:08*	*12/13/17 20:04*	*1*
Terphenyl-d14 (Surr)	*70*		*49 - 133*	*12/11/17 13:08*	*12/13/17 20:04*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.2**		0.20	0.039	mg/L			12/08/17 10:11	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 16:54	1

Client Sample ID: MW-5A-120717

Lab Sample ID: 590-7675-3

Date Collected: 12/07/17 10:07

Matrix: Water

Date Received: 12/07/17 16:40

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00023**	**J**	0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 16:54	1
Barium	**0.13**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 16:54	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:54	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 16:54	1
Chromium	**0.00021**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 16:54	1
Copper	**0.00084**	**J**	0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 16:54	1
Iron	ND		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 16:54	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 16:54	1
Manganese	ND		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 16:54	1
Nickel	**0.00052**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 16:54	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 16:54	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:54	1
Thallium	**0.000068**	**J**	0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 16:54	1
Vanadium	**0.0024**	**J**	0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 16:54	1
Zinc	**0.0023**	**J**	0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 16:54	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0011**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:25	1
Antimony	**0.00027**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:25	1
Barium	**0.10**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:25	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:25	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:25	1
Chromium	**0.00019**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:25	1
Copper	**0.00080**	**J**	0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:25	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:25	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:25	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:25	1
Nickel	**0.00047**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:25	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:25	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:25	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:25	1
Vanadium	**0.0014**	**J**	0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:25	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:25	1

Client Sample ID: MW-5-120717

Lab Sample ID: 590-7675-4

Date Collected: 12/07/17 11:16

Matrix: Water

Date Received: 12/07/17 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 15:31	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 15:31	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 15:31	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 15:31	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 15:31	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-5-120717
Date Collected: 12/07/17 11:16
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 15:31	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 15:31	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 15:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 15:31	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 15:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 15:31	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 15:31	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 15:31	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 15:31	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 15:31	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 15:31	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 15:31	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 15:31	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 15:31	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 15:31	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 15:31	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 15:31	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 15:31	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 15:31	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 15:31	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 15:31	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 15:31	1
Acetone	ND		30	14	ug/L			12/08/17 15:31	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 15:31	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 15:31	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 15:31	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 15:31	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 15:31	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 15:31	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 15:31	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 15:31	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 15:31	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 15:31	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 15:31	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 15:31	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 15:31	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 15:31	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 15:31	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 15:31	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 15:31	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 15:31	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 15:31	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 15:31	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 15:31	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 15:31	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 15:31	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 15:31	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 15:31	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 15:31	1

Client Sample ID: MW-5-120717
Date Collected: 12/07/17 11:16
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 15:31	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 15:31	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 15:31	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 15:31	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 15:31	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 15:31	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 15:31	1
Tetrachloroethene	**1.3**		1.0	0.22	ug/L			12/08/17 15:31	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 15:31	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 15:31	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 15:31	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 15:31	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 15:31	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 15:31	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*		*12/08/17 15:31*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/08/17 15:31*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/08/17 15:31*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/08/17 15:31*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 16:19	1
2,4-D	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 16:19	1
2,4-DB	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 16:19	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 16:19	1
Dicamba	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 16:19	1
Dichlorprop	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 16:19	1
MCPA	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 16:19	1
Silvex (2,4,5-TP)	ND		0.28	0.055	ug/L		12/11/17 10:47	12/13/17 16:19	1
MCPP	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*107*		*51 - 150*	*12/11/17 10:47*	*12/13/17 16:19*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.071**	**J**	0.11	0.012	ug/L		12/11/17 13:08	12/19/17 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*82*		*59 - 120*	*12/11/17 13:08*	*12/19/17 17:40*	*1*
Terphenyl-d14	*93*		*17 - 149*	*12/11/17 13:08*	*12/19/17 17:40*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/11/17 13:08*	*12/19/17 17:40*	*1*
2,4,6-Tribromophenol	*71*		*43 - 122*	*12/11/17 13:08*	*12/19/17 17:40*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.42	0.042	ug/L		12/11/17 13:08	12/13/17 20:29	1
1,2-Dichlorobenzene	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1

Client Sample ID: MW-5-120717
Date Collected: 12/07/17 11:16
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.42	0.042	ug/L		12/11/17 13:08	12/13/17 20:29	1
1,4-Dichlorobenzene	ND		0.42	0.063	ug/L		12/11/17 13:08	12/13/17 20:29	1
1-Methylnaphthalene	ND		1.1	0.032	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,4,5-Trichlorophenol	ND		0.42	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,4,6-Trichlorophenol	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,4-Dichlorophenol	ND		4.2	0.96	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,4-Dimethylphenol	ND		4.2	0.88	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,4-Dinitrophenol	ND		5.3	1.1	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,4-Dinitrotoluene	ND		1.1	0.25	ug/L		12/11/17 13:08	12/13/17 20:29	1
2,6-Dinitrotoluene	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
2-Chloronaphthalene	ND		1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
2-Chlorophenol	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
2-Methylnaphthalene	ND		0.42	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
2-Methylphenol	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
2-Nitroaniline	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
2-Nitrophenol	ND		1.1	0.25	ug/L		12/11/17 13:08	12/13/17 20:29	1
3 & 4 Methylphenol	ND		0.84	0.042	ug/L		12/11/17 13:08	12/13/17 20:29	1
3,3'-Dichlorobenzidine	ND		16	3.3	ug/L		12/11/17 13:08	12/13/17 20:29	1
3-Nitroaniline	ND		3.2	0.77	ug/L		12/11/17 13:08	12/13/17 20:29	1
4,6-Dinitro-2-methylphenol	ND		5.3	1.1	ug/L		12/11/17 13:08	12/13/17 20:29	1
4-Bromophenyl phenyl ether	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
4-Chloro-3-methylphenol	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
4-Chloroaniline	ND		11	2.2	ug/L		12/11/17 13:08	12/13/17 20:29	1
4-Chlorophenyl phenyl ether	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
4-Nitroaniline	ND		2.1	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
4-Nitrophenol	ND		16	3.9	ug/L		12/11/17 13:08	12/13/17 20:29	1
Acenaphthene	ND		0.42	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Acenaphthylene	ND		1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Anthracene	ND		0.042	0.011	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzo[a]anthracene	ND		1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzo[a]pyrene	ND		1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzo[b]fluoranthene	ND	*	1.1	0.053	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzo[g,h,i]perylene	ND	*	1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzo[k]fluoranthene	ND	*	1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzoic acid	ND		3.2	0.63	ug/L		12/11/17 13:08	12/13/17 20:29	1
Benzyl alcohol	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Bis(2-chloroethoxy)methane	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Bis(2-chloroethyl)ether	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Bis(2-ethylhexyl) phthalate	ND		16	2.3	ug/L		12/11/17 13:08	12/13/17 20:29	1
bis(chloroisopropyl) ether	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Butyl benzyl phthalate	ND		11	0.78	ug/L		12/11/17 13:08	12/13/17 20:29	1
Carbazole	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Chrysene	ND		0.63	0.011	ug/L		12/11/17 13:08	12/13/17 20:29	1
Dibenz(a,h)anthracene	ND	*	0.63	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Dibenzofuran	ND		0.42	0.063	ug/L		12/11/17 13:08	12/13/17 20:29	1
Diethyl phthalate	ND		13	3.0	ug/L		12/11/17 13:08	12/13/17 20:29	1
Dimethyl phthalate	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Di-n-butyl phthalate	ND		3.2	0.58	ug/L		12/11/17 13:08	12/13/17 20:29	1
Di-n-octyl phthalate	ND		1.1	0.19	ug/L		12/11/17 13:08	12/13/17 20:29	1

Client Sample ID: MW-5-120717
Date Collected: 12/07/17 11:16
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		3.2	0.011	ug/L		12/11/17 13:08	12/13/17 20:29	1
Fluorene	ND		2.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Hexachlorobenzene	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Hexachlorobutadiene	ND		1.1	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Hexachlorocyclopentadiene	ND		2.1	0.41	ug/L		12/11/17 13:08	12/13/17 20:29	1
Hexachloroethane	ND		1.1	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Indeno[1,2,3-cd]pyrene	ND		1.1	0.053	ug/L		12/11/17 13:08	12/13/17 20:29	1
Isophorone	ND		0.42	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Naphthalene	ND		0.42	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Nitrobenzene	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
N-Nitrosodi-n-propylamine	ND		0.63	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
N-Nitrosodiphenylamine	ND		3.2	0.11	ug/L		12/11/17 13:08	12/13/17 20:29	1
Pentachlorophenol	ND		5.3	1.1	ug/L		12/11/17 13:08	12/13/17 20:29	1
Phenanthrene	ND		1.1	0.021	ug/L		12/11/17 13:08	12/13/17 20:29	1
Phenol	ND		4.2	0.053	ug/L		12/11/17 13:08	12/13/17 20:29	1
Pyrene	ND		2.1	0.042	ug/L		12/11/17 13:08	12/13/17 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*55*		*48 - 125*	*12/11/17 13:08*	*12/13/17 20:29*	*1*
2-Fluorobiphenyl	*75*		*50 - 120*	*12/11/17 13:08*	*12/13/17 20:29*	*1*
2-Fluorophenol (Surr)	*74*		*50 - 120*	*12/11/17 13:08*	*12/13/17 20:29*	*1*
Nitrobenzene-d5 (Surr)	*81*		*52 - 120*	*12/11/17 13:08*	*12/13/17 20:29*	*1*
Phenol-d5 (Surr)	*77*		*52 - 120*	*12/11/17 13:08*	*12/13/17 20:29*	*1*
Terphenyl-d14 (Surr)	*72*		*49 - 133*	*12/11/17 13:08*	*12/13/17 20:29*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.3**		0.20	0.039	mg/L			12/08/17 10:35	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 16:58	1
Antimony	**0.00023**	**J**	0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 16:58	1
Barium	**0.11**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 16:58	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:58	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 16:58	1
Chromium	**0.00017**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 16:58	1
Copper	**0.0011**	**J**	0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 16:58	1
Iron	ND		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 16:58	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 16:58	1
Manganese	**0.00050**	**J**	0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 16:58	1
Nickel	**0.00057**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 16:58	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 16:58	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:58	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 16:58	1
Vanadium	**0.0025**	**J**	0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 16:58	1
Zinc	ND		0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 16:58	1

Client Sample ID: MW-5-120717

Lab Sample ID: 590-7675-4

Date Collected: 12/07/17 11:16

Matrix: Water

Date Received: 12/07/17 16:40

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0012**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:28	1
Antimony	**0.00027**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:28	1
Barium	**0.086**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:28	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:28	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:28	1
Chromium	**0.00015**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:28	1
Copper	**0.0010**	**J**	0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:28	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:28	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:28	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:28	1
Nickel	**0.00052**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:28	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:28	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:28	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:28	1
Vanadium	**0.0014**	**J**	0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:28	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:26	1

Client Sample ID: MW-4-120717

Lab Sample ID: 590-7675-5

Date Collected: 12/07/17 10:05

Matrix: Water

Date Received: 12/07/17 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 15:52	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 15:52	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 15:52	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 15:52	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 15:52	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 15:52	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 15:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 15:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 15:52	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 15:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 15:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 15:52	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 15:52	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 15:52	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 15:52	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 15:52	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 15:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 15:52	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 15:52	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 15:52	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 15:52	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 15:52	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 15:52	1

Client Sample ID: MW-4-120717
Date Collected: 12/07/17 10:05
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 15:52	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 15:52	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 15:52	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 15:52	1
Acetone	ND		30	14	ug/L			12/08/17 15:52	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 15:52	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 15:52	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 15:52	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 15:52	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 15:52	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 15:52	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 15:52	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 15:52	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 15:52	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 15:52	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 15:52	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 15:52	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 15:52	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 15:52	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 15:52	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 15:52	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 15:52	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 15:52	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 15:52	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 15:52	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 15:52	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 15:52	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 15:52	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 15:52	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 15:52	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 15:52	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 15:52	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 15:52	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 15:52	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 15:52	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 15:52	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 15:52	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 15:52	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 15:52	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 15:52	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 15:52	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 15:52	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 15:52	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 15:52	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 15:52	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/08/17 15:52*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/08/17 15:52*	*1*

Client Sample ID: MW-4-120717
Date Collected: 12/07/17 10:05
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/08/17 15:52*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/08/17 15:52*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 16:45	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 16:45	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 16:45	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 16:45	1
Dicamba	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 16:45	1
Dichlorprop	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 16:45	1
MCPA	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 16:45	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 16:45	1
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	*110*		*51 - 150*	*12/11/17 10:47*	*12/13/17 16:45*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.028**	**J**	0.095	0.010	ug/L		12/11/17 13:08	12/19/17 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*79*		*59 - 120*	*12/11/17 13:08*	*12/19/17 18:04*	*1*
Terphenyl-d14	*87*		*17 - 149*	*12/11/17 13:08*	*12/19/17 18:04*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/11/17 13:08*	*12/19/17 18:04*	*1*
2,4,6-Tribromophenol	*90*		*43 - 122*	*12/11/17 13:08*	*12/19/17 18:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/13/17 20:53	1
1,2-Dichlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
1,3-Dichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/13/17 20:53	1
1,4-Dichlorobenzene	ND		0.38	0.057	ug/L		12/11/17 13:08	12/13/17 20:53	1
1-Methylnaphthalene	ND		0.95	0.028	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,4-Dichlorophenol	ND		3.8	0.86	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,4-Dimethylphenol	ND		3.8	0.79	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,4-Dinitrotoluene	ND		0.95	0.23	ug/L		12/11/17 13:08	12/13/17 20:53	1
2,6-Dinitrotoluene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
2-Chloronaphthalene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
2-Chlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
2-Methylnaphthalene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
2-Methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
2-Nitroaniline	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
2-Nitrophenol	ND		0.95	0.23	ug/L		12/11/17 13:08	12/13/17 20:53	1
3 & 4 Methylphenol	ND		0.76	0.038	ug/L		12/11/17 13:08	12/13/17 20:53	1
3,3'-Dichlorobenzidine	ND		14	3.0	ug/L		12/11/17 13:08	12/13/17 20:53	1

Client Sample ID: MW-4-120717
Date Collected: 12/07/17 10:05
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		2.8	0.69	ug/L		12/11/17 13:08	12/13/17 20:53	1
4,6-Dinitro-2-methylphenol	ND		4.7	0.95	ug/L		12/11/17 13:08	12/13/17 20:53	1
4-Bromophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
4-Chloro-3-methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
4-Chloroaniline	ND		9.5	2.0	ug/L		12/11/17 13:08	12/13/17 20:53	1
4-Chlorophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
4-Nitroaniline	ND		1.9	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
4-Nitrophenol	ND		14	3.5	ug/L		12/11/17 13:08	12/13/17 20:53	1
Acenaphthene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Acenaphthylene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Anthracene	ND		0.038	0.0095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzo[a]anthracene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzo[a]pyrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzo[b]fluoranthene	ND	*	0.95	0.047	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzo[g,h,i]perylene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzo[k]fluoranthene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzoic acid	**0.63**	**J**	2.8	0.57	ug/L		12/11/17 13:08	12/13/17 20:53	1
Benzyl alcohol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Bis(2-chloroethoxy)methane	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Bis(2-chloroethyl)ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Bis(2-ethylhexyl) phthalate	ND		14	2.1	ug/L		12/11/17 13:08	12/13/17 20:53	1
bis(chloroisopropyl) ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Butyl benzyl phthalate	ND		9.5	0.70	ug/L		12/11/17 13:08	12/13/17 20:53	1
Carbazole	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Chrysene	ND		0.57	0.0095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Dibenz(a,h)anthracene	ND	*	0.57	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Dibenzofuran	ND		0.38	0.057	ug/L		12/11/17 13:08	12/13/17 20:53	1
Diethyl phthalate	ND		11	2.7	ug/L		12/11/17 13:08	12/13/17 20:53	1
Dimethyl phthalate	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Di-n-butyl phthalate	ND		2.8	0.52	ug/L		12/11/17 13:08	12/13/17 20:53	1
Di-n-octyl phthalate	ND		0.95	0.17	ug/L		12/11/17 13:08	12/13/17 20:53	1
Fluoranthene	ND		2.8	0.0095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Fluorene	ND		1.9	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Hexachlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Hexachlorobutadiene	ND		0.95	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Hexachlorocyclopentadiene	ND		1.9	0.37	ug/L		12/11/17 13:08	12/13/17 20:53	1
Hexachloroethane	ND		0.95	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Indeno[1,2,3-cd]pyrene	ND		0.95	0.047	ug/L		12/11/17 13:08	12/13/17 20:53	1
Isophorone	ND		0.38	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Naphthalene	ND		0.38	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Nitrobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
N-Nitrosodi-n-propylamine	ND		0.57	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
N-Nitrosodiphenylamine	ND		2.8	0.095	ug/L		12/11/17 13:08	12/13/17 20:53	1
Pentachlorophenol	ND		4.7	0.95	ug/L		12/11/17 13:08	12/13/17 20:53	1
Phenanthrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/13/17 20:53	1
Phenol	**0.060**	**J**	3.8	0.047	ug/L		12/11/17 13:08	12/13/17 20:53	1
Pyrene	ND		1.9	0.038	ug/L		12/11/17 13:08	12/13/17 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*82*		*48 - 125*	*12/11/17 13:08*	*12/13/17 20:53*	*1*

Client Sample ID: MW-4-120717

Date Collected: 12/07/17 10:05
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-5

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*50 - 120*	*12/11/17 13:08*	*12/13/17 20:53*	*1*
2-Fluorophenol (Surr)	*74*		*50 - 120*	*12/11/17 13:08*	*12/13/17 20:53*	*1*
Nitrobenzene-d5 (Surr)	*87*		*52 - 120*	*12/11/17 13:08*	*12/13/17 20:53*	*1*
Phenol-d5 (Surr)	*78*		*52 - 120*	*12/11/17 13:08*	*12/13/17 20:53*	*1*
Terphenyl-d14 (Surr)	*88*		*49 - 133*	*12/11/17 13:08*	*12/13/17 20:53*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**1.2**		0.20	0.039	mg/L			12/08/17 10:47	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0014**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 17:02	1
Antimony	**0.00032**	**J**	0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 17:02	1
Barium	**0.020**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 17:02	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:02	1
Cadmium	**0.0011**		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 17:02	1
Chromium	**0.00019**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 17:02	1
Copper	**0.0021**		0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 17:02	1
Iron	**0.045**	**J**	0.20	0.036	mg/L		12/21/17 11:07	12/21/17 17:02	1
Lead	**0.0039**		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 17:02	1
Manganese	**0.0037**		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 17:02	1
Nickel	**0.00045**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 17:02	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 17:02	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:02	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 17:02	1
Vanadium	**0.0018**	**J**	0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 17:02	1
Zinc	**0.0034**	**J**	0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 17:02	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0011**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:32	1
Antimony	**0.00017**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:32	1
Barium	**0.017**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:32	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:32	1
Cadmium	**0.0010**		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:32	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:32	1
Copper	**0.0019**	**J**	0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:32	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:32	1
Lead	**0.00061**	**J**	0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:32	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:32	1
Nickel	**0.00031**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:32	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:32	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:32	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:32	1
Vanadium	**0.0011**	**J**	0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:32	1
Zinc	**0.0023**	**J**	0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:32	1

Client Sample ID: MW-4-120717

Lab Sample ID: 590-7675-5

Date Collected: 12/07/17 10:05

Matrix: Water

Date Received: 12/07/17 16:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:27	1

Client Sample ID: MW-12A-120717

Lab Sample ID: 590-7675-6

Date Collected: 12/07/17 14:22

Matrix: Water

Date Received: 12/07/17 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 16:13	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 16:13	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 16:13	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 16:13	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 16:13	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 16:13	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 16:13	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 16:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 16:13	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 16:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 16:13	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 16:13	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 16:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 16:13	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 16:13	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 16:13	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 16:13	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 16:13	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 16:13	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 16:13	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 16:13	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 16:13	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 16:13	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 16:13	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 16:13	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 16:13	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 16:13	1
Acetone	ND		30	14	ug/L			12/08/17 16:13	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 16:13	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 16:13	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 16:13	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 16:13	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 16:13	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 16:13	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 16:13	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 16:13	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 16:13	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 16:13	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 16:13	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 16:13	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 16:13	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 16:13	1

Client Sample ID: MW-12A-120717
Date Collected: 12/07/17 14:22
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 16:13	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 16:13	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 16:13	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 16:13	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 16:13	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 16:13	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 16:13	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 16:13	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 16:13	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 16:13	1
Methylene Chloride	**6.4**		5.0	1.0	ug/L			12/08/17 16:13	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 16:13	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 16:13	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 16:13	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 16:13	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 16:13	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 16:13	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 16:13	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 16:13	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 16:13	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 16:13	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 16:13	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 16:13	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 16:13	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 16:13	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 16:13	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*12/08/17 16:13*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/08/17 16:13*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/08/17 16:13*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/08/17 16:13*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 17:11	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 17:11	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 17:11	1
Dalapon	ND		0.43	0.11	ug/L		12/11/17 10:47	12/13/17 17:11	1
Dicamba	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 17:11	1
Dichlorprop	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 17:11	1
MCPA	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 17:11	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 17:11	1
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*113*		*51 - 150*	*12/11/17 10:47*	*12/13/17 17:11*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-12A-120717
Date Collected: 12/07/17 14:22
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-6
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.033	J	0.095	0.011	ug/L		12/11/17 13:08	12/19/17 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*100*		*59 - 120*	*12/11/17 13:08*	*12/19/17 18:29*	*1*
Terphenyl-d14	*114*		*17 - 149*	*12/11/17 13:08*	*12/19/17 18:29*	*1*
2-Fluorobiphenyl	*99*		*50 - 120*	*12/11/17 13:08*	*12/19/17 18:29*	*1*
2,4,6-Tribromophenol	*113*		*43 - 122*	*12/11/17 13:08*	*12/19/17 18:29*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/14/17 12:39	1
1,2-Dichlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
1,3-Dichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/14/17 12:39	1
1,4-Dichlorobenzene	ND		0.38	0.057	ug/L		12/11/17 13:08	12/14/17 12:39	1
1-Methylnaphthalene	ND		0.95	0.029	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,4-Dichlorophenol	ND		3.8	0.87	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,4-Dimethylphenol	ND		3.8	0.79	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,4-Dinitrotoluene	ND		0.95	0.23	ug/L		12/11/17 13:08	12/14/17 12:39	1
2,6-Dinitrotoluene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
2-Chloronaphthalene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
2-Chlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
2-Methylnaphthalene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
2-Methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
2-Nitroaniline	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
2-Nitrophenol	ND		0.95	0.23	ug/L		12/11/17 13:08	12/14/17 12:39	1
3 & 4 Methylphenol	ND		0.76	0.038	ug/L		12/11/17 13:08	12/14/17 12:39	1
3,3'-Dichlorobenzidine	ND		14	3.0	ug/L		12/11/17 13:08	12/14/17 12:39	1
3-Nitroaniline	ND		2.9	0.70	ug/L		12/11/17 13:08	12/14/17 12:39	1
4,6-Dinitro-2-methylphenol	ND		4.8	0.95	ug/L		12/11/17 13:08	12/14/17 12:39	1
4-Bromophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
4-Chloro-3-methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
4-Chloroaniline	ND		9.5	2.0	ug/L		12/11/17 13:08	12/14/17 12:39	1
4-Chlorophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
4-Nitroaniline	ND		1.9	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
4-Nitrophenol	ND		14	3.6	ug/L		12/11/17 13:08	12/14/17 12:39	1
Acenaphthene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Acenaphthylene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Anthracene	ND		0.038	0.0095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzo[a]anthracene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzo[a]pyrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzo[b]fluoranthene	ND	*	0.95	0.048	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzo[g,h,i]perylene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzo[k]fluoranthene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzoic acid	0.67	J	2.9	0.57	ug/L		12/11/17 13:08	12/14/17 12:39	1
Benzyl alcohol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Bis(2-chloroethoxy)methane	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Bis(2-chloroethyl)ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1

Client Sample ID: MW-12A-120717
Date Collected: 12/07/17 14:22
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		14	2.1	ug/L		12/11/17 13:08	12/14/17 12:39	1
bis(chloroisopropyl) ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Butyl benzyl phthalate	ND		9.5	0.71	ug/L		12/11/17 13:08	12/14/17 12:39	1
Carbazole	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Chrysene	ND		0.57	0.0095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Dibenz(a,h)anthracene	ND	*	0.57	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Dibenzofuran	ND		0.38	0.057	ug/L		12/11/17 13:08	12/14/17 12:39	1
Diethyl phthalate	ND		11	2.7	ug/L		12/11/17 13:08	12/14/17 12:39	1
Dimethyl phthalate	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/11/17 13:08	12/14/17 12:39	1
Di-n-octyl phthalate	ND		0.95	0.17	ug/L		12/11/17 13:08	12/14/17 12:39	1
Fluoranthene	ND		2.9	0.0095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Fluorene	ND		1.9	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Hexachlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Hexachlorobutadiene	ND		0.95	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Hexachlorocyclopentadiene	ND		1.9	0.37	ug/L		12/11/17 13:08	12/14/17 12:39	1
Hexachloroethane	ND		0.95	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Indeno[1,2,3-cd]pyrene	ND		0.95	0.048	ug/L		12/11/17 13:08	12/14/17 12:39	1
Isophorone	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Naphthalene	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Nitrobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
N-Nitrosodi-n-propylamine	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
N-Nitrosodiphenylamine	ND		2.9	0.095	ug/L		12/11/17 13:08	12/14/17 12:39	1
Pentachlorophenol	ND		4.8	0.95	ug/L		12/11/17 13:08	12/14/17 12:39	1
Phenanthrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 12:39	1
Phenol	ND		3.8	0.048	ug/L		12/11/17 13:08	12/14/17 12:39	1
Pyrene	ND		1.9	0.038	ug/L		12/11/17 13:08	12/14/17 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*48 - 125*	*12/11/17 13:08*	*12/14/17 12:39*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/11/17 13:08*	*12/14/17 12:39*	*1*
2-Fluorophenol (Surr)	*77*		*50 - 120*	*12/11/17 13:08*	*12/14/17 12:39*	*1*
Nitrobenzene-d5 (Surr)	*88*		*52 - 120*	*12/11/17 13:08*	*12/14/17 12:39*	*1*
Phenol-d5 (Surr)	*75*		*52 - 120*	*12/11/17 13:08*	*12/14/17 12:39*	*1*
Terphenyl-d14 (Surr)	*96*		*49 - 133*	*12/11/17 13:08*	*12/14/17 12:39*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**3.4**		0.20	0.039	mg/L			12/08/17 10:59	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0011**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 17:06	1
Antimony	ND		0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 17:06	1
Barium	**0.0077**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 17:06	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:06	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 17:06	1
Chromium	**0.00025**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 17:06	1
Copper	**0.00068**	**J**	0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 17:06	1
Iron	**0.21**		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 17:06	1

Client Sample ID: MW-12A-120717

Date Collected: 12/07/17 14:22
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-6
Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.00032**	**J**	0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 17:06	1
Manganese	**0.0072**		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 17:06	1
Nickel	**0.00021**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 17:06	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 17:06	1
Silver	**0.00013**	**J**	0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:06	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 17:06	1
Vanadium	**0.0091**		0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 17:06	1
Zinc	**0.0042**	**J**	0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 17:06	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00092**	**J**	0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:36	1
Antimony	**0.00020**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:36	1
Barium	**0.0059**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:36	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:36	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:36	1
Chromium	**0.00027**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:36	1
Copper	ND		0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:36	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:36	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:36	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:36	1
Nickel	**0.00014**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:36	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:36	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:36	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:36	1
Vanadium	**0.0075**		0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:36	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:28	1

Client Sample ID: MW-14-120717

Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 16:34	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 16:34	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 16:34	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 16:34	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 16:34	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 16:34	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 16:34	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 16:34	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 16:34	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 16:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 16:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 16:34	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-14-120717
Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 16:34	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 16:34	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 16:34	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 16:34	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 16:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 16:34	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 16:34	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 16:34	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 16:34	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 16:34	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 16:34	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 16:34	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 16:34	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 16:34	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 16:34	1
Acetone	ND		30	14	ug/L			12/08/17 16:34	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 16:34	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 16:34	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 16:34	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 16:34	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 16:34	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 16:34	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 16:34	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 16:34	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 16:34	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 16:34	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 16:34	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 16:34	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 16:34	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 16:34	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 16:34	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 16:34	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 16:34	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 16:34	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 16:34	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 16:34	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 16:34	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 16:34	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 16:34	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 16:34	1
Methylene Chloride	**1.7**	**J**	5.0	1.0	ug/L			12/08/17 16:34	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 16:34	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 16:34	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 16:34	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 16:34	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 16:34	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 16:34	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 16:34	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 16:34	1

Client Sample ID: MW-14-120717
Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 16:34	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 16:34	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 16:34	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 16:34	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 16:34	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 16:34	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 16:34	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*		*12/08/17 16:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*69 - 120*		*12/08/17 16:34*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/08/17 16:34*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/08/17 16:34*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 17:36	1
2,4-D	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 17:36	1
2,4-DB	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 17:36	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 17:36	1
Dicamba	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 17:36	1
Dichlorprop	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 17:36	1
MCPA	ND		0.28	0.044	ug/L		12/11/17 10:47	12/13/17 17:36	1
Silvex (2,4,5-TP)	ND		0.28	0.055	ug/L		12/11/17 10:47	12/13/17 17:36	1
MCPP	ND		0.28	0.022	ug/L		12/11/17 10:47	12/13/17 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*114*		*51 - 150*	*12/11/17 10:47*	*12/13/17 17:36*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.027**	**J**	0.095	0.010	ug/L		12/11/17 13:08	12/19/17 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*59 - 120*	*12/11/17 13:08*	*12/19/17 18:53*	*1*
Terphenyl-d14	*92*		*17 - 149*	*12/11/17 13:08*	*12/19/17 18:53*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*12/11/17 13:08*	*12/19/17 18:53*	*1*
2,4,6-Tribromophenol	*87*		*43 - 122*	*12/11/17 13:08*	*12/19/17 18:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/14/17 13:03	1
1,2-Dichlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
1,3-Dichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/14/17 13:03	1
1,4-Dichlorobenzene	ND		0.38	0.057	ug/L		12/11/17 13:08	12/14/17 13:03	1
1-Methylnaphthalene	ND		0.95	0.029	ug/L		12/11/17 13:08	12/14/17 13:03	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
2,4-Dichlorophenol	ND		3.8	0.87	ug/L		12/11/17 13:08	12/14/17 13:03	1
2,4-Dimethylphenol	ND		3.8	0.79	ug/L		12/11/17 13:08	12/14/17 13:03	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-14-120717
Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		4.8	0.95	ug/L		12/11/17 13:08	12/14/17 13:03	1
2,4-Dinitrotoluene	ND		0.95	0.23	ug/L		12/11/17 13:08	12/14/17 13:03	1
2,6-Dinitrotoluene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
2-Chloronaphthalene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
2-Chlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
2-Methylnaphthalene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
2-Methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
2-Nitroaniline	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
2-Nitrophenol	ND		0.95	0.23	ug/L		12/11/17 13:08	12/14/17 13:03	1
3 & 4 Methylphenol	ND		0.76	0.038	ug/L		12/11/17 13:08	12/14/17 13:03	1
3,3'-Dichlorobenzidine	ND		14	3.0	ug/L		12/11/17 13:08	12/14/17 13:03	1
3-Nitroaniline	ND		2.9	0.69	ug/L		12/11/17 13:08	12/14/17 13:03	1
4,6-Dinitro-2-methylphenol	ND		4.8	0.95	ug/L		12/11/17 13:08	12/14/17 13:03	1
4-Bromophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
4-Chloro-3-methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
4-Chloroaniline	ND		9.5	2.0	ug/L		12/11/17 13:08	12/14/17 13:03	1
4-Chlorophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
4-Nitroaniline	ND		1.9	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
4-Nitrophenol	ND		14	3.6	ug/L		12/11/17 13:08	12/14/17 13:03	1
Acenaphthene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Acenaphthylene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Anthracene	ND		0.038	0.0095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzo[a]anthracene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzo[a]pyrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzo[b]fluoranthene	ND	*	0.95	0.048	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzo[g,h,i]perylene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzo[k]fluoranthene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzoic acid	ND		2.9	0.57	ug/L		12/11/17 13:08	12/14/17 13:03	1
Benzyl alcohol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Bis(2-chloroethoxy)methane	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Bis(2-chloroethyl)ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Bis(2-ethylhexyl) phthalate	ND		14	2.1	ug/L		12/11/17 13:08	12/14/17 13:03	1
bis(chloroisopropyl) ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Butyl benzyl phthalate	ND		9.5	0.70	ug/L		12/11/17 13:08	12/14/17 13:03	1
Carbazole	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Chrysene	ND		0.57	0.0095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Dibenz(a,h)anthracene	ND	*	0.57	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Dibenzofuran	ND		0.38	0.057	ug/L		12/11/17 13:08	12/14/17 13:03	1
Diethyl phthalate	ND		11	2.7	ug/L		12/11/17 13:08	12/14/17 13:03	1
Dimethyl phthalate	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Di-n-butyl phthalate	ND		2.9	0.52	ug/L		12/11/17 13:08	12/14/17 13:03	1
Di-n-octyl phthalate	ND		0.95	0.17	ug/L		12/11/17 13:08	12/14/17 13:03	1
Fluoranthene	ND		2.9	0.0095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Fluorene	ND		1.9	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Hexachlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Hexachlorobutadiene	ND		0.95	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Hexachlorocyclopentadiene	ND		1.9	0.37	ug/L		12/11/17 13:08	12/14/17 13:03	1
Hexachloroethane	ND		0.95	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Indeno[1,2,3-cd]pyrene	ND		0.95	0.048	ug/L		12/11/17 13:08	12/14/17 13:03	1

Client Sample ID: MW-14-120717

Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Naphthalene	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Nitrobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
N-Nitrosodi-n-propylamine	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
N-Nitrosodiphenylamine	ND		2.9	0.095	ug/L		12/11/17 13:08	12/14/17 13:03	1
Pentachlorophenol	ND		4.8	0.95	ug/L		12/11/17 13:08	12/14/17 13:03	1
Phenanthrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:03	1
Phenol	ND		3.8	0.048	ug/L		12/11/17 13:08	12/14/17 13:03	1
Pyrene	ND		1.9	0.038	ug/L		12/11/17 13:08	12/14/17 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/11/17 13:08*	*12/14/17 13:03*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*12/11/17 13:08*	*12/14/17 13:03*	*1*
2-Fluorophenol (Surr)	*71*		*50 - 120*	*12/11/17 13:08*	*12/14/17 13:03*	*1*
Nitrobenzene-d5 (Surr)	*91*		*52 - 120*	*12/11/17 13:08*	*12/14/17 13:03*	*1*
Phenol-d5 (Surr)	*73*		*52 - 120*	*12/11/17 13:08*	*12/14/17 13:03*	*1*
Terphenyl-d14 (Surr)	*88*		*49 - 133*	*12/11/17 13:08*	*12/14/17 13:03*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.2**		0.20	0.039	mg/L			12/08/17 11:24	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 17:10	1
Antimony	ND		0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 17:10	1
Barium	**0.047**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 17:10	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:10	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 17:10	1
Chromium	**0.00039**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 17:10	1
Copper	**0.00081**	**J**	0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 17:10	1
Iron	ND		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 17:10	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 17:10	1
Manganese	**0.00048**	**J**	0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 17:10	1
Nickel	**0.00024**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 17:10	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 17:10	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:10	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 17:10	1
Vanadium	**0.0030**	**J**	0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 17:10	1
Zinc	ND		0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 17:10	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0013**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:40	1
Antimony	ND		0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:40	1
Barium	**0.036**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:40	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:40	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:40	1
Chromium	**0.00034**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:40	1
Copper	**0.00074**	**J**	0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:40	1

Client Sample ID: MW-14-120717

Lab Sample ID: 590-7675-7

Date Collected: 12/07/17 13:18

Matrix: Water

Date Received: 12/07/17 16:40

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:40	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:40	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:40	1
Nickel	**0.00017**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:40	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:40	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:40	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:40	1
Vanadium	**0.0020**	**J**	0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:40	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**0.0024**	**J**	0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:29	1

Client Sample ID: MW-16-120717

Lab Sample ID: 590-7675-8

Date Collected: 12/07/17 11:31

Matrix: Water

Date Received: 12/07/17 16:40

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:02	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 18:02	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 18:02	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 18:02	1
Dicamba	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:02	1
Dichlorprop	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:02	1
MCPA	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:02	1
Silvex (2,4,5-TP)	ND		0.27	0.055	ug/L		12/11/17 10:47	12/13/17 18:02	1
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*108*		*51 - 150*	*12/11/17 10:47*	*12/13/17 18:02*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.050**	**J**	0.095	0.010	ug/L		12/11/17 13:08	12/19/17 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*78*		*59 - 120*	*12/11/17 13:08*	*12/19/17 19:18*	*1*
Terphenyl-d14	*85*		*17 - 149*	*12/11/17 13:08*	*12/19/17 19:18*	*1*
2-Fluorobiphenyl	*78*		*50 - 120*	*12/11/17 13:08*	*12/19/17 19:18*	*1*
2,4,6-Tribromophenol	*88*		*43 - 122*	*12/11/17 13:08*	*12/19/17 19:18*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/14/17 13:28	1
1,2-Dichlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
1,3-Dichlorobenzene	ND		0.38	0.038	ug/L		12/11/17 13:08	12/14/17 13:28	1
1,4-Dichlorobenzene	ND		0.38	0.057	ug/L		12/11/17 13:08	12/14/17 13:28	1
1-Methylnaphthalene	ND		0.95	0.028	ug/L		12/11/17 13:08	12/14/17 13:28	1
2,4,5-Trichlorophenol	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-16-120717
Date Collected: 12/07/17 11:31
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-8
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
2,4-Dichlorophenol	ND		3.8	0.86	ug/L		12/11/17 13:08	12/14/17 13:28	1
2,4-Dimethylphenol	ND		3.8	0.79	ug/L		12/11/17 13:08	12/14/17 13:28	1
2,4-Dinitrophenol	ND		4.7	0.95	ug/L		12/11/17 13:08	12/14/17 13:28	1
2,4-Dinitrotoluene	ND		0.95	0.23	ug/L		12/11/17 13:08	12/14/17 13:28	1
2,6-Dinitrotoluene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
2-Chloronaphthalene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
2-Chlorophenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
2-Methylnaphthalene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
2-Methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
2-Nitroaniline	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
2-Nitrophenol	ND		0.95	0.23	ug/L		12/11/17 13:08	12/14/17 13:28	1
3 & 4 Methylphenol	ND		0.76	0.038	ug/L		12/11/17 13:08	12/14/17 13:28	1
3,3'-Dichlorobenzidine	ND		14	3.0	ug/L		12/11/17 13:08	12/14/17 13:28	1
3-Nitroaniline	ND		2.8	0.69	ug/L		12/11/17 13:08	12/14/17 13:28	1
4,6-Dinitro-2-methylphenol	ND		4.7	0.95	ug/L		12/11/17 13:08	12/14/17 13:28	1
4-Bromophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
4-Chloro-3-methylphenol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
4-Chloroaniline	ND		9.5	2.0	ug/L		12/11/17 13:08	12/14/17 13:28	1
4-Chlorophenyl phenyl ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
4-Nitroaniline	ND		1.9	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
4-Nitrophenol	ND		14	3.5	ug/L		12/11/17 13:08	12/14/17 13:28	1
Acenaphthene	ND		0.38	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Acenaphthylene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Anthracene	ND		0.038	0.0095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzo[a]anthracene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzo[a]pyrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzo[b]fluoranthene	ND	*	0.95	0.047	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzo[g,h,i]perylene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzo[k]fluoranthene	ND	*	0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzoic acid	**0.72**	**J**	2.8	0.57	ug/L		12/11/17 13:08	12/14/17 13:28	1
Benzyl alcohol	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Bis(2-chloroethoxy)methane	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Bis(2-chloroethyl)ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Bis(2-ethylhexyl) phthalate	**2.4**	**J**	14	2.1	ug/L		12/11/17 13:08	12/14/17 13:28	1
bis(chloroisopropyl) ether	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Butyl benzyl phthalate	ND		9.5	0.70	ug/L		12/11/17 13:08	12/14/17 13:28	1
Carbazole	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Chrysene	ND		0.57	0.0095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Dibenz(a,h)anthracene	ND	*	0.57	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Dibenzofuran	ND		0.38	0.057	ug/L		12/11/17 13:08	12/14/17 13:28	1
Diethyl phthalate	ND		11	2.7	ug/L		12/11/17 13:08	12/14/17 13:28	1
Dimethyl phthalate	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Di-n-butyl phthalate	ND		2.8	0.52	ug/L		12/11/17 13:08	12/14/17 13:28	1
Di-n-octyl phthalate	**0.18**	**J**	0.95	0.17	ug/L		12/11/17 13:08	12/14/17 13:28	1
Fluoranthene	ND		2.8	0.0095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Fluorene	ND		1.9	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Hexachlorobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Hexachlorobutadiene	ND		0.95	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1

Client Sample ID: MW-16-120717

Date Collected: 12/07/17 11:31
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-8

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		1.9	0.37	ug/L		12/11/17 13:08	12/14/17 13:28	1
Hexachloroethane	ND		0.95	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Indeno[1,2,3-cd]pyrene	ND		0.95	0.047	ug/L		12/11/17 13:08	12/14/17 13:28	1
Isophorone	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Naphthalene	ND		0.38	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Nitrobenzene	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
N-Nitrosodi-n-propylamine	ND		0.57	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
N-Nitrosodiphenylamine	ND		2.8	0.095	ug/L		12/11/17 13:08	12/14/17 13:28	1
Pentachlorophenol	ND		4.7	0.95	ug/L		12/11/17 13:08	12/14/17 13:28	1
Phenanthrene	ND		0.95	0.019	ug/L		12/11/17 13:08	12/14/17 13:28	1
Phenol	**0.14**	**J**	3.8	0.047	ug/L		12/11/17 13:08	12/14/17 13:28	1
Pyrene	ND		1.9	0.038	ug/L		12/11/17 13:08	12/14/17 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*48 - 125*	*12/11/17 13:08*	*12/14/17 13:28*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/11/17 13:08*	*12/14/17 13:28*	*1*
2-Fluorophenol (Surr)	*75*		*50 - 120*	*12/11/17 13:08*	*12/14/17 13:28*	*1*
Nitrobenzene-d5 (Surr)	*87*		*52 - 120*	*12/11/17 13:08*	*12/14/17 13:28*	*1*
Phenol-d5 (Surr)	*77*		*52 - 120*	*12/11/17 13:08*	*12/14/17 13:28*	*1*
Terphenyl-d14 (Surr)	*84*		*49 - 133*	*12/11/17 13:08*	*12/14/17 13:28*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**2.9**		0.20	0.039	mg/L			12/08/17 11:36	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 17:14	1
Antimony	**0.00012**	**J**	0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 17:14	1
Barium	**0.034**		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 17:14	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:14	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 17:14	1
Chromium	**0.00028**	**J**	0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 17:14	1
Copper	**0.0032**		0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 17:14	1
Iron	**0.072**	**J**	0.20	0.036	mg/L		12/21/17 11:07	12/21/17 17:14	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 17:14	1
Manganese	**0.0020**		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 17:14	1
Nickel	**0.00076**	**J**	0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 17:14	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 17:14	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 17:14	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 17:14	1
Vanadium	**0.0038**	**J**	0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 17:14	1
Zinc	**0.0019**	**J**	0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 17:14	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:44	1
Antimony	**0.00022**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:44	1
Barium	**0.026**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:44	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:44	1

Client Sample ID: MW-16-120717

Lab Sample ID: 590-7675-8

Date Collected: 12/07/17 11:31

Matrix: Water

Date Received: 12/07/17 16:40

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:44	1
Chromium	**0.00024**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:44	1
Copper	**0.0027**		0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:44	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:44	1
Lead	**0.00057**	**J**	0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:44	1
Manganese	**0.00050**	**J**	0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:44	1
Nickel	**0.00072**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:44	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:44	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:44	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:44	1
Vanadium	**0.0026**	**J**	0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:44	1
Zinc	**0.0019**	**J**	0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:30	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-7675-9

Date Collected: 12/07/17 00:01

Matrix: Water

Date Received: 12/07/17 16:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 17:36	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 17:36	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 17:36	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 17:36	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 17:36	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 17:36	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 17:36	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 17:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 17:36	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 17:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 17:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 17:36	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 17:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 17:36	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 17:36	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 17:36	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 17:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 17:36	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 17:36	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 17:36	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 17:36	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 17:36	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 17:36	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 17:36	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 17:36	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 17:36	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 17:36	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: Trip Blank
Date Collected: 12/07/17 00:01
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		30	14	ug/L			12/08/17 17:36	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 17:36	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 17:36	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 17:36	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 17:36	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 17:36	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 17:36	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 17:36	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 17:36	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 17:36	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 17:36	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 17:36	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 17:36	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 17:36	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 17:36	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 17:36	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 17:36	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 17:36	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 17:36	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 17:36	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 17:36	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 17:36	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 17:36	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 17:36	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 17:36	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 17:36	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 17:36	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 17:36	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 17:36	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 17:36	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 17:36	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 17:36	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 17:36	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 17:36	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 17:36	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 17:36	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 17:36	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 17:36	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 17:36	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 17:36	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 17:36	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*		*12/08/17 17:36*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/08/17 17:36*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/08/17 17:36*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/08/17 17:36*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-15000/8
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 13:47	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 13:47	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 13:47	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 13:47	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 13:47	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 13:47	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 13:47	1
1,2,3-Trichlorobenzene	0.612	J	1.0	0.33	ug/L			12/08/17 13:47	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 13:47	1
1,2,4-Trichlorobenzene	0.225	J	1.0	0.16	ug/L			12/08/17 13:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 13:47	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 13:47	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 13:47	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 13:47	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 13:47	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 13:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 13:47	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 13:47	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 13:47	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 13:47	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 13:47	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 13:47	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 13:47	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 13:47	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 13:47	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 13:47	1
Acetone	ND		30	14	ug/L			12/08/17 13:47	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 13:47	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 13:47	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 13:47	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 13:47	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 13:47	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 13:47	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 13:47	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 13:47	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 13:47	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 13:47	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 13:47	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 13:47	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 13:47	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 13:47	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 13:47	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 13:47	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 13:47	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 13:47	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 13:47	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15000/8
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/08/17 13:47	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 13:47	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 13:47	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 13:47	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 13:47	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 13:47	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 13:47	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 13:47	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 13:47	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 13:47	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 13:47	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 13:47	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 13:47	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 13:47	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 13:47	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 13:47	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 13:47	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 13:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*12/08/17 13:47*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/08/17 13:47*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/08/17 13:47*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/08/17 13:47*	*1*

Lab Sample ID: LCS 590-15000/1007
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.5		ug/L		105	75 - 124
1,1,1-Trichloroethane	10.0	10.6		ug/L		106	71 - 130
1,1,2,2-Tetrachloroethane	10.0	9.85		ug/L		99	66 - 122
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	11.5		ug/L		115	70 - 127
1,1-Dichloroethane	10.0	10.5		ug/L		105	79 - 121
1,1-Dichloroethene	10.0	11.4		ug/L		114	69 - 127
1,1-Dichloropropene	10.0	11.5		ug/L		115	76 - 125
1,2,3-Trichlorobenzene	10.0	9.60		ug/L		96	60 - 125
1,2,3-Trichloropropane	10.0	11.0		ug/L		110	60 - 124
1,2,4-Trichlorobenzene	10.0	10.2		ug/L		102	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.33	J	ug/L		93	36 - 140
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	78 - 120
1,2-Dichloroethane	10.0	10.4		ug/L		104	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15000/1007
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.7		ug/L		107	76 - 121
1,3,5-Trimethylbenzene	10.0	10.4		ug/L		104	75 - 122
1,3-Dichlorobenzene	10.0	10.6		ug/L		106	77 - 120
1,3-Dichloropropane	10.0	10.2		ug/L		102	75 - 120
1,4-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 121
2,2-Dichloropropane	10.0	11.1		ug/L		111	49 - 147
2-Butanone (MEK)	50.0	56.2		ug/L		112	40 - 150
2-Chlorotoluene	10.0	11.0		ug/L		110	75 - 121
2-Hexanone	50.0	54.3		ug/L		109	46 - 146
4-Chlorotoluene	10.0	10.7		ug/L		107	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	48.9		ug/L		98	60 - 127
Acetone	50.0	69.9		ug/L		140	20 - 150
Benzene	10.0	11.0		ug/L		110	80 - 120
Bromobenzene	10.0	10.2		ug/L		102	74 - 121
Bromochloromethane	10.0	11.1		ug/L		111	70 - 126
Bromodichloromethane	10.0	10.6		ug/L		106	67 - 125
Bromoform	10.0	9.59		ug/L		96	60 - 122
Bromomethane	10.0	10.8		ug/L		108	45 - 150
Carbon disulfide	10.0	10.8		ug/L		108	67 - 129
Carbon tetrachloride	10.0	10.8		ug/L		108	68 - 134
Chlorobenzene	10.0	10.3		ug/L		103	79 - 125
Chloroethane	10.0	10.6		ug/L		106	48 - 150
Chloroform	10.0	10.8		ug/L		108	73 - 126
Chloromethane	10.0	11.0		ug/L		110	51 - 150
cis-1,2-Dichloroethene	10.0	10.8		ug/L		108	76 - 121
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	72 - 120
Dibromochloromethane	10.0	9.62		ug/L		96	72 - 120
Dibromomethane	10.0	9.92		ug/L		99	71 - 120
Dichlorodifluoromethane	10.0	9.17		ug/L		92	32 - 150
Dichlorofluoromethane	10.0	11.1		ug/L		111	60 - 140
Ethylbenzene	10.0	10.8		ug/L		108	80 - 120
Hexachlorobutadiene	10.0	9.95		ug/L		99	62 - 132
Hexane	10.0	11.5		ug/L		115	68 - 125
Isopropylbenzene	10.0	10.5		ug/L		105	77 - 123
m,p-Xylene	10.0	10.7		ug/L		107	80 - 120
Methyl tert-butyl ether	10.0	10.8		ug/L		108	71 - 128
Methylene Chloride	10.0	10.8		ug/L		108	20 - 150
Naphthalene	10.0	9.35		ug/L		93	63 - 124
n-Butylbenzene	10.0	10.8		ug/L		108	71 - 120
N-Propylbenzene	10.0	10.7		ug/L		107	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	10.6		ug/L		106	77 - 120
sec-Butylbenzene	10.0	10.4		ug/L		104	74 - 121
Styrene	10.0	10.5		ug/L		105	73 - 120
tert-Butylbenzene	10.0	10.7		ug/L		107	79 - 120
Tetrachloroethene	10.0	10.7		ug/L		107	71 - 132
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,2-Dichloroethene	10.0	12.2		ug/L		122	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15000/1007
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
trans-1,3-Dichloropropene			10.0	10.1		ug/L		101	70 - 121		
Trichloroethene			10.0	10.5		ug/L		105	75 - 129		
Trichlorofluoromethane			10.0	10.3		ug/L		103	60 - 140		
Vinyl chloride			10.0	10.4		ug/L		104	42 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-15000/9
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			10.0	10.3		ug/L		103	75 - 124	1	15
1,1,1-Trichloroethane			10.0	11.0		ug/L		110	71 - 130	4	25
1,1,2,2-Tetrachloroethane			10.0	10.3		ug/L		103	66 - 122	4	15
1,1,2-Trichloroethane			10.0	10.4		ug/L		104	76 - 120	2	15
1,1,2-Trichlorotrifluoroethane			10.0	11.8		ug/L		118	70 - 127	3	25
1,1-Dichloroethane			10.0	10.5		ug/L		105	79 - 121	0	25
1,1-Dichloroethene			10.0	11.7		ug/L		117	69 - 127	2	14
1,1-Dichloropropene			10.0	11.5		ug/L		115	76 - 125	0	15
1,2,3-Trichlorobenzene			10.0	9.95		ug/L		99	60 - 125	4	15
1,2,3-Trichloropropane			10.0	10.4		ug/L		104	60 - 124	5	15
1,2,4-Trichlorobenzene			10.0	9.88		ug/L		99	66 - 124	3	15
1,2,4-Trimethylbenzene			10.0	10.2		ug/L		102	77 - 120	2	15
1,2-Dibromo-3-Chloropropane			10.0	9.95	J	ug/L		99	36 - 140	6	15
1,2-Dichlorobenzene			10.0	10.5		ug/L		105	78 - 120	2	15
1,2-Dichloroethane			10.0	10.5		ug/L		105	68 - 127	1	12
1,2-Dichloropropane			10.0	10.7		ug/L		107	76 - 121	1	15
1,3,5-Trimethylbenzene			10.0	10.5		ug/L		105	75 - 122	1	15
1,3-Dichlorobenzene			10.0	10.5		ug/L		105	77 - 120	0	15
1,3-Dichloropropane			10.0	10.1		ug/L		101	75 - 120	0	15
1,4-Dichlorobenzene			10.0	10.3		ug/L		103	77 - 121	0	15
2,2-Dichloropropane			10.0	11.4		ug/L		114	49 - 147	3	25
2-Butanone (MEK)			50.0	55.9		ug/L		112	40 - 150	0	25
2-Chlorotoluene			10.0	10.8		ug/L		108	75 - 121	2	15
2-Hexanone			50.0	52.3		ug/L		105	46 - 146	4	15
4-Chlorotoluene			10.0	10.3		ug/L		103	74 - 120	4	15
4-Methyl-2-pentanone (MIBK)			50.0	50.2		ug/L		100	60 - 127	3	15
Acetone			50.0	65.3		ug/L		131	20 - 150	7	25
Benzene			10.0	11.1		ug/L		111	80 - 120	1	25
Bromobenzene			10.0	10.2		ug/L		102	74 - 121	0	15
Bromochloromethane			10.0	10.5		ug/L		105	70 - 126	6	25
Bromodichloromethane			10.0	10.8		ug/L		108	67 - 125	2	15
Bromoform			10.0	10.0		ug/L		100	60 - 122	4	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-15000/9
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			10.0	10.3		ug/L		103	45 - 150	4	25
Carbon disulfide			10.0	11.4		ug/L		114	67 - 129	5	25
Carbon tetrachloride			10.0	10.8		ug/L		108	68 - 134	0	25
Chlorobenzene			10.0	10.1		ug/L		101	79 - 125	2	25
Chloroethane			10.0	10.8		ug/L		108	48 - 150	2	25
Chloroform			10.0	10.8		ug/L		108	73 - 126	0	25
Chloromethane			10.0	11.1		ug/L		111	51 - 150	1	15
cis-1,2-Dichloroethene			10.0	10.5		ug/L		105	76 - 121	2	25
cis-1,3-Dichloropropene			10.0	10.3		ug/L		103	72 - 120	1	15
Dibromochloromethane			10.0	9.69		ug/L		97	72 - 120	1	15
Dibromomethane			10.0	10.2		ug/L		102	71 - 120	3	15
Dichlorodifluoromethane			10.0	9.33		ug/L		93	32 - 150	2	25
Dichlorofluoromethane			10.0	11.2		ug/L		112	60 - 140	1	25
Ethylbenzene			10.0	10.8		ug/L		108	80 - 120	0	25
Hexachlorobutadiene			10.0	10.1		ug/L		101	62 - 132	1	15
Hexane			10.0	11.8		ug/L		118	68 - 125	2	15
Isopropylbenzene			10.0	10.4		ug/L		104	77 - 123	1	15
m,p-Xylene			10.0	10.9		ug/L		109	80 - 120	2	25
Methyl tert-butyl ether			10.0	11.1		ug/L		111	71 - 128	3	12
Methylene Chloride			10.0	11.1		ug/L		111	20 - 150	3	25
Naphthalene			10.0	9.49		ug/L		95	63 - 124	1	25
n-Butylbenzene			10.0	10.8		ug/L		108	71 - 120	1	15
N-Propylbenzene			10.0	10.7		ug/L		107	76 - 120	0	15
o-Xylene			10.0	10.6		ug/L		106	80 - 120	0	25
p-Isopropyltoluene			10.0	10.7		ug/L		107	77 - 120	1	15
sec-Butylbenzene			10.0	10.4		ug/L		104	74 - 121	0	15
Styrene			10.0	10.5		ug/L		105	73 - 120	0	15
tert-Butylbenzene			10.0	10.7		ug/L		107	79 - 120	1	15
Tetrachloroethene			10.0	10.8		ug/L		108	71 - 132	1	15
Toluene			10.0	10.6		ug/L		106	80 - 123	1	25
trans-1,2-Dichloroethene			10.0	12.6	*	ug/L		126	75 - 124	3	25
trans-1,3-Dichloropropene			10.0	10.2		ug/L		102	70 - 121	1	15
Trichloroethene			10.0	10.7		ug/L		107	75 - 129	2	25
Trichlorofluoromethane			10.0	10.5		ug/L		105	60 - 140	2	25
Vinyl chloride			10.0	10.5		ug/L		105	42 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 125*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8151A - Herbicides (GC/MS)

Lab Sample ID: MB 580-263171/1-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263171

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
2,4-D	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1
2,4-DB	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dalapon	ND		0.40	0.10	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dicamba	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dichlorprop	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
MCPA	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
Silvex (2,4,5-TP)	ND		0.25	0.050	ug/L		12/11/17 10:47	12/13/17 09:26	1
MCPP	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*88*		*51 - 150*	*12/11/17 10:47*	*12/13/17 09:26*	*1*

Lab Sample ID: LCS 580-263171/2-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263171

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	3.63		ug/L		73	20 - 150		
2,4-D			5.00	3.76		ug/L		75	20 - 150		
2,4-DB			5.00	5.15		ug/L		103	50 - 150		
Dalapon			5.00	2.55		ug/L		51	20 - 120		
Dicamba			5.00	3.55		ug/L		71	20 - 150		
Dichlorprop			5.00	4.71		ug/L		94	23 - 150		
MCPA			5.00	3.72		ug/L		74	21 - 150		
Silvex (2,4,5-TP)			5.00	4.73		ug/L		95	24 - 150		
MCPP			5.00	5.17		ug/L		103	51 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*116*		*51 - 150*

Lab Sample ID: LCSD 580-263171/3-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263171

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.03		ug/L		81	20 - 150	10	35
2,4-D			5.00	4.45		ug/L		89	20 - 150	17	35
2,4-DB			5.00	5.26		ug/L		105	50 - 150	2	35
Dalapon			5.00	3.57		ug/L		71	20 - 120	34	35
Dicamba			5.00	4.54		ug/L		91	20 - 150	25	35
Dichlorprop			5.00	5.56		ug/L		111	23 - 150	16	35
MCPA			5.00	4.30		ug/L		86	21 - 150	15	35
Silvex (2,4,5-TP)			5.00	5.51		ug/L		110	24 - 150	15	35
MCPP			5.00	5.48		ug/L		110	51 - 150	6	35

Method: 8151A - Herbicides (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263171/3-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263171

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*111*		*51 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 15:36	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dichlorophenol	ND		4.0	0.91	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 15:36	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/13/17 15:36	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/11/17 13:08	12/13/17 15:36	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chloroaniline	ND		10	2.1	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Nitrophenol	ND		15	3.7	ug/L		12/11/17 13:08	12/13/17 15:36	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Anthracene	ND		0.040	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[b]fluoranthene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[g,h,i]perylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[k]fluoranthene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzoic acid	ND		3.0	0.60	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/11/17 13:08	12/13/17 15:36	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/11/17 13:08	12/13/17 15:36	1
Carbazole	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Chrysene	ND		0.60	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dibenz(a,h)anthracene	ND		0.60	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 15:36	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/11/17 13:08	12/13/17 15:36	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/11/17 13:08	12/13/17 15:36	1
Fluoranthene	ND		3.0	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Isophorone	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Naphthalene	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
Phenanthrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*66*		*48 - 125*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
2-Fluorophenol (Surr)	*76*		*50 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Nitrobenzene-d5 (Surr)	*83*		*52 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Phenol-d5 (Surr)	*76*		*52 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Terphenyl-d14 (Surr)	*84*		*49 - 133*	*12/11/17 13:08*	*12/13/17 15:36*	*1*

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.45		ug/L		73	46 - 120
1,2-Dichlorobenzene	2.00	1.60		ug/L		80	44 - 120
1,3-Dichlorobenzene	2.00	1.39		ug/L		70	34 - 121
1,4-Dichlorobenzene	2.00	1.42		ug/L		71	40 - 120
1-Methylnaphthalene	2.00	1.63		ug/L		82	65 - 120
2,4,5-Trichlorophenol	2.00	1.77		ug/L		89	56 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2.00	2.14		ug/L		107	55 - 129
2,4-Dichlorophenol	2.00	1.88	J	ug/L		94	60 - 140
2,4-Dimethylphenol	2.00	1.49	J	ug/L		74	20 - 129
2,4-Dinitrophenol	4.00	2.41	J	ug/L		60	20 - 132
2,4-Dinitrotoluene	2.00	1.93		ug/L		96	53 - 143
2,6-Dinitrotoluene	2.00	1.90		ug/L		95	59 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	64 - 125
2-Chlorophenol	2.00	1.84		ug/L		92	69 - 125
2-Methylnaphthalene	2.00	1.55		ug/L		77	56 - 120
2-Methylphenol	2.00	1.68		ug/L		84	53 - 120
2-Nitroaniline	10.0	8.07		ug/L		81	58 - 142
2-Nitrophenol	2.00	1.90		ug/L		95	20 - 143
3 & 4 Methylphenol	2.00	1.71		ug/L		85	54 - 120
3,3'-Dichlorobenzidine	12.0	11.3	J	ug/L		95	20 - 146
3-Nitroaniline	10.0	7.90		ug/L		79	22 - 139
4,6-Dinitro-2-methylphenol	4.00	3.53	J	ug/L		88	20 - 144
4-Bromophenyl phenyl ether	2.00	1.76		ug/L		88	70 - 123
4-Chloro-3-methylphenol	2.00	1.48		ug/L		74	63 - 126
4-Chloroaniline	10.0	7.75	J	ug/L		78	20 - 120
4-Chlorophenyl phenyl ether	2.00	1.83		ug/L		92	69 - 125
4-Nitroaniline	10.0	7.67		ug/L		77	40 - 130
4-Nitrophenol	4.00	ND		ug/L		81	27 - 150
Acenaphthene	2.00	1.63		ug/L		82	62 - 120
Acenaphthylene	2.00	1.52		ug/L		76	24 - 141
Anthracene	2.00	1.59		ug/L		79	20 - 140
Benzo[a]anthracene	2.00	1.76		ug/L		88	59 - 123
Benzo[a]pyrene	2.00	2.39		ug/L		119	20 - 133
Benzo[b]fluoranthene	2.00	2.49		ug/L		124	72 - 129
Benzo[g,h,i]perylene	2.00	2.65		ug/L		133	67 - 133
Benzo[k]fluoranthene	2.00	2.40		ug/L		120	72 - 120
Benzoic acid	4.00	0.830	J	ug/L		21	20 - 145
Benzyl alcohol	2.00	1.55		ug/L		77	42 - 129
Bis(2-chloroethoxy)methane	2.00	1.68		ug/L		84	59 - 125
Bis(2-chloroethyl)ether	2.00	1.64		ug/L		82	64 - 120
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		92	58 - 150
bis(chloroisopropyl) ether	2.00	1.45		ug/L		72	53 - 133
Butyl benzyl phthalate	2.00	2.03	J	ug/L		102	72 - 150
Carbazole	2.00	1.87		ug/L		94	80 - 135
Chrysene	2.00	1.66		ug/L		83	74 - 120
Dibenz(a,h)anthracene	2.00	2.60		ug/L		130	56 - 135
Dibenzofuran	2.00	1.72		ug/L		86	70 - 125
Diethyl phthalate	2.00	ND		ug/L		88	66 - 139
Dimethyl phthalate	2.00	1.73		ug/L		87	74 - 128
Di-n-butyl phthalate	2.00	1.83	J	ug/L		91	74 - 140
Di-n-octyl phthalate	2.00	2.39		ug/L		119	65 - 150
Fluoranthene	2.00	1.84	J	ug/L		92	70 - 135
Fluorene	2.00	1.85	J	ug/L		93	70 - 125
Hexachlorobenzene	2.00	1.46		ug/L		73	55 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	2.00	1.22		ug/L		61	20 - 125
Hexachlorocyclopentadiene	10.0	3.63		ug/L		36	20 - 120
Hexachloroethane	2.00	1.32		ug/L		66	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.53		ug/L		127	64 - 133
Isophorone	2.00	1.75		ug/L		87	64 - 125
Naphthalene	2.00	1.59		ug/L		80	56 - 120
Nitrobenzene	2.00	1.73		ug/L		87	54 - 133
N-Nitrosodi-n-propylamine	10.0	7.21		ug/L		72	54 - 120
N-Nitrosodiphenylamine	11.4	7.87		ug/L		69	22 - 135
Pentachlorophenol	4.00	2.05	J	ug/L		51	20 - 135
Phenanthrene	2.00	1.64		ug/L		82	71 - 120
Phenol	2.00	1.57	J	ug/L		79	53 - 126
Pyrene	2.00	1.87	J	ug/L		93	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*77*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*84*		*52 - 120*
Phenol-d5 (Surr)	*79*		*52 - 120*
Terphenyl-d14 (Surr)	*83*		*49 - 133*

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.68		ug/L		84	46 - 120	14	20
1,2-Dichlorobenzene	2.00	1.73		ug/L		86	44 - 120	8	20
1,3-Dichlorobenzene	2.00	1.56		ug/L		78	34 - 121	11	29
1,4-Dichlorobenzene	2.00	1.55		ug/L		77	40 - 120	8	25
1-Methylnaphthalene	2.00	1.87		ug/L		93	65 - 120	13	20
2,4,5-Trichlorophenol	2.00	1.87		ug/L		93	56 - 122	5	25
2,4,6-Trichlorophenol	2.00	2.12		ug/L		106	55 - 129	1	20
2,4-Dichlorophenol	2.00	2.04	J	ug/L		102	60 - 140	8	26
2,4-Dimethylphenol	2.00	1.53	J	ug/L		76	20 - 129	3	35
2,4-Dinitrophenol	4.00	2.68	J	ug/L		67	20 - 132	11	35
2,4-Dinitrotoluene	2.00	2.04		ug/L		102	53 - 143	6	29
2,6-Dinitrotoluene	2.00	2.06		ug/L		103	59 - 134	8	24
2-Chloronaphthalene	2.00	1.59		ug/L		80	64 - 125	5	20
2-Chlorophenol	2.00	1.92		ug/L		96	69 - 125	4	20
2-Methylnaphthalene	2.00	1.77		ug/L		89	56 - 120	14	20
2-Methylphenol	2.00	1.68		ug/L		84	53 - 120	0	33
2-Nitroaniline	10.0	8.11		ug/L		81	58 - 142	1	20
2-Nitrophenol	2.00	2.18		ug/L		109	20 - 143	14	35
3 & 4 Methylphenol	2.00	1.76		ug/L		88	54 - 120	3	20
3,3'-Dichlorobenzidine	12.0	11.9	J	ug/L		99	20 - 146	5	35
3-Nitroaniline	10.0	8.20		ug/L		82	22 - 139	4	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	4.00	3.60	J	ug/L		90	20 - 144	2	35
4-Bromophenyl phenyl ether	2.00	1.88		ug/L		94	70 - 123	7	20
4-Chloro-3-methylphenol	2.00	1.57		ug/L		79	63 - 126	6	20
4-Chloroaniline	10.0	8.56	J	ug/L		86	20 - 120	10	35
4-Chlorophenyl phenyl ether	2.00	1.92		ug/L		96	69 - 125	5	20
4-Nitroaniline	10.0	8.04		ug/L		80	40 - 130	5	35
4-Nitrophenol	4.00	ND		ug/L		78	27 - 150	4	23
Acenaphthene	2.00	1.68		ug/L		84	62 - 120	3	20
Acenaphthylene	2.00	1.56		ug/L		78	24 - 141	3	20
Anthracene	2.00	1.60		ug/L		80	20 - 140	1	26
Benzo[a]anthracene	2.00	1.86		ug/L		93	59 - 123	5	20
Benzo[a]pyrene	2.00	2.46		ug/L		123	20 - 133	3	35
Benzo[b]fluoranthene	2.00	2.60	*	ug/L		130	72 - 129	4	20
Benzo[g,h,i]perylene	2.00	2.79	*	ug/L		139	67 - 133	5	20
Benzo[k]fluoranthene	2.00	2.72	*	ug/L		136	72 - 120	13	20
Benzoic acid	4.00	0.969	J	ug/L		24	20 - 145	16	35
Benzyl alcohol	2.00	1.61		ug/L		80	42 - 129	4	35
Bis(2-chloroethoxy)methane	2.00	1.71		ug/L		86	59 - 125	2	26
Bis(2-chloroethyl)ether	2.00	1.68		ug/L		84	64 - 120	3	20
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		101	58 - 150	9	35
bis(chloroisopropyl) ether	2.00	1.51		ug/L		75	53 - 133	4	20
Butyl benzyl phthalate	2.00	2.15	J	ug/L		107	72 - 150	6	20
Carbazole	2.00	1.96		ug/L		98	80 - 135	5	20
Chrysene	2.00	1.82		ug/L		91	74 - 120	9	20
Dibenz(a,h)anthracene	2.00	2.76	*	ug/L		138	56 - 135	6	20
Dibenzofuran	2.00	1.81		ug/L		90	70 - 125	5	20
Diethyl phthalate	2.00	ND		ug/L		94	66 - 139	6	20
Dimethyl phthalate	2.00	1.79		ug/L		89	74 - 128	3	20
Di-n-butyl phthalate	2.00	1.86	J	ug/L		93	74 - 140	2	20
Di-n-octyl phthalate	2.00	2.36		ug/L		118	65 - 150	1	20
Fluoranthene	2.00	1.93	J	ug/L		96	70 - 135	4	20
Fluorene	2.00	1.96	J	ug/L		98	70 - 125	6	20
Hexachlorobenzene	2.00	1.54		ug/L		77	55 - 122	5	20
Hexachlorobutadiene	2.00	1.50		ug/L		75	20 - 125	21	31
Hexachlorocyclopentadiene	10.0	4.35		ug/L		44	20 - 120	18	35
Hexachloroethane	2.00	1.45		ug/L		73	24 - 125	10	35
Indeno[1,2,3-cd]pyrene	2.00	2.60		ug/L		130	64 - 133	2	20
Isophorone	2.00	1.84		ug/L		92	64 - 125	5	20
Naphthalene	2.00	1.81		ug/L		90	56 - 120	13	20
Nitrobenzene	2.00	1.77		ug/L		89	54 - 133	2	20
N-Nitrosodi-n-propylamine	10.0	7.60		ug/L		76	54 - 120	5	20
N-Nitrosodiphenylamine	11.4	8.37		ug/L		73	22 - 135	6	29
Pentachlorophenol	4.00	2.15	J	ug/L		54	20 - 135	5	35
Phenanthrene	2.00	1.78		ug/L		89	71 - 120	8	20
Phenol	2.00	1.63	J	ug/L		81	53 - 126	4	26
Pyrene	2.00	1.93	J	ug/L		97	64 - 128	3	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*81*		*48 - 125*
2-Fluorobiphenyl	*77*		*50 - 120*
2-Fluorophenol (Surr)	*79*		*50 - 120*
Nitrobenzene-d5 (Surr)	*89*		*52 - 120*
Phenol-d5 (Surr)	*81*		*52 - 120*
Terphenyl-d14 (Surr)	*83*		*49 - 133*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.10	0.011	ug/L		12/11/17 13:08	12/19/17 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*59 - 120*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
Terphenyl-d14	*90*		*17 - 149*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
2,4,6-Tribromophenol	*64*		*43 - 122*	*12/11/17 13:08*	*12/19/17 12:09*	*1*

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.81		ug/L		90	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*85*		*59 - 120*
Terphenyl-d14	*92*		*17 - 149*
2-Fluorobiphenyl	*81*		*50 - 120*
2,4,6-Tribromophenol	*99*		*43 - 122*

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.77		ug/L		88	40 - 140	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*80*		*59 - 120*
Terphenyl-d14	*82*		*17 - 149*
2-Fluorobiphenyl	*77*		*50 - 120*
2,4,6-Tribromophenol	*91*		*43 - 122*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-14999/1015
Matrix: Water
Analysis Batch: 14999

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/08/17 12:00	1

Lab Sample ID: LCS 590-14999/1014
Matrix: Water
Analysis Batch: 14999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	5.12		mg/L		102	90 - 110		

Lab Sample ID: 590-7675-1 MS
Matrix: Water
Analysis Batch: 14999

Client Sample ID: MW-2A-120717
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	1.9		4.55	6.71		mg/L		106	80 - 120		

Lab Sample ID: 590-7675-1 MSD
Matrix: Water
Analysis Batch: 14999

Client Sample ID: MW-2A-120717
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.9		4.55	6.75		mg/L		107	80 - 120	1	12.1

Lab Sample ID: 590-7675-1 DU
Matrix: Water
Analysis Batch: 14999

Client Sample ID: MW-2A-120717
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate as N	1.9			1.88		mg/L				0.5	13.1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-263398/16-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263398

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			0.100	0.0982		mg/L		98	85 - 115		
Antimony			0.100	0.0945		mg/L		94	85 - 115		
Barium			0.100	0.0962		mg/L		96	85 - 115		
Beryllium			0.100	0.0974		mg/L		97	85 - 115		
Cadmium			0.100	0.0950		mg/L		95	85 - 115		
Chromium			0.100	0.101		mg/L		101	85 - 115		
Copper			0.100	0.0981		mg/L		98	85 - 115		
Iron			10.0	10.1		mg/L		101	85 - 115		
Lead			0.100	0.0988		mg/L		99	85 - 115		
Manganese			0.100	0.0994		mg/L		99	85 - 115		
Nickel			0.100	0.100		mg/L		100	85 - 115		
Selenium			0.100	0.0926		mg/L		93	85 - 115		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-263398/16-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.100	0.0964		mg/L		96	85 - 115
Thallium	0.100	0.0964		mg/L		96	85 - 115
Vanadium	0.100	0.0984		mg/L		98	85 - 115
Zinc	0.100	0.0951		mg/L		95	85 - 115

Lab Sample ID: LCSD 580-263398/17-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263398

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0941		mg/L		94	85 - 115	4	20
Antimony	0.100	0.0910		mg/L		91	85 - 115	4	20
Barium	0.100	0.0914		mg/L		91	85 - 115	5	20
Beryllium	0.100	0.0937		mg/L		94	85 - 115	4	20
Cadmium	0.100	0.0895		mg/L		89	85 - 115	6	20
Chromium	0.100	0.0969		mg/L		97	85 - 115	4	20
Copper	0.100	0.0947		mg/L		95	85 - 115	4	20
Iron	10.0	9.57		mg/L		96	85 - 115	5	20
Lead	0.100	0.0946		mg/L		95	85 - 115	4	20
Manganese	0.100	0.0956		mg/L		96	85 - 115	4	20
Nickel	0.100	0.0956		mg/L		96	85 - 115	5	20
Selenium	0.100	0.0895		mg/L		89	85 - 115	3	20
Silver	0.100	0.0911		mg/L		91	85 - 115	6	20
Thallium	0.100	0.0923		mg/L		92	85 - 115	4	20
Vanadium	0.100	0.0942		mg/L		94	85 - 115	4	20
Zinc	0.100	0.0920		mg/L		92	85 - 115	3	20

Lab Sample ID: MB 580-263946/14-A
Matrix: Water
Analysis Batch: 264010

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263946

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/21/17 11:07	12/21/17 16:04	1
Antimony	ND		0.00040	0.00011	mg/L		12/21/17 11:07	12/21/17 16:04	1
Barium	ND		0.0012	0.000054	mg/L		12/21/17 11:07	12/21/17 16:04	1
Beryllium	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:04	1
Cadmium	ND		0.00040	0.00010	mg/L		12/21/17 11:07	12/21/17 16:04	1
Chromium	ND		0.00040	0.00014	mg/L		12/21/17 11:07	12/21/17 16:04	1
Copper	ND		0.0020	0.00060	mg/L		12/21/17 11:07	12/21/17 16:04	1
Iron	ND		0.20	0.036	mg/L		12/21/17 11:07	12/21/17 16:04	1
Lead	ND		0.00080	0.00020	mg/L		12/21/17 11:07	12/21/17 16:04	1
Manganese	ND		0.0020	0.00046	mg/L		12/21/17 11:07	12/21/17 16:04	1
Nickel	ND		0.0030	0.00011	mg/L		12/21/17 11:07	12/21/17 16:04	1
Selenium	ND		0.0080	0.0021	mg/L		12/21/17 11:07	12/21/17 16:04	1
Silver	ND		0.00040	0.000043	mg/L		12/21/17 11:07	12/21/17 16:04	1
Thallium	ND		0.0010	0.000065	mg/L		12/21/17 11:07	12/21/17 16:04	1
Vanadium	ND		0.0040	0.00046	mg/L		12/21/17 11:07	12/21/17 16:04	1
Zinc	ND		0.0070	0.0019	mg/L		12/21/17 11:07	12/21/17 16:04	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-263946/15-A
Matrix: Water
Analysis Batch: 264010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0960		mg/L		96	85 - 115
Antimony	0.100	0.0939		mg/L		94	85 - 115
Barium	0.100	0.0948		mg/L		95	85 - 115
Beryllium	0.100	0.0949		mg/L		95	85 - 115
Cadmium	0.100	0.0946		mg/L		95	85 - 115
Chromium	0.100	0.0927		mg/L		93	85 - 115
Copper	0.100	0.0904		mg/L		90	85 - 115
Iron	10.0	9.28		mg/L		93	85 - 115
Lead	0.100	0.0924		mg/L		92	85 - 115
Manganese	0.100	0.0913		mg/L		91	85 - 115
Nickel	0.100	0.0904		mg/L		90	85 - 115
Selenium	0.100	0.0966		mg/L		97	85 - 115
Silver	0.100	0.0944		mg/L		94	85 - 115
Thallium	0.100	0.0909		mg/L		91	85 - 115
Vanadium	0.100	0.0926		mg/L		93	85 - 115
Zinc	0.100	0.0932		mg/L		93	85 - 115

Lab Sample ID: LCSD 580-263946/16-A
Matrix: Water
Analysis Batch: 264010

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0945		mg/L		95	85 - 115	2	20
Antimony	0.100	0.0929		mg/L		93	85 - 115	1	20
Barium	0.100	0.0943		mg/L		94	85 - 115	0	20
Beryllium	0.100	0.0904		mg/L		90	85 - 115	5	20
Cadmium	0.100	0.0917		mg/L		92	85 - 115	3	20
Chromium	0.100	0.0914		mg/L		91	85 - 115	1	20
Copper	0.100	0.0895		mg/L		89	85 - 115	1	20
Iron	10.0	9.21		mg/L		92	85 - 115	1	20
Lead	0.100	0.0914		mg/L		91	85 - 115	1	20
Manganese	0.100	0.0907		mg/L		91	85 - 115	1	20
Nickel	0.100	0.0898		mg/L		90	85 - 115	1	20
Selenium	0.100	0.0942		mg/L		94	85 - 115	3	20
Silver	0.100	0.0927		mg/L		93	85 - 115	2	20
Thallium	0.100	0.0883		mg/L		88	85 - 115	3	20
Vanadium	0.100	0.0913		mg/L		91	85 - 115	1	20
Zinc	0.100	0.0926		mg/L		93	85 - 115	1	20

Lab Sample ID: 590-7675-1 MS
Matrix: Water
Analysis Batch: 264010

Client Sample ID: MW-2A-120717
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0021		0.100	0.0976		mg/L		95	70 - 130
Antimony	0.00013	J	0.100	0.0936		mg/L		93	70 - 130
Barium	0.034		0.100	0.127		mg/L		94	70 - 130
Beryllium	ND		0.100	0.0958		mg/L		96	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7675-1 MS
Matrix: Water
Analysis Batch: 264010

Client Sample ID: MW-2A-120717
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		0.100	0.0954		mg/L		95	70 - 130
Chromium	ND		0.100	0.0925		mg/L		92	70 - 130
Copper	0.0028		0.100	0.0923		mg/L		89	70 - 130
Iron	ND		10.0	9.33		mg/L		93	70 - 130
Lead	ND		0.100	0.0928		mg/L		93	70 - 130
Manganese	ND		0.100	0.0907		mg/L		91	70 - 130
Nickel	0.00083	J	0.100	0.0890		mg/L		88	70 - 130
Selenium	ND		0.100	0.0959		mg/L		96	70 - 130
Silver	ND		0.100	0.0934		mg/L		93	70 - 130
Thallium	ND		0.100	0.0913		mg/L		91	70 - 130
Vanadium	0.0062		0.100	0.0992		mg/L		93	70 - 130
Zinc	0.0050	J	0.100	0.0925		mg/L		87	70 - 130

Lab Sample ID: 590-7675-1 MSD
Matrix: Water
Analysis Batch: 264010

Client Sample ID: MW-2A-120717
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0021		0.100	0.101		mg/L		99	70 - 130	4	20
Antimony	0.00013	J	0.100	0.0968		mg/L		97	70 - 130	3	20
Barium	0.034		0.100	0.134		mg/L		100	70 - 130	5	20
Beryllium	ND		0.100	0.0992		mg/L		99	70 - 130	4	20
Cadmium	ND		0.100	0.0994		mg/L		99	70 - 130	4	20
Chromium	ND		0.100	0.0960		mg/L		96	70 - 130	4	20
Copper	0.0028		0.100	0.0946		mg/L		92	70 - 130	3	20
Iron	ND		10.0	9.55		mg/L		95	70 - 130	2	20
Lead	ND		0.100	0.0956		mg/L		96	70 - 130	3	20
Manganese	ND		0.100	0.0938		mg/L		94	70 - 130	3	20
Nickel	0.00083	J	0.100	0.0922		mg/L		91	70 - 130	4	20
Selenium	ND		0.100	0.0979		mg/L		98	70 - 130	2	20
Silver	ND		0.100	0.0981		mg/L		98	70 - 130	5	20
Thallium	ND		0.100	0.0947		mg/L		95	70 - 130	4	20
Vanadium	0.0062		0.100	0.103		mg/L		97	70 - 130	4	20
Zinc	0.0050	J	0.100	0.0967		mg/L		92	70 - 130	4	20

Lab Sample ID: 590-7675-1 DU
Matrix: Water
Analysis Batch: 264010

Client Sample ID: MW-2A-120717
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0021		0.00217		mg/L		1	20
Antimony	0.00013	J	0.000119	J	mg/L		9	20
Barium	0.034		0.0327		mg/L		3	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	0.0028		0.00285		mg/L		0.2	20
Iron	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7675-1 DU
Matrix: Water
Analysis Batch: 264010

Client Sample ID: MW-2A-120717
Prep Type: Total/NA
Prep Batch: 263946

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Manganese	ND			ND		mg/L				NC	20
Nickel	0.00083	J		0.000766	J	mg/L				8	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Thallium	ND			ND		mg/L				NC	20
Vanadium	0.0062			0.00625		mg/L				0.3	20
Zinc	0.0050	J		0.00227	J F5	mg/L				76	20

Lab Sample ID: MB 580-263151/12-B
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 263398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 19:30	1
Antimony	ND		0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 19:30	1
Barium	ND		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 19:30	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 19:30	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 19:30	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 19:30	1
Copper	ND		0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 19:30	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 19:30	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 19:30	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 19:30	1
Nickel	ND		0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 19:30	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 19:30	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 19:30	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 19:30	1
Vanadium	ND		0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 19:30	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 19:30	1

Lab Sample ID: 590-7675-1 MS
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-2A-120717
Prep Type: Dissolved
Prep Batch: 263398

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	0.0019		0.100	0.0840		mg/L		82	70 - 130		
Antimony	0.00012	J	0.100	0.0808		mg/L		81	70 - 130		
Barium	0.029		0.100	0.113		mg/L		83	70 - 130		
Beryllium	ND		0.100	0.0795		mg/L		80	70 - 130		
Cadmium	ND		0.100	0.0805		mg/L		81	70 - 130		
Chromium	0.0025		0.100	0.0874		mg/L		85	70 - 130		
Copper	0.0027		0.100	0.0852		mg/L		82	70 - 130		
Iron	ND		10.0	8.42		mg/L		84	70 - 130		
Lead	ND		0.100	0.0837		mg/L		84	70 - 130		
Manganese	0.00092	J	0.100	0.0842		mg/L		83	70 - 130		
Nickel	0.0011	J	0.100	0.0839		mg/L		83	70 - 130		
Selenium	ND		0.100	0.0763		mg/L		76	70 - 130		
Silver	ND		0.100	0.0817		mg/L		82	70 - 130		
Thallium	ND		0.100	0.0819		mg/L		82	70 - 130		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7675-1 MS
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-2A-120717
Prep Type: Dissolved
Prep Batch: 263398

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.0056		0.100	0.0899		mg/L		84	70 - 130
Zinc	ND		0.100	0.0778		mg/L		78	70 - 130

Lab Sample ID: 590-7675-1 MSD
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-2A-120717
Prep Type: Dissolved
Prep Batch: 263398

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0019		0.100	0.0830		mg/L		81	70 - 130	1	20
Antimony	0.00012	J	0.100	0.0783		mg/L		78	70 - 130	3	20
Barium	0.029		0.100	0.109		mg/L		80	70 - 130	3	20
Beryllium	ND		0.100	0.0788		mg/L		79	70 - 130	1	20
Cadmium	ND		0.100	0.0782		mg/L		78	70 - 130	3	20
Chromium	0.0025		0.100	0.0852		mg/L		83	70 - 130	2	20
Copper	0.0027		0.100	0.0824		mg/L		80	70 - 130	3	20
Iron	ND		10.0	8.20		mg/L		82	70 - 130	3	20
Lead	ND		0.100	0.0821		mg/L		82	70 - 130	2	20
Manganese	0.00092	J	0.100	0.0813		mg/L		80	70 - 130	4	20
Nickel	0.0011	J	0.100	0.0816		mg/L		80	70 - 130	3	20
Selenium	ND		0.100	0.0760		mg/L		76	70 - 130	0	20
Silver	ND		0.100	0.0800		mg/L		80	70 - 130	2	20
Thallium	ND		0.100	0.0805		mg/L		81	70 - 130	2	20
Vanadium	0.0056		0.100	0.0878		mg/L		82	70 - 130	2	20
Zinc	ND		0.100	0.0772		mg/L		77	70 - 130	1	20

Lab Sample ID: 590-7675-1 DU
Matrix: Water
Analysis Batch: 263508

Client Sample ID: MW-2A-120717
Prep Type: Dissolved
Prep Batch: 263398

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0019		0.00189		mg/L		0.6	20
Antimony	0.00012	J	0.000260	J F5	mg/L		77	20
Barium	0.029		0.0310		mg/L		6	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.0025		0.00241		mg/L		3	20
Copper	0.0027		0.00298		mg/L		8	20
Iron	ND		0.0363	J	mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	0.00092	J	0.000983	J	mg/L		7	20
Nickel	0.0011	J	0.00121	J	mg/L		9	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0056		0.00585		mg/L		5	20
Zinc	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-483088/1-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/13/17 16:56	12/16/17 17:11	1

Lab Sample ID: LCS 490-483088/2-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.103		mg/L		103	90 - 110

Lab Sample ID: LCSD 490-483088/3-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 483088

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.110		mg/L		110	90 - 110	7	20

Lab Sample ID: 590-7675-1 MS
Matrix: Water
Analysis Batch: 483913

Client Sample ID: MW-2A-120717
Prep Type: Total/NA
Prep Batch: 483088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	0.111	F1	mg/L		111	90 - 110

Client Sample ID: MW-2A-120717

Lab Sample ID: 590-7675-1

Date Collected: 12/07/17 14:51

Matrix: Water

Date Received: 12/07/17 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 14:29	MRS	TAL SPK
Total/NA	Prep	8151A			908.5 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 15:02	ERZ	TAL SEA
Total/NA	Prep	3520C			961.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 19:15	TL1	TAL SEA
Total/NA	Prep	3520C			961.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 16:26	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 09:47	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 19:38	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 16:08	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:21	SDL	TAL NSH

Client Sample ID: MW-3-120717

Lab Sample ID: 590-7675-2

Date Collected: 12/07/17 13:11

Matrix: Water

Date Received: 12/07/17 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 14:50	MRS	TAL SPK
Total/NA	Prep	8151A			928.1 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 15:28	ERZ	TAL SEA
Total/NA	Prep	3520C			964.2 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 19:40	TL1	TAL SEA
Total/NA	Prep	3520C			964.2 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 16:50	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 09:59	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:21	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 16:50	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:23	SDL	TAL NSH

Client Sample ID: MW-5A-120717

Lab Sample ID: 590-7675-3

Date Collected: 12/07/17 10:07

Matrix: Water

Date Received: 12/07/17 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			927.2 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA

Client Sample ID: MW-5A-120717

Lab Sample ID: 590-7675-3

Date Collected: 12/07/17 10:07

Matrix: Water

Date Received: 12/07/17 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8151A		1			263311	12/13/17 15:54	ERZ	TAL SEA
Total/NA	Prep	3520C			994.4 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 20:04	TL1	TAL SEA
Total/NA	Prep	3520C			994.4 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 17:15	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 10:11	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:25	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 16:54	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:25	SDL	TAL NSH

Client Sample ID: MW-5-120717

Lab Sample ID: 590-7675-4

Date Collected: 12/07/17 11:16

Matrix: Water

Date Received: 12/07/17 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 15:31	MRS	TAL SPK
Total/NA	Prep	8151A			904.5 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 16:19	ERZ	TAL SEA
Total/NA	Prep	3520C			946.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 20:29	TL1	TAL SEA
Total/NA	Prep	3520C			946.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 17:40	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 10:35	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:28	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 16:58	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:26	SDL	TAL NSH

Client Sample ID: MW-4-120717

Lab Sample ID: 590-7675-5

Date Collected: 12/07/17 10:05

Matrix: Water

Date Received: 12/07/17 16:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 15:52	MRS	TAL SPK
Total/NA	Prep	8151A			918.1 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 16:45	ERZ	TAL SEA

Client Sample ID: MW-4-120717

Date Collected: 12/07/17 10:05
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1055.9 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263313	12/13/17 20:53	TL1	TAL SEA
Total/NA	Prep	3520C			1055.9 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 18:04	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 10:47	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:32	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 17:02	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:27	SDL	TAL NSH

Client Sample ID: MW-12A-120717

Date Collected: 12/07/17 14:22
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 16:13	MRS	TAL SPK
Total/NA	Prep	8151A			922.8 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 17:11	ERZ	TAL SEA
Total/NA	Prep	3520C			1047.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263442	12/14/17 12:39	CJ	TAL SEA
Total/NA	Prep	3520C			1047.6 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 18:29	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 10:59	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:36	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 17:06	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:28	SDL	TAL NSH

Client Sample ID: MW-14-120717

Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 16:34	MRS	TAL SPK
Total/NA	Prep	8151A			905.2 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 17:36	ERZ	TAL SEA
Total/NA	Prep	3520C			1050.7 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Client Sample ID: MW-14-120717

Date Collected: 12/07/17 13:18
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		1			263442	12/14/17 13:03	CJ	TAL SEA
Total/NA	Prep	3520C			1050.7 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 18:53	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 11:24	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:40	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 17:10	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:29	SDL	TAL NSH

Client Sample ID: MW-16-120717

Date Collected: 12/07/17 11:31
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			915.1 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 18:02	ERZ	TAL SEA
Total/NA	Prep	3520C			1052.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263442	12/14/17 13:28	CJ	TAL SEA
Total/NA	Prep	3520C			1052.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 19:18	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 11:36	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:44	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	263946	12/21/17 11:07	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264010	12/21/17 17:14	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483088	12/13/17 16:56	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:30	SDL	TAL NSH

Client Sample ID: Trip Blank

Date Collected: 12/07/17 00:01
Date Received: 12/07/17 16:40

Lab Sample ID: 590-7675-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 17:36	MRS	TAL SPK

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Laboratory: TestAmerica Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-071	12-31-17
Oregon	NELAP Primary AB	10	4137	12-07-18
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C789	07-19-18

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis(chloroisopropyl) ether
8270D SIM	3520C	Water	1,4-Dioxane

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7675-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
8151A	Herbicides (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

12/27/2017

Client Information	Sampler: JWR & AF	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3266-1070.2
Client Contact: Josh Lee	Phone: 509-363-3125	E-Mail: randee.arrington@testamericainc.com		Page: ~~Page 2 of 2~~ 1 of 1
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: std			
City: Spokane	TAT Requested (days): std			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4 - Total Cyanide	200.8_CWA - Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8151A_MS, 8270D	8270D_SIM_AK - 1,4-Dioxane only	200.8_CWA - Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	300_ORGFMS - Nitrate only	8260C - 8260C - Volatiles							Total Number of containers	Special Instructions/Note:
			Preservation Code:				B	D	N	N	N	N	A								
MW-2A: 120717	12/7/17	14:51	G	Water	N		X	X	X	X	X	X	X							12	
MW-3: 120717	12/7/17	13:11	G	Water	N		X	X	X	X	X	X	X								
MW-5A: 120717	12/7/17	10:07	G	Water	N		X	X	X	X	X	X	X								~~Please Analyze for PCE TCE cis-1,2-DCE VC~~
MW-5: 120717	12/7/17	11:16	G	Water	N		X	X	X	X	X	X	X								
MW-4: 120717	12/7/17	1005	G	Water	N		X	X	X	X	X	X	X								
MW-12A: 120717	12/7/17	1422	G	Water	N		X	X	X	X	X	X	X								
MW-14: 120717	12/7/17	1318	G	Water	N		X	X	X	X	X	X	X								
MW-16: 120717	12/7/17	1131	G	Water	N		X	X	X	X	X	X	X								
Trip Blank				Water									X								
				Water																	
				Water																	

590-7675 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Justin Rice	12-7-17 1640	GEI	[signature]	12/7/17 1640	TestAmerica
2						
3						

Custody Seals Intact: ☐ Yes ☐ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.5°C IR004

Ver: 08/04/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

590-7675 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 12/9/2017 @ 09:40

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9760 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 1.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) J.J.

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) es

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) es

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) es

I certify that I attached a label with the unique LIMS number to each container (intial) es

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# es

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-7675

merica ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-7675-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/19/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-2A-120717 (590-7675-1)	12/7/17	14:51 Pacific		Water			X	1	
MW-3-120717 (590-7675-2)	12/7/17	13:11 Pacific		Water			X	1	
MW-5A-120717 (590-7675-3)	12/7/17	10:07 Pacific		Water			X	1	
MW-5-120717 (590-7675-4)	12/7/17	11:16 Pacific		Water			X	1	
MW-4-120717 (590-7675-5)	12/7/17	10:05 Pacific		Water			X	1	
MW-12A-120717 (590-7675-6)	12/7/17	14:22 Pacific		Water			X	1	
MW-14-120717 (590-7675-7)	12/7/17	13:18 Pacific		Water			X	1	
MW-16-120717 (590-7675-8)	12/7/17	11:31 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Randee Arrington	12/8/17 1515	TestAmerica		12-9-17 9:40	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.9

Ver: 09/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3251.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-7675-1
Address: 5755 8th Street East,	Due Date Requested: 12/19/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	200.8_CWA/200.8_P_TOT Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8270D_SIM_AK/3520C (MOD) 1,4-Dioxane only	8151A_MS/8151A_AP Herbicide (Aqueous)	8270D/3520C Semivolatiles, standard list	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MW-2A-120717 (590-7675-1)	12/7/17	14:51 Pacific		Water			X	X	X	X	X	7	
MW-3-120717 (590-7675-2)	12/7/17	13:11 Pacific		Water			X	X	X	X	X	8	
MW-5A-120717 (590-7675-3)	12/7/17	10:07 Pacific		Water			X	X	X	X	X	8	
MW-5-120717 (590-7675-4)	12/7/17	11:16 Pacific		Water			X	X	X	X	X	8	
MW-4-120717 (590-7675-5)	12/7/17	10:05 Pacific		Water			X	X	X	X	X	8	
MW-12A-120717 (590-7675-6)	12/7/17	14:22 Pacific		Water			X	X	X	X	X	8	
MW-14-120717 (590-7675-7)	12/7/17	13:18 Pacific		Water			X	X	X	X	X	8	
MW-16-120717 (590-7675-8)	12/7/17	11:31 Pacific		Water			X	X	X	X	X	8	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Randee Arrington	Date/Time: 12/8/17 1333	Company: TestAmerica	Received by:	Date/Time: 12.9.17 1240	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

IR5-1.0, 1.1, 0.3 0.2 n.H L1

12/27/2017

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7675-1

Login Number: 7675
List Number: 1
Creator: Arrington, Randee E

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Refer to Job Narrative for details.
Sample Preservation Verified.	False	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7675-1

Login Number: 7675
List Number: 3
Creator: Hobbs, Kenneth F

List Source: TestAmerica Seattle
List Creation: 12/09/17 02:43 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR5=1.0, 1.1, 0.3, 0.2, 0.4, 1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-7679-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/28/2017 9:52:29 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Job ID: 590-7679-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/8/2017 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-15000 recovered above the upper control limit for acetone and trans-1,2-dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-2 (590-7679-1), MW-15 (590-7679-2) and Trip Blank (590-7679-3).

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 590-15000 recovered outside control limits for the following analytes: trans-1,2-Dichloroethene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The method blank for analytical batch 590-15000 contained 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene above the method detection limit (MDL) but below the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The laboratory control sample duplicate (LCSD) for preparation batch 580-263185 and analytical batch 580-263313 recovered outside control limits for the following analytes: Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene and Dibenz(a,h)anthracene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263313 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263442 recovered above the upper control limit for 2,4-Dimethylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-2 (590-7679-1), MW-15 (590-7679-2) and (CCVIS 580-263442/3).

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263442 recovered outside acceptance criteria, low biased, for 2,2'-oxybis[1-chloropropane], Phenol, N-Nitrosodi-n-propylamine and Benzyl alcohol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263442 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Job ID: 590-7679-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7679-1	MW-2	Water	12/08/17 09:35	12/08/17 13:00
590-7679-2	MW-15	Water	12/08/17 10:31	12/08/17 13:00
590-7679-3	Trip Blank	Water	12/08/17 00:01	12/08/17 13:00

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Client Sample ID: MW-2
Date Collected: 12/08/17 09:35
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 18:17	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 18:17	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 18:17	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 18:17	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 18:17	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 18:17	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 18:17	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 18:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 18:17	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 18:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 18:17	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 18:17	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 18:17	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 18:17	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 18:17	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 18:17	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 18:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 18:17	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 18:17	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 18:17	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 18:17	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 18:17	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 18:17	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 18:17	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 18:17	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 18:17	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 18:17	1
Acetone	ND		30	14	ug/L			12/08/17 18:17	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 18:17	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 18:17	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 18:17	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 18:17	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 18:17	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 18:17	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 18:17	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 18:17	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 18:17	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 18:17	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 18:17	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 18:17	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 18:17	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 18:17	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 18:17	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 18:17	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 18:17	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 18:17	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 18:17	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 18:17	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 18:17	1

Client Sample ID: MW-2
Date Collected: 12/08/17 09:35
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 18:17	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 18:17	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 18:17	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 18:17	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 18:17	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 18:17	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 18:17	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 18:17	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 18:17	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 18:17	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 18:17	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 18:17	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 18:17	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 18:17	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 18:17	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 18:17	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 18:17	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 18:17	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 18:17	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*12/08/17 18:17*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/08/17 18:17*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/08/17 18:17*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/08/17 18:17*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 18:28	1
2,4-D	ND		0.27	0.021	ug/L		12/11/17 10:47	12/13/17 18:28	1
2,4-DB	ND		0.27	0.021	ug/L		12/11/17 10:47	12/13/17 18:28	1
Dalapon	ND		0.43	0.11	ug/L		12/11/17 10:47	12/13/17 18:28	1
Dicamba	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 18:28	1
Dichlorprop	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 18:28	1
MCPA	ND		0.27	0.043	ug/L		12/11/17 10:47	12/13/17 18:28	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/11/17 10:47	12/13/17 18:28	1
MCPP	ND		0.27	0.021	ug/L		12/11/17 10:47	12/13/17 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*102*		*51 - 150*	*12/11/17 10:47*	*12/13/17 18:28*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.076**	**J**	0.099	0.011	ug/L		12/11/17 13:08	12/19/17 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*82*		*59 - 120*	*12/11/17 13:08*	*12/19/17 19:43*	*1*
Terphenyl-d14	*88*		*17 - 149*	*12/11/17 13:08*	*12/19/17 19:43*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*12/11/17 13:08*	*12/19/17 19:43*	*1*
2,4,6-Tribromophenol	*85*		*43 - 122*	*12/11/17 13:08*	*12/19/17 19:43*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/14/17 13:52	1
1,2-Dichlorobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/14/17 13:52	1
1,4-Dichlorobenzene	ND		0.40	0.059	ug/L		12/11/17 13:08	12/14/17 13:52	1
1-Methylnaphthalene	ND		0.99	0.030	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,4,5-Trichlorophenol	ND		0.40	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,4,6-Trichlorophenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,4-Dichlorophenol	ND		4.0	0.90	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,4-Dimethylphenol	ND		4.0	0.82	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,4-Dinitrophenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,4-Dinitrotoluene	ND		0.99	0.24	ug/L		12/11/17 13:08	12/14/17 13:52	1
2,6-Dinitrotoluene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
2-Chloronaphthalene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
2-Chlorophenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
2-Methylphenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
2-Nitroaniline	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
2-Nitrophenol	ND		0.99	0.24	ug/L		12/11/17 13:08	12/14/17 13:52	1
3 & 4 Methylphenol	ND		0.79	0.040	ug/L		12/11/17 13:08	12/14/17 13:52	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/14/17 13:52	1
3-Nitroaniline	ND		3.0	0.72	ug/L		12/11/17 13:08	12/14/17 13:52	1
4,6-Dinitro-2-methylphenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/14/17 13:52	1
4-Bromophenyl phenyl ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
4-Chloro-3-methylphenol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
4-Chloroaniline	ND		9.9	2.1	ug/L		12/11/17 13:08	12/14/17 13:52	1
4-Chlorophenyl phenyl ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
4-Nitroaniline	ND		2.0	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
4-Nitrophenol	ND		15	3.7	ug/L		12/11/17 13:08	12/14/17 13:52	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Acenaphthylene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Anthracene	ND		0.040	0.0099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzo[a]anthracene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzo[a]pyrene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzo[b]fluoranthene	ND	*	0.99	0.050	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzo[g,h,i]perylene	ND	*	0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzo[k]fluoranthene	ND	*	0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzoic acid	**0.66**	**J**	3.0	0.59	ug/L		12/11/17 13:08	12/14/17 13:52	1
Benzyl alcohol	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Bis(2-chloroethoxy)methane	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Bis(2-chloroethyl)ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/11/17 13:08	12/14/17 13:52	1
bis(chloroisopropyl) ether	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Butyl benzyl phthalate	ND		9.9	0.73	ug/L		12/11/17 13:08	12/14/17 13:52	1
Carbazole	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Chrysene	ND		0.59	0.0099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Dibenz(a,h)anthracene	ND	*	0.59	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Dibenzofuran	ND		0.40	0.059	ug/L		12/11/17 13:08	12/14/17 13:52	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/14/17 13:52	1
Dimethyl phthalate	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Di-n-butyl phthalate	ND		3.0	0.54	ug/L		12/11/17 13:08	12/14/17 13:52	1
Di-n-octyl phthalate	ND		0.99	0.18	ug/L		12/11/17 13:08	12/14/17 13:52	1
Fluoranthene	ND		3.0	0.0099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1

Client Sample ID: MW-2
Date Collected: 12/08/17 09:35
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Hexachlorobutadiene	ND		0.99	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/14/17 13:52	1
Hexachloroethane	ND		0.99	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Indeno[1,2,3-cd]pyrene	ND		0.99	0.050	ug/L		12/11/17 13:08	12/14/17 13:52	1
Isophorone	ND		0.40	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Naphthalene	ND		0.40	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Nitrobenzene	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
N-Nitrosodi-n-propylamine	ND		0.59	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
N-Nitrosodiphenylamine	ND		3.0	0.099	ug/L		12/11/17 13:08	12/14/17 13:52	1
Pentachlorophenol	ND		5.0	0.99	ug/L		12/11/17 13:08	12/14/17 13:52	1
Phenanthrene	ND		0.99	0.020	ug/L		12/11/17 13:08	12/14/17 13:52	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/14/17 13:52	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/14/17 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*74*		*48 - 125*	*12/11/17 13:08*	*12/14/17 13:52*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/11/17 13:08*	*12/14/17 13:52*	*1*
2-Fluorophenol (Surr)	*72*		*50 - 120*	*12/11/17 13:08*	*12/14/17 13:52*	*1*
Nitrobenzene-d5 (Surr)	*89*		*52 - 120*	*12/11/17 13:08*	*12/14/17 13:52*	*1*
Phenol-d5 (Surr)	*71*		*52 - 120*	*12/11/17 13:08*	*12/14/17 13:52*	*1*
Terphenyl-d14 (Surr)	*89*		*49 - 133*	*12/11/17 13:08*	*12/14/17 13:52*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**1.7**		0.20	0.039	mg/L			12/08/17 13:13	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:03	1
Antimony	**0.00014**	**J**	0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:03	1
Barium	**0.038**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:03	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:03	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:03	1
Chromium	ND		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:03	1
Copper	**0.0033**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:03	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:03	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:03	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:03	1
Nickel	**0.00085**	**J**	0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:03	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:03	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:03	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:03	1
Vanadium	**0.0050**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:03	1
Zinc	**0.0020**	**J**	0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:03	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0017**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:48	1
Antimony	**0.00017**	**J**	0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:48	1

Client Sample ID: MW-2

Lab Sample ID: 590-7679-1

Date Collected: 12/08/17 09:35

Matrix: Water

Date Received: 12/08/17 13:00

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.031**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:48	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:48	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:48	1
Chromium	**0.0045**		0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:48	1
Copper	**0.0027**		0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:48	1
Iron	**0.036**	**J**	0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:48	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:48	1
Manganese	**0.00052**	**J**	0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:48	1
Nickel	**0.00092**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:48	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:48	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:48	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:48	1
Vanadium	**0.0041**		0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:48	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:42	1

Client Sample ID: MW-15

Lab Sample ID: 590-7679-2

Date Collected: 12/08/17 10:31

Matrix: Water

Date Received: 12/08/17 13:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 18:37	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 18:37	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 18:37	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 18:37	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 18:37	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 18:37	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 18:37	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 18:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 18:37	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 18:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 18:37	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 18:37	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 18:37	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 18:37	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 18:37	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 18:37	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 18:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 18:37	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 18:37	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 18:37	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 18:37	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 18:37	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 18:37	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 18:37	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 18:37	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Client Sample ID: MW-15
Date Collected: 12/08/17 10:31
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 18:37	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 18:37	1
Acetone	ND		30	14	ug/L			12/08/17 18:37	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 18:37	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 18:37	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 18:37	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 18:37	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 18:37	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 18:37	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 18:37	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 18:37	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 18:37	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 18:37	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 18:37	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 18:37	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 18:37	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 18:37	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 18:37	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 18:37	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 18:37	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 18:37	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 18:37	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 18:37	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 18:37	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 18:37	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 18:37	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 18:37	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 18:37	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 18:37	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 18:37	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 18:37	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 18:37	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 18:37	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 18:37	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 18:37	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 18:37	1
Tetrachloroethene	**1.1**		1.0	0.22	ug/L			12/08/17 18:37	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 18:37	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 18:37	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 18:37	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 18:37	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 18:37	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 18:37	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 125*		*12/08/17 18:37*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/08/17 18:37*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/08/17 18:37*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/08/17 18:37*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:54	1
2,4-D	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 18:54	1
2,4-DB	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 18:54	1
Dalapon	ND		0.44	0.11	ug/L		12/11/17 10:47	12/13/17 18:54	1
Dicamba	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:54	1
Dichlorprop	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:54	1
MCPA	ND		0.27	0.044	ug/L		12/11/17 10:47	12/13/17 18:54	1
Silvex (2,4,5-TP)	ND		0.27	0.055	ug/L		12/11/17 10:47	12/13/17 18:54	1
MCPP	ND		0.27	0.022	ug/L		12/11/17 10:47	12/13/17 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*105*		*51 - 150*	*12/11/17 10:47*	*12/13/17 18:54*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.034	J	0.098	0.011	ug/L		12/11/17 13:08	12/19/17 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*59 - 120*	*12/11/17 13:08*	*12/19/17 20:07*	*1*
Terphenyl-d14	*86*		*17 - 149*	*12/11/17 13:08*	*12/19/17 20:07*	*1*
2-Fluorobiphenyl	*77*		*50 - 120*	*12/11/17 13:08*	*12/19/17 20:07*	*1*
2,4,6-Tribromophenol	*87*		*43 - 122*	*12/11/17 13:08*	*12/19/17 20:07*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/11/17 13:08	12/14/17 14:17	1
1,2-Dichlorobenzene	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/11/17 13:08	12/14/17 14:17	1
1,4-Dichlorobenzene	ND		0.39	0.059	ug/L		12/11/17 13:08	12/14/17 14:17	1
1-Methylnaphthalene	ND		0.98	0.029	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,4-Dichlorophenol	ND		3.9	0.89	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,4-Dimethylphenol	ND		3.9	0.81	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,4-Dinitrotoluene	ND		0.98	0.23	ug/L		12/11/17 13:08	12/14/17 14:17	1
2,6-Dinitrotoluene	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
2-Chloronaphthalene	ND		0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
2-Chlorophenol	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
2-Methylnaphthalene	ND		0.39	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
2-Methylphenol	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
2-Nitroaniline	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
2-Nitrophenol	ND		0.98	0.23	ug/L		12/11/17 13:08	12/14/17 14:17	1
3 & 4 Methylphenol	ND		0.78	0.039	ug/L		12/11/17 13:08	12/14/17 14:17	1
3,3'-Dichlorobenzidine	ND		15	3.0	ug/L		12/11/17 13:08	12/14/17 14:17	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/11/17 13:08	12/14/17 14:17	1
4,6-Dinitro-2-methylphenol	ND		4.9	0.98	ug/L		12/11/17 13:08	12/14/17 14:17	1
4-Bromophenyl phenyl ether	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
4-Chloro-3-methylphenol	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
4-Chloroaniline	ND		9.8	2.1	ug/L		12/11/17 13:08	12/14/17 14:17	1
4-Chlorophenyl phenyl ether	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
4-Nitroaniline	ND		2.0	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
4-Nitrophenol	ND		15	3.6	ug/L		12/11/17 13:08	12/14/17 14:17	1
Acenaphthene	ND		0.39	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1

Client Sample ID: MW-15
Date Collected: 12/08/17 10:31
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Anthracene	ND		0.039	0.0098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzo[a]anthracene	ND		0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzo[a]pyrene	ND		0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzo[b]fluoranthene	ND	*	0.98	0.049	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzo[g,h,i]perylene	ND	*	0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzo[k]fluoranthene	ND	*	0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzoic acid	**0.63**	**J**	2.9	0.59	ug/L		12/11/17 13:08	12/14/17 14:17	1
Benzyl alcohol	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Bis(2-chloroethoxy)methane	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Bis(2-chloroethyl)ether	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/11/17 13:08	12/14/17 14:17	1
bis(chloroisopropyl) ether	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Butyl benzyl phthalate	ND		9.8	0.72	ug/L		12/11/17 13:08	12/14/17 14:17	1
Carbazole	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Chrysene	ND		0.59	0.0098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Dibenz(a,h)anthracene	ND	*	0.59	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Dibenzofuran	ND		0.39	0.059	ug/L		12/11/17 13:08	12/14/17 14:17	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/14/17 14:17	1
Dimethyl phthalate	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Di-n-butyl phthalate	ND		2.9	0.54	ug/L		12/11/17 13:08	12/14/17 14:17	1
Di-n-octyl phthalate	ND		0.98	0.18	ug/L		12/11/17 13:08	12/14/17 14:17	1
Fluoranthene	ND		2.9	0.0098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Hexachlorobenzene	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Hexachlorobutadiene	ND		0.98	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Hexachlorocyclopentadiene	ND		2.0	0.38	ug/L		12/11/17 13:08	12/14/17 14:17	1
Hexachloroethane	ND		0.98	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Indeno[1,2,3-cd]pyrene	ND		0.98	0.049	ug/L		12/11/17 13:08	12/14/17 14:17	1
Isophorone	ND		0.39	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Naphthalene	ND		0.39	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Nitrobenzene	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
N-Nitrosodi-n-propylamine	ND		0.59	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
N-Nitrosodiphenylamine	ND		2.9	0.098	ug/L		12/11/17 13:08	12/14/17 14:17	1
Pentachlorophenol	ND		4.9	0.98	ug/L		12/11/17 13:08	12/14/17 14:17	1
Phenanthrene	ND		0.98	0.020	ug/L		12/11/17 13:08	12/14/17 14:17	1
Phenol	ND		3.9	0.049	ug/L		12/11/17 13:08	12/14/17 14:17	1
Pyrene	ND		2.0	0.039	ug/L		12/11/17 13:08	12/14/17 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*48 - 125*	*12/11/17 13:08*	*12/14/17 14:17*	*1*
2-Fluorobiphenyl	*74*		*50 - 120*	*12/11/17 13:08*	*12/14/17 14:17*	*1*
2-Fluorophenol (Surr)	*71*		*50 - 120*	*12/11/17 13:08*	*12/14/17 14:17*	*1*
Nitrobenzene-d5 (Surr)	*84*		*52 - 120*	*12/11/17 13:08*	*12/14/17 14:17*	*1*
Phenol-d5 (Surr)	*70*		*52 - 120*	*12/11/17 13:08*	*12/14/17 14:17*	*1*
Terphenyl-d14 (Surr)	*84*		*49 - 133*	*12/11/17 13:08*	*12/14/17 14:17*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.5**		0.20	0.039	mg/L			12/08/17 13:25	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0021**		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:06	1
Antimony	**0.00016**	**J**	0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:06	1
Barium	**0.049**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:06	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:06	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:06	1
Chromium	**0.00036**	**J**	0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:06	1
Copper	**0.0024**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:06	1
Iron	**0.15**	**J**	0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:06	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:06	1
Manganese	**0.0024**		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:06	1
Nickel	**0.00094**	**J**	0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:06	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:06	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:06	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:06	1
Vanadium	**0.0029**	**J**	0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:06	1
Zinc	**0.0020**	**J**	0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:06	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 20:52	1
Antimony	ND		0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 20:52	1
Barium	**0.036**		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 20:52	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:52	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 20:52	1
Chromium	**0.00024**	**J**	0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 20:52	1
Copper	**0.0016**	**J**	0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 20:52	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 20:52	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 20:52	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 20:52	1
Nickel	**0.00070**	**J**	0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 20:52	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 20:52	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 20:52	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 20:52	1
Vanadium	**0.0022**	**J**	0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 20:52	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 20:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:43	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-7679-3

Date Collected: 12/08/17 00:01

Matrix: Water

Date Received: 12/08/17 13:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 18:57	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 18:57	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 18:57	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 18:57	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 18:57	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 18:57	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 18:57	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 18:57	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Client Sample ID: Trip Blank
Date Collected: 12/08/17 00:01
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/17 18:57	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 18:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/08/17 18:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 18:57	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 18:57	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 18:57	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 18:57	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 18:57	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 18:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 18:57	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 18:57	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 18:57	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 18:57	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 18:57	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 18:57	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 18:57	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 18:57	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 18:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 18:57	1
Acetone	ND		30	14	ug/L			12/08/17 18:57	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 18:57	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 18:57	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 18:57	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 18:57	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 18:57	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 18:57	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 18:57	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 18:57	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 18:57	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 18:57	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 18:57	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 18:57	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 18:57	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 18:57	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 18:57	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 18:57	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 18:57	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 18:57	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 18:57	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 18:57	1
Hexane	ND		1.0	0.084	ug/L			12/08/17 18:57	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 18:57	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 18:57	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 18:57	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 18:57	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 18:57	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 18:57	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 18:57	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 18:57	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Client Sample ID: Trip Blank
Date Collected: 12/08/17 00:01
Date Received: 12/08/17 13:00

Lab Sample ID: 590-7679-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 18:57	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 18:57	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 18:57	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 18:57	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 18:57	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 18:57	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/08/17 18:57	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 18:57	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 18:57	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 18:57	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 18:57	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*12/08/17 18:57*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/08/17 18:57*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/08/17 18:57*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/08/17 18:57*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-15000/8
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/17 13:47	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/17 13:47	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/08/17 13:47	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/17 13:47	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/08/17 13:47	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/17 13:47	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/17 13:47	1
1,2,3-Trichlorobenzene	0.612	J	1.0	0.33	ug/L			12/08/17 13:47	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/17 13:47	1
1,2,4-Trichlorobenzene	0.225	J	1.0	0.16	ug/L			12/08/17 13:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/08/17 13:47	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/17 13:47	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/08/17 13:47	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/08/17 13:47	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/17 13:47	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/17 13:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/08/17 13:47	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/17 13:47	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/08/17 13:47	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/08/17 13:47	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/17 13:47	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/08/17 13:47	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/08/17 13:47	1
2-Hexanone	ND		10	0.75	ug/L			12/08/17 13:47	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/08/17 13:47	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/08/17 13:47	1
Acetone	ND		30	14	ug/L			12/08/17 13:47	1
Benzene	ND		0.40	0.093	ug/L			12/08/17 13:47	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/17 13:47	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/17 13:47	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/08/17 13:47	1
Bromoform	ND		5.0	1.6	ug/L			12/08/17 13:47	1
Bromomethane	ND		5.0	0.22	ug/L			12/08/17 13:47	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/08/17 13:47	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/08/17 13:47	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/08/17 13:47	1
Chloroethane	ND		2.0	0.16	ug/L			12/08/17 13:47	1
Chloroform	ND		1.0	0.91	ug/L			12/08/17 13:47	1
Chloromethane	ND		3.0	0.22	ug/L			12/08/17 13:47	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/17 13:47	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/08/17 13:47	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/08/17 13:47	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/17 13:47	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/08/17 13:47	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/08/17 13:47	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/17 13:47	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15000/8
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/08/17 13:47	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/17 13:47	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/17 13:47	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/17 13:47	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/08/17 13:47	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/17 13:47	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/08/17 13:47	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/17 13:47	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/17 13:47	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/08/17 13:47	1
Styrene	ND		1.0	0.24	ug/L			12/08/17 13:47	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/17 13:47	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/17 13:47	1
Toluene	ND		1.0	0.31	ug/L			12/08/17 13:47	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/17 13:47	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/17 13:47	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/08/17 13:47	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/17 13:47	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/08/17 13:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*12/08/17 13:47*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/08/17 13:47*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/08/17 13:47*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/08/17 13:47*	*1*

Lab Sample ID: LCS 590-15000/1007
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	10.5		ug/L		105	75 - 124
1,1,1-Trichloroethane	10.0	10.6		ug/L		106	71 - 130
1,1,2,2-Tetrachloroethane	10.0	9.85		ug/L		99	66 - 122
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	11.5		ug/L		115	70 - 127
1,1-Dichloroethane	10.0	10.5		ug/L		105	79 - 121
1,1-Dichloroethene	10.0	11.4		ug/L		114	69 - 127
1,1-Dichloropropene	10.0	11.5		ug/L		115	76 - 125
1,2,3-Trichlorobenzene	10.0	9.60		ug/L		96	60 - 125
1,2,3-Trichloropropane	10.0	11.0		ug/L		110	60 - 124
1,2,4-Trichlorobenzene	10.0	10.2		ug/L		102	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	9.33	J	ug/L		93	36 - 140
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	78 - 120
1,2-Dichloroethane	10.0	10.4		ug/L		104	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15000/1007
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.7		ug/L		107	76 - 121
1,3,5-Trimethylbenzene	10.0	10.4		ug/L		104	75 - 122
1,3-Dichlorobenzene	10.0	10.6		ug/L		106	77 - 120
1,3-Dichloropropane	10.0	10.2		ug/L		102	75 - 120
1,4-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 121
2,2-Dichloropropane	10.0	11.1		ug/L		111	49 - 147
2-Butanone (MEK)	50.0	56.2		ug/L		112	40 - 150
2-Chlorotoluene	10.0	11.0		ug/L		110	75 - 121
2-Hexanone	50.0	54.3		ug/L		109	46 - 146
4-Chlorotoluene	10.0	10.7		ug/L		107	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	48.9		ug/L		98	60 - 127
Acetone	50.0	69.9		ug/L		140	20 - 150
Benzene	10.0	11.0		ug/L		110	80 - 120
Bromobenzene	10.0	10.2		ug/L		102	74 - 121
Bromochloromethane	10.0	11.1		ug/L		111	70 - 126
Bromodichloromethane	10.0	10.6		ug/L		106	67 - 125
Bromoform	10.0	9.59		ug/L		96	60 - 122
Bromomethane	10.0	10.8		ug/L		108	45 - 150
Carbon disulfide	10.0	10.8		ug/L		108	67 - 129
Carbon tetrachloride	10.0	10.8		ug/L		108	68 - 134
Chlorobenzene	10.0	10.3		ug/L		103	79 - 125
Chloroethane	10.0	10.6		ug/L		106	48 - 150
Chloroform	10.0	10.8		ug/L		108	73 - 126
Chloromethane	10.0	11.0		ug/L		110	51 - 150
cis-1,2-Dichloroethene	10.0	10.8		ug/L		108	76 - 121
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	72 - 120
Dibromochloromethane	10.0	9.62		ug/L		96	72 - 120
Dibromomethane	10.0	9.92		ug/L		99	71 - 120
Dichlorodifluoromethane	10.0	9.17		ug/L		92	32 - 150
Dichlorofluoromethane	10.0	11.1		ug/L		111	60 - 140
Ethylbenzene	10.0	10.8		ug/L		108	80 - 120
Hexachlorobutadiene	10.0	9.95		ug/L		99	62 - 132
Hexane	10.0	11.5		ug/L		115	68 - 125
Isopropylbenzene	10.0	10.5		ug/L		105	77 - 123
m,p-Xylene	10.0	10.7		ug/L		107	80 - 120
Methyl tert-butyl ether	10.0	10.8		ug/L		108	71 - 128
Methylene Chloride	10.0	10.8		ug/L		108	20 - 150
Naphthalene	10.0	9.35		ug/L		93	63 - 124
n-Butylbenzene	10.0	10.8		ug/L		108	71 - 120
N-Propylbenzene	10.0	10.7		ug/L		107	76 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
p-Isopropyltoluene	10.0	10.6		ug/L		106	77 - 120
sec-Butylbenzene	10.0	10.4		ug/L		104	74 - 121
Styrene	10.0	10.5		ug/L		105	73 - 120
tert-Butylbenzene	10.0	10.7		ug/L		107	79 - 120
Tetrachloroethene	10.0	10.7		ug/L		107	71 - 132
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,2-Dichloroethene	10.0	12.2		ug/L		122	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15000/1007
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.1		ug/L		101	70 - 121
Trichloroethene	10.0	10.5		ug/L		105	75 - 129
Trichlorofluoromethane	10.0	10.3		ug/L		103	60 - 140
Vinyl chloride	10.0	10.4		ug/L		104	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-15000/9
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	75 - 124	1	15
1,1,1-Trichloroethane	10.0	11.0		ug/L		110	71 - 130	4	25
1,1,2,2-Tetrachloroethane	10.0	10.3		ug/L		103	66 - 122	4	15
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	76 - 120	2	15
1,1,2-Trichlorotrifluoroethane	10.0	11.8		ug/L		118	70 - 127	3	25
1,1-Dichloroethane	10.0	10.5		ug/L		105	79 - 121	0	25
1,1-Dichloroethene	10.0	11.7		ug/L		117	69 - 127	2	14
1,1-Dichloropropene	10.0	11.5		ug/L		115	76 - 125	0	15
1,2,3-Trichlorobenzene	10.0	9.95		ug/L		99	60 - 125	4	15
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	60 - 124	5	15
1,2,4-Trichlorobenzene	10.0	9.88		ug/L		99	66 - 124	3	15
1,2,4-Trimethylbenzene	10.0	10.2		ug/L		102	77 - 120	2	15
1,2-Dibromo-3-Chloropropane	10.0	9.95	J	ug/L		99	36 - 140	6	15
1,2-Dichlorobenzene	10.0	10.5		ug/L		105	78 - 120	2	15
1,2-Dichloroethane	10.0	10.5		ug/L		105	68 - 127	1	12
1,2-Dichloropropane	10.0	10.7		ug/L		107	76 - 121	1	15
1,3,5-Trimethylbenzene	10.0	10.5		ug/L		105	75 - 122	1	15
1,3-Dichlorobenzene	10.0	10.5		ug/L		105	77 - 120	0	15
1,3-Dichloropropane	10.0	10.1		ug/L		101	75 - 120	0	15
1,4-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 121	0	15
2,2-Dichloropropane	10.0	11.4		ug/L		114	49 - 147	3	25
2-Butanone (MEK)	50.0	55.9		ug/L		112	40 - 150	0	25
2-Chlorotoluene	10.0	10.8		ug/L		108	75 - 121	2	15
2-Hexanone	50.0	52.3		ug/L		105	46 - 146	4	15
4-Chlorotoluene	10.0	10.3		ug/L		103	74 - 120	4	15
4-Methyl-2-pentanone (MIBK)	50.0	50.2		ug/L		100	60 - 127	3	15
Acetone	50.0	65.3		ug/L		131	20 - 150	7	25
Benzene	10.0	11.1		ug/L		111	80 - 120	1	25
Bromobenzene	10.0	10.2		ug/L		102	74 - 121	0	15
Bromochloromethane	10.0	10.5		ug/L		105	70 - 126	6	25
Bromodichloromethane	10.0	10.8		ug/L		108	67 - 125	2	15
Bromoform	10.0	10.0		ug/L		100	60 - 122	4	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-15000/9
Matrix: Water
Analysis Batch: 15000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			10.0	10.3		ug/L		103	45 - 150	4	25
Carbon disulfide			10.0	11.4		ug/L		114	67 - 129	5	25
Carbon tetrachloride			10.0	10.8		ug/L		108	68 - 134	0	25
Chlorobenzene			10.0	10.1		ug/L		101	79 - 125	2	25
Chloroethane			10.0	10.8		ug/L		108	48 - 150	2	25
Chloroform			10.0	10.8		ug/L		108	73 - 126	0	25
Chloromethane			10.0	11.1		ug/L		111	51 - 150	1	15
cis-1,2-Dichloroethene			10.0	10.5		ug/L		105	76 - 121	2	25
cis-1,3-Dichloropropene			10.0	10.3		ug/L		103	72 - 120	1	15
Dibromochloromethane			10.0	9.69		ug/L		97	72 - 120	1	15
Dibromomethane			10.0	10.2		ug/L		102	71 - 120	3	15
Dichlorodifluoromethane			10.0	9.33		ug/L		93	32 - 150	2	25
Dichlorofluoromethane			10.0	11.2		ug/L		112	60 - 140	1	25
Ethylbenzene			10.0	10.8		ug/L		108	80 - 120	0	25
Hexachlorobutadiene			10.0	10.1		ug/L		101	62 - 132	1	15
Hexane			10.0	11.8		ug/L		118	68 - 125	2	15
Isopropylbenzene			10.0	10.4		ug/L		104	77 - 123	1	15
m,p-Xylene			10.0	10.9		ug/L		109	80 - 120	2	25
Methyl tert-butyl ether			10.0	11.1		ug/L		111	71 - 128	3	12
Methylene Chloride			10.0	11.1		ug/L		111	20 - 150	3	25
Naphthalene			10.0	9.49		ug/L		95	63 - 124	1	25
n-Butylbenzene			10.0	10.8		ug/L		108	71 - 120	1	15
N-Propylbenzene			10.0	10.7		ug/L		107	76 - 120	0	15
o-Xylene			10.0	10.6		ug/L		106	80 - 120	0	25
p-Isopropyltoluene			10.0	10.7		ug/L		107	77 - 120	1	15
sec-Butylbenzene			10.0	10.4		ug/L		104	74 - 121	0	15
Styrene			10.0	10.5		ug/L		105	73 - 120	0	15
tert-Butylbenzene			10.0	10.7		ug/L		107	79 - 120	1	15
Tetrachloroethene			10.0	10.8		ug/L		108	71 - 132	1	15
Toluene			10.0	10.6		ug/L		106	80 - 123	1	25
trans-1,2-Dichloroethene			10.0	12.6	*	ug/L		126	75 - 124	3	25
trans-1,3-Dichloropropene			10.0	10.2		ug/L		102	70 - 121	1	15
Trichloroethene			10.0	10.7		ug/L		107	75 - 129	2	25
Trichlorofluoromethane			10.0	10.5		ug/L		105	60 - 140	2	25
Vinyl chloride			10.0	10.5		ug/L		105	42 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 125*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8151A - Herbicides (GC/MS)

Lab Sample ID: MB 580-263171/1-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263171

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
2,4-D	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1
2,4-DB	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dalapon	ND		0.40	0.10	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dicamba	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
Dichlorprop	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
MCPA	ND		0.25	0.040	ug/L		12/11/17 10:47	12/13/17 09:26	1
Silvex (2,4,5-TP)	ND		0.25	0.050	ug/L		12/11/17 10:47	12/13/17 09:26	1
MCPP	ND		0.25	0.020	ug/L		12/11/17 10:47	12/13/17 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*88*		*51 - 150*	*12/11/17 10:47*	*12/13/17 09:26*	*1*

Lab Sample ID: LCS 580-263171/2-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263171

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	3.63		ug/L		73	20 - 150		
2,4-D			5.00	3.76		ug/L		75	20 - 150		
2,4-DB			5.00	5.15		ug/L		103	50 - 150		
Dalapon			5.00	2.55		ug/L		51	20 - 120		
Dicamba			5.00	3.55		ug/L		71	20 - 150		
Dichlorprop			5.00	4.71		ug/L		94	23 - 150		
MCPA			5.00	3.72		ug/L		74	21 - 150		
Silvex (2,4,5-TP)			5.00	4.73		ug/L		95	24 - 150		
MCPP			5.00	5.17		ug/L		103	51 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*116*		*51 - 150*

Lab Sample ID: LCSD 580-263171/3-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263171

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.03		ug/L		81	20 - 150	10	35
2,4-D			5.00	4.45		ug/L		89	20 - 150	17	35
2,4-DB			5.00	5.26		ug/L		105	50 - 150	2	35
Dalapon			5.00	3.57		ug/L		71	20 - 120	34	35
Dicamba			5.00	4.54		ug/L		91	20 - 150	25	35
Dichlorprop			5.00	5.56		ug/L		111	23 - 150	16	35
MCPA			5.00	4.30		ug/L		86	21 - 150	15	35
Silvex (2,4,5-TP)			5.00	5.51		ug/L		110	24 - 150	15	35
MCPP			5.00	5.48		ug/L		110	51 - 150	6	35

Method: 8151A - Herbicides (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263171/3-A
Matrix: Water
Analysis Batch: 263311

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263171

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*111*		*51 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 15:36	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dichlorophenol	ND		4.0	0.91	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 15:36	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/11/17 13:08	12/13/17 15:36	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/11/17 13:08	12/13/17 15:36	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/11/17 13:08	12/13/17 15:36	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chloroaniline	ND		10	2.1	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
4-Nitrophenol	ND		15	3.7	ug/L		12/11/17 13:08	12/13/17 15:36	1
Acenaphthene	ND		0.40	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Anthracene	ND		0.040	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[b]fluoranthene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[g,h,i]perylene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzo[k]fluoranthene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzoic acid	ND		3.0	0.60	ug/L		12/11/17 13:08	12/13/17 15:36	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/11/17 13:08	12/13/17 15:36	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/11/17 13:08	12/13/17 15:36	1
Carbazole	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Chrysene	ND		0.60	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dibenz(a,h)anthracene	ND		0.60	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/11/17 13:08	12/13/17 15:36	1
Diethyl phthalate	ND		12	2.8	ug/L		12/11/17 13:08	12/13/17 15:36	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/11/17 13:08	12/13/17 15:36	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/11/17 13:08	12/13/17 15:36	1
Fluoranthene	ND		3.0	0.010	ug/L		12/11/17 13:08	12/13/17 15:36	1
Fluorene	ND		2.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/11/17 13:08	12/13/17 15:36	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Isophorone	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Naphthalene	ND		0.40	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/11/17 13:08	12/13/17 15:36	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/11/17 13:08	12/13/17 15:36	1
Phenanthrene	ND		1.0	0.020	ug/L		12/11/17 13:08	12/13/17 15:36	1
Phenol	ND		4.0	0.050	ug/L		12/11/17 13:08	12/13/17 15:36	1
Pyrene	ND		2.0	0.040	ug/L		12/11/17 13:08	12/13/17 15:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*66*		*48 - 125*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
2-Fluorophenol (Surr)	*76*		*50 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Nitrobenzene-d5 (Surr)	*83*		*52 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Phenol-d5 (Surr)	*76*		*52 - 120*	*12/11/17 13:08*	*12/13/17 15:36*	*1*
Terphenyl-d14 (Surr)	*84*		*49 - 133*	*12/11/17 13:08*	*12/13/17 15:36*	*1*

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.45		ug/L		73	46 - 120
1,2-Dichlorobenzene	2.00	1.60		ug/L		80	44 - 120
1,3-Dichlorobenzene	2.00	1.39		ug/L		70	34 - 121
1,4-Dichlorobenzene	2.00	1.42		ug/L		71	40 - 120
1-Methylnaphthalene	2.00	1.63		ug/L		82	65 - 120
2,4,5-Trichlorophenol	2.00	1.77		ug/L		89	56 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2.00	2.14		ug/L		107	55 - 129
2,4-Dichlorophenol	2.00	1.88	J	ug/L		94	60 - 140
2,4-Dimethylphenol	2.00	1.49	J	ug/L		74	20 - 129
2,4-Dinitrophenol	4.00	2.41	J	ug/L		60	20 - 132
2,4-Dinitrotoluene	2.00	1.93		ug/L		96	53 - 143
2,6-Dinitrotoluene	2.00	1.90		ug/L		95	59 - 134
2-Chloronaphthalene	2.00	1.52		ug/L		76	64 - 125
2-Chlorophenol	2.00	1.84		ug/L		92	69 - 125
2-Methylnaphthalene	2.00	1.55		ug/L		77	56 - 120
2-Methylphenol	2.00	1.68		ug/L		84	53 - 120
2-Nitroaniline	10.0	8.07		ug/L		81	58 - 142
2-Nitrophenol	2.00	1.90		ug/L		95	20 - 143
3 & 4 Methylphenol	2.00	1.71		ug/L		85	54 - 120
3,3'-Dichlorobenzidine	12.0	11.3	J	ug/L		95	20 - 146
3-Nitroaniline	10.0	7.90		ug/L		79	22 - 139
4,6-Dinitro-2-methylphenol	4.00	3.53	J	ug/L		88	20 - 144
4-Bromophenyl phenyl ether	2.00	1.76		ug/L		88	70 - 123
4-Chloro-3-methylphenol	2.00	1.48		ug/L		74	63 - 126
4-Chloroaniline	10.0	7.75	J	ug/L		78	20 - 120
4-Chlorophenyl phenyl ether	2.00	1.83		ug/L		92	69 - 125
4-Nitroaniline	10.0	7.67		ug/L		77	40 - 130
4-Nitrophenol	4.00	ND		ug/L		81	27 - 150
Acenaphthene	2.00	1.63		ug/L		82	62 - 120
Acenaphthylene	2.00	1.52		ug/L		76	24 - 141
Anthracene	2.00	1.59		ug/L		79	20 - 140
Benzo[a]anthracene	2.00	1.76		ug/L		88	59 - 123
Benzo[a]pyrene	2.00	2.39		ug/L		119	20 - 133
Benzo[b]fluoranthene	2.00	2.49		ug/L		124	72 - 129
Benzo[g,h,i]perylene	2.00	2.65		ug/L		133	67 - 133
Benzo[k]fluoranthene	2.00	2.40		ug/L		120	72 - 120
Benzoic acid	4.00	0.830	J	ug/L		21	20 - 145
Benzyl alcohol	2.00	1.55		ug/L		77	42 - 129
Bis(2-chloroethoxy)methane	2.00	1.68		ug/L		84	59 - 125
Bis(2-chloroethyl)ether	2.00	1.64		ug/L		82	64 - 120
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		92	58 - 150
bis(chloroisopropyl) ether	2.00	1.45		ug/L		72	53 - 133
Butyl benzyl phthalate	2.00	2.03	J	ug/L		102	72 - 150
Carbazole	2.00	1.87		ug/L		94	80 - 135
Chrysene	2.00	1.66		ug/L		83	74 - 120
Dibenz(a,h)anthracene	2.00	2.60		ug/L		130	56 - 135
Dibenzofuran	2.00	1.72		ug/L		86	70 - 125
Diethyl phthalate	2.00	ND		ug/L		88	66 - 139
Dimethyl phthalate	2.00	1.73		ug/L		87	74 - 128
Di-n-butyl phthalate	2.00	1.83	J	ug/L		91	74 - 140
Di-n-octyl phthalate	2.00	2.39		ug/L		119	65 - 150
Fluoranthene	2.00	1.84	J	ug/L		92	70 - 135
Fluorene	2.00	1.85	J	ug/L		93	70 - 125
Hexachlorobenzene	2.00	1.46		ug/L		73	55 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	2.00	1.22		ug/L		61	20 - 125
Hexachlorocyclopentadiene	10.0	3.63		ug/L		36	20 - 120
Hexachloroethane	2.00	1.32		ug/L		66	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.53		ug/L		127	64 - 133
Isophorone	2.00	1.75		ug/L		87	64 - 125
Naphthalene	2.00	1.59		ug/L		80	56 - 120
Nitrobenzene	2.00	1.73		ug/L		87	54 - 133
N-Nitrosodi-n-propylamine	10.0	7.21		ug/L		72	54 - 120
N-Nitrosodiphenylamine	11.4	7.87		ug/L		69	22 - 135
Pentachlorophenol	4.00	2.05	J	ug/L		51	20 - 135
Phenanthrene	2.00	1.64		ug/L		82	71 - 120
Phenol	2.00	1.57	J	ug/L		79	53 - 126
Pyrene	2.00	1.87	J	ug/L		93	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*77*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*84*		*52 - 120*
Phenol-d5 (Surr)	*79*		*52 - 120*
Terphenyl-d14 (Surr)	*83*		*49 - 133*

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.68		ug/L		84	46 - 120	14	20
1,2-Dichlorobenzene	2.00	1.73		ug/L		86	44 - 120	8	20
1,3-Dichlorobenzene	2.00	1.56		ug/L		78	34 - 121	11	29
1,4-Dichlorobenzene	2.00	1.55		ug/L		77	40 - 120	8	25
1-Methylnaphthalene	2.00	1.87		ug/L		93	65 - 120	13	20
2,4,5-Trichlorophenol	2.00	1.87		ug/L		93	56 - 122	5	25
2,4,6-Trichlorophenol	2.00	2.12		ug/L		106	55 - 129	1	20
2,4-Dichlorophenol	2.00	2.04	J	ug/L		102	60 - 140	8	26
2,4-Dimethylphenol	2.00	1.53	J	ug/L		76	20 - 129	3	35
2,4-Dinitrophenol	4.00	2.68	J	ug/L		67	20 - 132	11	35
2,4-Dinitrotoluene	2.00	2.04		ug/L		102	53 - 143	6	29
2,6-Dinitrotoluene	2.00	2.06		ug/L		103	59 - 134	8	24
2-Chloronaphthalene	2.00	1.59		ug/L		80	64 - 125	5	20
2-Chlorophenol	2.00	1.92		ug/L		96	69 - 125	4	20
2-Methylnaphthalene	2.00	1.77		ug/L		89	56 - 120	14	20
2-Methylphenol	2.00	1.68		ug/L		84	53 - 120	0	33
2-Nitroaniline	10.0	8.11		ug/L		81	58 - 142	1	20
2-Nitrophenol	2.00	2.18		ug/L		109	20 - 143	14	35
3 & 4 Methylphenol	2.00	1.76		ug/L		88	54 - 120	3	20
3,3'-Dichlorobenzidine	12.0	11.9	J	ug/L		99	20 - 146	5	35
3-Nitroaniline	10.0	8.20		ug/L		82	22 - 139	4	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	4.00	3.60	J	ug/L		90	20 - 144	2	35
4-Bromophenyl phenyl ether	2.00	1.88		ug/L		94	70 - 123	7	20
4-Chloro-3-methylphenol	2.00	1.57		ug/L		79	63 - 126	6	20
4-Chloroaniline	10.0	8.56	J	ug/L		86	20 - 120	10	35
4-Chlorophenyl phenyl ether	2.00	1.92		ug/L		96	69 - 125	5	20
4-Nitroaniline	10.0	8.04		ug/L		80	40 - 130	5	35
4-Nitrophenol	4.00	ND		ug/L		78	27 - 150	4	23
Acenaphthene	2.00	1.68		ug/L		84	62 - 120	3	20
Acenaphthylene	2.00	1.56		ug/L		78	24 - 141	3	20
Anthracene	2.00	1.60		ug/L		80	20 - 140	1	26
Benzo[a]anthracene	2.00	1.86		ug/L		93	59 - 123	5	20
Benzo[a]pyrene	2.00	2.46		ug/L		123	20 - 133	3	35
Benzo[b]fluoranthene	2.00	2.60	*	ug/L		130	72 - 129	4	20
Benzo[g,h,i]perylene	2.00	2.79	*	ug/L		139	67 - 133	5	20
Benzo[k]fluoranthene	2.00	2.72	*	ug/L		136	72 - 120	13	20
Benzoic acid	4.00	0.969	J	ug/L		24	20 - 145	16	35
Benzyl alcohol	2.00	1.61		ug/L		80	42 - 129	4	35
Bis(2-chloroethoxy)methane	2.00	1.71		ug/L		86	59 - 125	2	26
Bis(2-chloroethyl)ether	2.00	1.68		ug/L		84	64 - 120	3	20
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		101	58 - 150	9	35
bis(chloroisopropyl) ether	2.00	1.51		ug/L		75	53 - 133	4	20
Butyl benzyl phthalate	2.00	2.15	J	ug/L		107	72 - 150	6	20
Carbazole	2.00	1.96		ug/L		98	80 - 135	5	20
Chrysene	2.00	1.82		ug/L		91	74 - 120	9	20
Dibenz(a,h)anthracene	2.00	2.76	*	ug/L		138	56 - 135	6	20
Dibenzofuran	2.00	1.81		ug/L		90	70 - 125	5	20
Diethyl phthalate	2.00	ND		ug/L		94	66 - 139	6	20
Dimethyl phthalate	2.00	1.79		ug/L		89	74 - 128	3	20
Di-n-butyl phthalate	2.00	1.86	J	ug/L		93	74 - 140	2	20
Di-n-octyl phthalate	2.00	2.36		ug/L		118	65 - 150	1	20
Fluoranthene	2.00	1.93	J	ug/L		96	70 - 135	4	20
Fluorene	2.00	1.96	J	ug/L		98	70 - 125	6	20
Hexachlorobenzene	2.00	1.54		ug/L		77	55 - 122	5	20
Hexachlorobutadiene	2.00	1.50		ug/L		75	20 - 125	21	31
Hexachlorocyclopentadiene	10.0	4.35		ug/L		44	20 - 120	18	35
Hexachloroethane	2.00	1.45		ug/L		73	24 - 125	10	35
Indeno[1,2,3-cd]pyrene	2.00	2.60		ug/L		130	64 - 133	2	20
Isophorone	2.00	1.84		ug/L		92	64 - 125	5	20
Naphthalene	2.00	1.81		ug/L		90	56 - 120	13	20
Nitrobenzene	2.00	1.77		ug/L		89	54 - 133	2	20
N-Nitrosodi-n-propylamine	10.0	7.60		ug/L		76	54 - 120	5	20
N-Nitrosodiphenylamine	11.4	8.37		ug/L		73	22 - 135	6	29
Pentachlorophenol	4.00	2.15	J	ug/L		54	20 - 135	5	35
Phenanthrene	2.00	1.78		ug/L		89	71 - 120	8	20
Phenol	2.00	1.63	J	ug/L		81	53 - 126	4	26
Pyrene	2.00	1.93	J	ug/L		97	64 - 128	3	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*81*		*48 - 125*
2-Fluorobiphenyl	*77*		*50 - 120*
2-Fluorophenol (Surr)	*79*		*50 - 120*
Nitrobenzene-d5 (Surr)	*89*		*52 - 120*
Phenol-d5 (Surr)	*81*		*52 - 120*
Terphenyl-d14 (Surr)	*83*		*49 - 133*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-263185/1-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263185

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.10	0.011	ug/L		12/11/17 13:08	12/19/17 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*59 - 120*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
Terphenyl-d14	*90*		*17 - 149*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/11/17 13:08*	*12/19/17 12:09*	*1*
2,4,6-Tribromophenol	*64*		*43 - 122*	*12/11/17 13:08*	*12/19/17 12:09*	*1*

Lab Sample ID: LCS 580-263185/2-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263185

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.81		ug/L		90	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*85*		*59 - 120*
Terphenyl-d14	*92*		*17 - 149*
2-Fluorobiphenyl	*81*		*50 - 120*
2,4,6-Tribromophenol	*99*		*43 - 122*

Lab Sample ID: LCSD 580-263185/3-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263185

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.77		ug/L		88	40 - 140	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*80*		*59 - 120*
Terphenyl-d14	*82*		*17 - 149*
2-Fluorobiphenyl	*77*		*50 - 120*
2,4,6-Tribromophenol	*91*		*43 - 122*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-14999/1015
Matrix: Water
Analysis Batch: 14999

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/08/17 12:00	1

Lab Sample ID: LCS 590-14999/1014
Matrix: Water
Analysis Batch: 14999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.12		mg/L		102	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-263398/16-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0982		mg/L		98	85 - 115
Antimony	0.100	0.0945		mg/L		94	85 - 115
Barium	0.100	0.0962		mg/L		96	85 - 115
Beryllium	0.100	0.0974		mg/L		97	85 - 115
Cadmium	0.100	0.0950		mg/L		95	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.100	0.0981		mg/L		98	85 - 115
Iron	10.0	10.1		mg/L		101	85 - 115
Lead	0.100	0.0988		mg/L		99	85 - 115
Manganese	0.100	0.0994		mg/L		99	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Selenium	0.100	0.0926		mg/L		93	85 - 115
Silver	0.100	0.0964		mg/L		96	85 - 115
Thallium	0.100	0.0964		mg/L		96	85 - 115
Vanadium	0.100	0.0984		mg/L		98	85 - 115
Zinc	0.100	0.0951		mg/L		95	85 - 115

Lab Sample ID: LCSD 580-263398/17-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263398

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0941		mg/L		94	85 - 115	4	20
Antimony	0.100	0.0910		mg/L		91	85 - 115	4	20
Barium	0.100	0.0914		mg/L		91	85 - 115	5	20
Beryllium	0.100	0.0937		mg/L		94	85 - 115	4	20
Cadmium	0.100	0.0895		mg/L		89	85 - 115	6	20
Chromium	0.100	0.0969		mg/L		97	85 - 115	4	20
Copper	0.100	0.0947		mg/L		95	85 - 115	4	20
Iron	10.0	9.57		mg/L		96	85 - 115	5	20
Lead	0.100	0.0946		mg/L		95	85 - 115	4	20
Manganese	0.100	0.0956		mg/L		96	85 - 115	4	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-263398/17-A
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263398

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nickel	0.100	0.0956		mg/L		96	85 - 115	5	20
Selenium	0.100	0.0895		mg/L		89	85 - 115	3	20
Silver	0.100	0.0911		mg/L		91	85 - 115	6	20
Thallium	0.100	0.0923		mg/L		92	85 - 115	4	20
Vanadium	0.100	0.0942		mg/L		94	85 - 115	4	20
Zinc	0.100	0.0920		mg/L		92	85 - 115	3	20

Lab Sample ID: MB 580-264059/13-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 264059

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 11:21	1
Antimony	ND		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Barium	ND		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 11:21	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 11:21	1
Chromium	ND		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 11:21	1
Copper	ND		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 11:21	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 11:21	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 11:21	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Nickel	ND		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 11:21	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 11:21	1
Vanadium	ND		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Zinc	ND		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 11:21	1

Lab Sample ID: LCS 580-264059/14-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	85 - 115
Antimony	0.100	0.0987		mg/L		99	85 - 115
Barium	0.100	0.0996		mg/L		100	85 - 115
Beryllium	0.100	0.0997		mg/L		100	85 - 115
Cadmium	0.100	0.0972		mg/L		97	85 - 115
Chromium	0.100	0.100		mg/L		100	85 - 115
Copper	0.100	0.100		mg/L		100	85 - 115
Iron	10.0	10.0		mg/L		100	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0954		mg/L		95	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Selenium	0.100	0.0955		mg/L		96	85 - 115
Silver	0.100	0.100		mg/L		100	85 - 115
Thallium	0.100	0.0959		mg/L		96	85 - 115
Vanadium	0.100	0.0977		mg/L		98	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-264059/14-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.100	0.0991		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-264059/15-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0973		mg/L		97	85 - 115	3	20
Antimony	0.100	0.0983		mg/L		98	85 - 115	0	20
Barium	0.100	0.0989		mg/L		99	85 - 115	1	20
Beryllium	0.100	0.0955		mg/L		95	85 - 115	4	20
Cadmium	0.100	0.0971		mg/L		97	85 - 115	0	20
Chromium	0.100	0.0980		mg/L		98	85 - 115	2	20
Copper	0.100	0.0981		mg/L		98	85 - 115	2	20
Iron	10.0	9.66		mg/L		97	85 - 115	4	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0937		mg/L		94	85 - 115	2	20
Nickel	0.100	0.0982		mg/L		98	85 - 115	2	20
Selenium	0.100	0.0960		mg/L		96	85 - 115	1	20
Silver	0.100	0.0995		mg/L		99	85 - 115	0	20
Thallium	0.100	0.0947		mg/L		95	85 - 115	1	20
Vanadium	0.100	0.0959		mg/L		96	85 - 115	2	20
Zinc	0.100	0.0967		mg/L		97	85 - 115	2	20

Lab Sample ID: MB 580-263151/12-B
Matrix: Water
Analysis Batch: 263508

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 263398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/13/17 15:59	12/14/17 19:30	1
Antimony	ND		0.00040	0.00011	mg/L		12/13/17 15:59	12/14/17 19:30	1
Barium	ND		0.0012	0.000054	mg/L		12/13/17 15:59	12/14/17 19:30	1
Beryllium	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 19:30	1
Cadmium	ND		0.00040	0.00010	mg/L		12/13/17 15:59	12/14/17 19:30	1
Chromium	ND		0.00040	0.00014	mg/L		12/13/17 15:59	12/14/17 19:30	1
Copper	ND		0.0020	0.00060	mg/L		12/13/17 15:59	12/14/17 19:30	1
Iron	ND		0.20	0.036	mg/L		12/13/17 15:59	12/14/17 19:30	1
Lead	ND		0.00080	0.00020	mg/L		12/13/17 15:59	12/14/17 19:30	1
Manganese	ND		0.0020	0.00046	mg/L		12/13/17 15:59	12/14/17 19:30	1
Nickel	ND		0.0030	0.00011	mg/L		12/13/17 15:59	12/14/17 19:30	1
Selenium	ND		0.0080	0.0021	mg/L		12/13/17 15:59	12/14/17 19:30	1
Silver	ND		0.00040	0.000043	mg/L		12/13/17 15:59	12/14/17 19:30	1
Thallium	ND		0.0010	0.000065	mg/L		12/13/17 15:59	12/14/17 19:30	1
Vanadium	ND		0.0040	0.00046	mg/L		12/13/17 15:59	12/14/17 19:30	1
Zinc	ND		0.0070	0.0019	mg/L		12/13/17 15:59	12/14/17 19:30	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-483722/1-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:32	1

Lab Sample ID: LCS 490-483722/2-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.101		mg/L		101	90 - 110

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Client Sample ID: MW-2

Lab Sample ID: 590-7679-1

Date Collected: 12/08/17 09:35

Matrix: Water

Date Received: 12/08/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 18:17	MRS	TAL SPK
Total/NA	Prep	8151A			933 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 18:28	ERZ	TAL SEA
Total/NA	Prep	3520C			1009.2 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263442	12/14/17 13:52	CJ	TAL SEA
Total/NA	Prep	3520C			1009.2 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 19:43	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 13:13	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:48	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:03	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:42	SDL	TAL NSH

Client Sample ID: MW-15

Lab Sample ID: 590-7679-2

Date Collected: 12/08/17 10:31

Matrix: Water

Date Received: 12/08/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 18:37	MRS	TAL SPK
Total/NA	Prep	8151A			912.5 mL	10 mL	263171	12/11/17 10:47	APR	TAL SEA
Total/NA	Analysis	8151A		1			263311	12/13/17 18:54	ERZ	TAL SEA
Total/NA	Prep	3520C			1023.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D		1			263442	12/14/17 14:17	CJ	TAL SEA
Total/NA	Prep	3520C			1023.8 mL	2 mL	263185	12/11/17 13:08	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 20:07	W1T	TAL SEA
Total/NA	Analysis	300.0		1			14999	12/08/17 13:25	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	263151	12/09/17 15:37	R1K	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263398	12/13/17 15:59	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263508	12/14/17 20:52	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:06	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:43	SDL	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 590-7679-3

Date Collected: 12/08/17 00:01

Matrix: Water

Date Received: 12/08/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15000	12/08/17 18:57	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Laboratory: TestAmerica Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-071	12-31-17
Oregon	NELAP Primary AB	10	4137	12-07-18
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C789	07-19-18

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis(chloroisopropyl) ether
8270D SIM	3520C	Water	1,4-Dioxane

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7679-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
8151A	Herbicides (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Aaron Feederly / Matt Peterson	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3266-1070.1
Client Contact: Josh Lee	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4 - Total Cyanide	200.8_CWA - Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8151A_MS, 8270D	8270D_SIM_AK - 1,4-Dioxane only	200.8_CWA - Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	300_ORGFMS - Nitrate only	8260C - 8260C - Volatiles	Total Number of containers	Special Instructions/Note:
Preservation Code:							B	D	N	N	N	N	A		
~~MW-1A~~	~~12/8/17~~		G	Water	N		X	X	X	X	X	X	X	12	
MW-2	12/8/17	09:35	G	Water	N		X	X	X	X	X	X	X	12	
MW-15	12/8/17	10:31	G	Water	N		X	X	X	X	X	X	X	12	
Trip Blank				Water									X		
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											

590-7679 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	12-8-17 1300	GEI	Matthew Sudo	12.8.17 1300	TestAmerica
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0-7°C (IR Gun)

Ver: 08/04/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

590-7679 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 12/9/2017 @ 09:40

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9760 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 1.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) J.J.

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA


Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ES

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ES

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ES

I certify that I attached a label with the unique LIMS number to each container (intial) ES

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# ES

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-7679

TestAmerica
THE ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington	Job #: 590-7679-1
Address: 2960 Foster Creighton Drive,	Due Date Requested: 12/20/2017		
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email	WO #:		
Project Name: Marshall 0504-104-00	Project #: 59000577		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-2 (590-7679-1)	12/8/17	09:35 Pacific		Water			X	1	
MW-15 (590-7679-2)	12/8/17	10:31 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

~~Empty Kit~~ Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Randee Arrington	Date/Time: 12/8/17 1515	Company TestAmerica	Received by:	Date/Time: 12-9-17 9:40	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.9			

Ver: 09/20/2016

12/28/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3251.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-7679-1
Address: 5755 8th Street East.	Due Date Requested: 12/20/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	200.8_CWA/200.8_P_TOT Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8270D_SIM_AK/3520C (MOD) 1,4-Dioxane only	8151A_MS/8151A_AP Herbicide (Aqueous)	8270D/3520C Semivolatiles, standard list	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MW-2 (590-7679-1)	12/8/17	09:35 Pacific		Water			X	X	X	X	X	8	
MW-15 (590-7679-2)	12/8/17	10:31 Pacific		Water			X	X	X	X	X	8	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Randee Arrington	Date/Time: 12/8/17 1333	Company: TestAmerica	Received by: [signature] Date/Time: 12-9-17 1240 Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:
	Cooler Temperature(s) °C and Other Remarks:

TR5 = 1.0 1.1 0.3 0.2 0.4 1.1

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7679-1

Login Number: 7679

List Source: TestAmerica Spokane

List Number: 1

Creator: Arrington, Randee E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7679-1

Login Number: 7679
List Number: 3
Creator: Hobbs, Kenneth F

List Source: TestAmerica Seattle
List Creation: 12/09/17 03:26 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR5=1.0, 1.1, 0.3, 0.2, 0.4, 1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-7685-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/28/2017 2:38:35 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Job ID: 590-7685-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/11/2017 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-15078 recovered above the upper control limit for Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-11A:121117 (590-7685-1), MW-15A:121117 (590-7685-2) and MW-1A:121117 (590-7685-3).

Method 8260C: The continuing calibration verification (CCV) associated with batch 590-15052 recovered above the upper control limit for 1,1,2-Trichlorotrifluoroethane, 2-Butanone (MEK), Acetone, Chloromethane, 2,2-Dichloropropane, Dichlorofluoromethane and trans-1,2-Dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. Because the %D for acetone was greater than 40, results for this analyte are estimates. The following sample is impacted: Trip Blank (590-7685-4).

Method 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 590-15052 recovered outside control limits for the following analytes: 1,1,2-Trichlorotrifluoroethane, Dichlorofluoromethane, trans-1,2-Dichloroethene and Hexane. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The laboratory control sample (LCS) for analytical batch 590-15052 recovered outside control limits for the following analytes: Acetone and trans-1,2-Dichloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The method blank for analytical batch 590-15052 contained 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene above the method detection limit (MDL) but below the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263784 recovered outside acceptance criteria, low biased, for Isophorone, Hexachlorocyclopentadiene, 2,2'oxybis[1-chloropropane], and 2,4,6-Trichlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263784 recovered above the upper control limit for 4-Nitrophenol and 4-Nitroaniline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-263471 and analytical batch 580-263784 recovered outside control limits for the following analytes: 4-Nitrophenol, Benzo[k]fluoranthene (LCSD only), and Indeno[1,2,3-cd]pyrene (LCSD only). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: Surrogate 2,4,6-Tribromophenol (Surr) was 2% low in the method blank (MB 580-263471/1-A). Since all other surrogates in the MB met acceptance criteria, the CCV associated with the MB was within the 20%D limits, and the LCS/LCSD pair and all samples met acceptance criteria for this surrogate data was reported. This appears to be an isolated event and any re-extraction would be outside of holding time, therefore data is qualified and reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-264116 recovered outside acceptance criteria, low biased, for Phenol, Benzyl alcohol, N-Nitrosodi-n-propylamine, Bis(2-ethylhexyl) phthalate, 2,2'-oxybis[1-chloropropane], and Di-n-octyl phthalate. A standard at or below the reporting limit (RL) was analyzed, and the target analytes were detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Job ID: 590-7685-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-264116 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8151A: The continuing calibration verification (CCV) associated with batch 580-264093 recovered outside acceptance criteria, low biased, for 2,4,5-T. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.8: The method blank for preparation batch 580-263646 and analytical batch 580-263734 contained Barium and Thallium above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7685-1	MW-11A:121117	Water	12/11/17 11:40	12/11/17 16:30
590-7685-2	MW-15A:121117	Water	12/11/17 13:10	12/11/17 16:30
590-7685-3	MW-1A:121117	Water	12/11/17 14:32	12/11/17 16:30
590-7685-4	Trip Blank	Water	12/11/17 00:00	12/11/17 16:30

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Client Sample ID: MW-11A:121117
Date Collected: 12/11/17 11:40
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 13:33	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 13:33	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 13:33	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 13:33	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 13:33	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 13:33	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 13:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 13:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 13:33	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 13:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 13:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 13:33	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 13:33	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 13:33	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 13:33	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 13:33	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 13:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 13:33	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 13:33	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 13:33	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 13:33	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 13:33	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 13:33	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 13:33	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 13:33	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 13:33	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 13:33	1
Acetone	ND		30	14	ug/L			12/15/17 13:33	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 13:33	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 13:33	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 13:33	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 13:33	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 13:33	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 13:33	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 13:33	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 13:33	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 13:33	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 13:33	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 13:33	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 13:33	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 13:33	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 13:33	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 13:33	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 13:33	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 13:33	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 13:33	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 13:33	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 13:33	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 13:33	1

Client Sample ID: MW-11A:121117
Date Collected: 12/11/17 11:40
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 13:33	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 13:33	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 13:33	1
Methylene Chloride	**1.1**	**J**	5.0	1.0	ug/L			12/15/17 13:33	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 13:33	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 13:33	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 13:33	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 13:33	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 13:33	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 13:33	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 13:33	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 13:33	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 13:33	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 13:33	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 13:33	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 13:33	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 13:33	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 13:33	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 13:33	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 125*		*12/15/17 13:33*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/15/17 13:33*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/15/17 13:33*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/15/17 13:33*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.043	ug/L		12/18/17 09:34	12/23/17 16:49	1
2,4-D	ND		0.27	0.021	ug/L		12/18/17 09:34	12/23/17 16:49	1
2,4-DB	ND		0.27	0.021	ug/L		12/18/17 09:34	12/23/17 16:49	1
Dalapon	ND		0.43	0.11	ug/L		12/18/17 09:34	12/23/17 16:49	1
Dicamba	ND		0.27	0.043	ug/L		12/18/17 09:34	12/23/17 16:49	1
Dichlorprop	ND		0.27	0.043	ug/L		12/18/17 09:34	12/23/17 16:49	1
MCPA	ND		0.27	0.043	ug/L		12/18/17 09:34	12/23/17 16:49	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/18/17 09:34	12/23/17 16:49	1
MCPP	ND		0.27	0.021	ug/L		12/18/17 09:34	12/23/17 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*121*		*51 - 150*	*12/18/17 09:34*	*12/23/17 16:49*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.013**	**J**	0.098	0.011	ug/L		12/14/17 12:44	12/20/17 11:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*89*		*59 - 120*	*12/14/17 12:44*	*12/20/17 11:05*	*1*
Terphenyl-d14	*94*		*17 - 149*	*12/14/17 12:44*	*12/20/17 11:05*	*1*
2-Fluorobiphenyl	*87*		*50 - 120*	*12/14/17 12:44*	*12/20/17 11:05*	*1*
2,4,6-Tribromophenol	*99*		*43 - 122*	*12/14/17 12:44*	*12/20/17 11:05*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/26/17 18:54	1
1,2-Dichlorobenzene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/26/17 18:54	1
1,4-Dichlorobenzene	ND		0.39	0.059	ug/L		12/14/17 12:44	12/26/17 18:54	1
1-Methylnaphthalene	ND		0.98	0.029	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,4-Dichlorophenol	ND		3.9	0.89	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,4-Dimethylphenol	ND		3.9	0.81	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,4-Dinitrotoluene	ND		0.98	0.24	ug/L		12/14/17 12:44	12/26/17 18:54	1
2,6-Dinitrotoluene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
2-Chloronaphthalene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
2-Chlorophenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
2-Methylnaphthalene	ND		0.39	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
2-Methylphenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
2-Nitroaniline	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
2-Nitrophenol	ND		0.98	0.24	ug/L		12/14/17 12:44	12/26/17 18:54	1
3 & 4 Methylphenol	ND		0.78	0.039	ug/L		12/14/17 12:44	12/26/17 18:54	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/14/17 12:44	12/26/17 18:54	1
3-Nitroaniline	ND		2.9	0.72	ug/L		12/14/17 12:44	12/26/17 18:54	1
4,6-Dinitro-2-methylphenol	ND		4.9	0.98	ug/L		12/14/17 12:44	12/26/17 18:54	1
4-Bromophenyl phenyl ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
4-Chloro-3-methylphenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
4-Chloroaniline	ND		9.8	2.1	ug/L		12/14/17 12:44	12/26/17 18:54	1
4-Chlorophenyl phenyl ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
4-Nitroaniline	ND		2.0	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
4-Nitrophenol	ND	*	15	3.7	ug/L		12/14/17 12:44	12/26/17 18:54	1
Acenaphthene	ND		0.39	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Acenaphthylene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Anthracene	ND		0.039	0.0098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzo[a]anthracene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzo[a]pyrene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzo[b]fluoranthene	ND		0.98	0.049	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzo[g,h,i]perylene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzo[k]fluoranthene	ND	*	0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzoic acid	**0.63**	**J**	2.9	0.59	ug/L		12/14/17 12:44	12/26/17 18:54	1
Benzyl alcohol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Bis(2-chloroethoxy)methane	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Bis(2-chloroethyl)ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/14/17 12:44	12/26/17 18:54	1
bis(chloroisopropyl) ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Butyl benzyl phthalate	ND		9.8	0.73	ug/L		12/14/17 12:44	12/26/17 18:54	1
Carbazole	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Chrysene	ND		0.59	0.0098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Dibenz(a,h)anthracene	ND		0.59	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Dibenzofuran	ND		0.39	0.059	ug/L		12/14/17 12:44	12/26/17 18:54	1
Diethyl phthalate	ND		12	2.8	ug/L		12/14/17 12:44	12/26/17 18:54	1
Dimethyl phthalate	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Di-n-butyl phthalate	ND		2.9	0.54	ug/L		12/14/17 12:44	12/26/17 18:54	1
Di-n-octyl phthalate	ND		0.98	0.18	ug/L		12/14/17 12:44	12/26/17 18:54	1
Fluoranthene	ND		2.9	0.0098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Fluorene	ND		2.0	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1

Client Sample ID: MW-11A:121117
Date Collected: 12/11/17 11:40
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Hexachlorobutadiene	ND		0.98	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Hexachlorocyclopentadiene	ND		2.0	0.38	ug/L		12/14/17 12:44	12/26/17 18:54	1
Hexachloroethane	ND		0.98	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Indeno[1,2,3-cd]pyrene	ND	*	0.98	0.049	ug/L		12/14/17 12:44	12/26/17 18:54	1
Isophorone	ND		0.39	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Naphthalene	ND		0.39	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Nitrobenzene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
N-Nitrosodi-n-propylamine	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
N-Nitrosodiphenylamine	ND		2.9	0.098	ug/L		12/14/17 12:44	12/26/17 18:54	1
Pentachlorophenol	ND		4.9	0.98	ug/L		12/14/17 12:44	12/26/17 18:54	1
Phenanthrene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 18:54	1
Phenol	ND		3.9	0.049	ug/L		12/14/17 12:44	12/26/17 18:54	1
Pyrene	ND		2.0	0.039	ug/L		12/14/17 12:44	12/26/17 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*	*12/14/17 12:44*	*12/26/17 18:54*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/14/17 12:44*	*12/26/17 18:54*	*1*
2-Fluorophenol (Surr)	*75*		*50 - 120*	*12/14/17 12:44*	*12/26/17 18:54*	*1*
Nitrobenzene-d5 (Surr)	*85*		*52 - 120*	*12/14/17 12:44*	*12/26/17 18:54*	*1*
Phenol-d5 (Surr)	*76*		*52 - 120*	*12/14/17 12:44*	*12/26/17 18:54*	*1*
Terphenyl-d14 (Surr)	*95*		*49 - 133*	*12/14/17 12:44*	*12/26/17 18:54*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**3.5**		0.20	0.039	mg/L			12/12/17 09:20	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0016**		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 11:24	1
Antimony	ND		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 11:24	1
Barium	**0.085**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 11:24	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:24	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 11:24	1
Chromium	**0.00046**		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 11:24	1
Copper	ND		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 11:24	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 11:24	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 11:24	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 11:24	1
Nickel	ND		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 11:24	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 11:24	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:24	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 11:24	1
Vanadium	**0.0024**	**J**	0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 11:24	1
Zinc	ND		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 11:24	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 09:03	1
Antimony	ND		0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 09:03	1

Client Sample ID: MW-11A:121117

Lab Sample ID: 590-7685-1

Date Collected: 12/11/17 11:40

Matrix: Water

Date Received: 12/11/17 16:30

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.083**	**B**	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 09:03	1
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 09:03	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 09:03	1
Chromium	**0.00066**		0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 09:03	1
Copper	ND		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 09:03	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 09:03	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 09:03	1
Manganese	ND		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 09:03	1
Nickel	**0.00022**	**J**	0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 09:03	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 09:03	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 09:03	1
Thallium	ND		0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 09:03	1
Vanadium	**0.0028**	**J**	0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 09:03	1
Zinc	ND		0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 09:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:44	1

Client Sample ID: MW-15A:121117

Lab Sample ID: 590-7685-2

Date Collected: 12/11/17 13:10

Matrix: Water

Date Received: 12/11/17 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 13:55	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 13:55	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 13:55	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 13:55	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 13:55	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 13:55	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 13:55	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 13:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 13:55	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 13:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 13:55	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 13:55	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 13:55	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 13:55	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 13:55	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 13:55	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 13:55	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 13:55	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 13:55	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 13:55	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 13:55	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 13:55	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 13:55	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 13:55	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 13:55	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Client Sample ID: MW-15A:121117
Date Collected: 12/11/17 13:10
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 13:55	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 13:55	1
Acetone	ND		30	14	ug/L			12/15/17 13:55	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 13:55	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 13:55	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 13:55	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 13:55	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 13:55	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 13:55	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 13:55	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 13:55	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 13:55	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 13:55	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 13:55	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 13:55	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 13:55	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 13:55	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 13:55	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 13:55	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 13:55	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 13:55	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 13:55	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 13:55	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 13:55	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 13:55	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 13:55	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 13:55	1
Methylene Chloride	**1.8**	**J**	5.0	1.0	ug/L			12/15/17 13:55	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 13:55	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 13:55	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 13:55	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 13:55	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 13:55	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 13:55	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 13:55	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 13:55	1
Tetrachloroethene	**0.71**	**J**	1.0	0.22	ug/L			12/15/17 13:55	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 13:55	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 13:55	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 13:55	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 13:55	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 13:55	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 13:55	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 13:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*12/15/17 13:55*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/15/17 13:55*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/15/17 13:55*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/15/17 13:55*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:14	1
2,4-D	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 17:14	1
2,4-DB	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 17:14	1
Dalapon	ND		0.44	0.11	ug/L		12/18/17 09:34	12/23/17 17:14	1
Dicamba	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:14	1
Dichlorprop	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:14	1
MCPA	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:14	1
Silvex (2,4,5-TP)	ND		0.27	0.054	ug/L		12/18/17 09:34	12/23/17 17:14	1
MCPP	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*101*		*51 - 150*	*12/18/17 09:34*	*12/23/17 17:14*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.033	J	0.097	0.011	ug/L		12/14/17 12:44	12/19/17 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*59 - 120*	*12/14/17 12:44*	*12/19/17 20:56*	*1*
Terphenyl-d14	*96*		*17 - 149*	*12/14/17 12:44*	*12/19/17 20:56*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*	*12/14/17 12:44*	*12/19/17 20:56*	*1*
2,4,6-Tribromophenol	*100*		*43 - 122*	*12/14/17 12:44*	*12/19/17 20:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/19/17 22:23	1
1,2-Dichlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/19/17 22:23	1
1,4-Dichlorobenzene	ND		0.39	0.058	ug/L		12/14/17 12:44	12/19/17 22:23	1
1-Methylnaphthalene	ND		0.97	0.029	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,4-Dichlorophenol	ND		3.9	0.88	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,4-Dimethylphenol	ND		3.9	0.80	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,4-Dinitrotoluene	ND		0.97	0.23	ug/L		12/14/17 12:44	12/19/17 22:23	1
2,6-Dinitrotoluene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
2-Chloronaphthalene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
2-Chlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
2-Methylnaphthalene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
2-Methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
2-Nitroaniline	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
2-Nitrophenol	ND		0.97	0.23	ug/L		12/14/17 12:44	12/19/17 22:23	1
3 & 4 Methylphenol	ND		0.78	0.039	ug/L		12/14/17 12:44	12/19/17 22:23	1
3,3'-Dichlorobenzidine	ND		15	3.0	ug/L		12/14/17 12:44	12/19/17 22:23	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/14/17 12:44	12/19/17 22:23	1
4,6-Dinitro-2-methylphenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 22:23	1
4-Bromophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
4-Chloro-3-methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
4-Chloroaniline	ND		9.7	2.0	ug/L		12/14/17 12:44	12/19/17 22:23	1
4-Chlorophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
4-Nitroaniline	ND		1.9	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
4-Nitrophenol	ND	*	15	3.6	ug/L		12/14/17 12:44	12/19/17 22:23	1
Acenaphthene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1

Client Sample ID: MW-15A:121117
Date Collected: 12/11/17 13:10
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Anthracene	ND		0.039	0.0097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzo[a]anthracene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzo[a]pyrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzo[b]fluoranthene	ND		0.97	0.048	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzo[g,h,i]perylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzo[k]fluoranthene	ND	*	0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzoic acid	ND		2.9	0.58	ug/L		12/14/17 12:44	12/19/17 22:23	1
Benzyl alcohol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Bis(2-chloroethoxy)methane	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Bis(2-chloroethyl)ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/14/17 12:44	12/19/17 22:23	1
bis(chloroisopropyl) ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Butyl benzyl phthalate	ND		9.7	0.72	ug/L		12/14/17 12:44	12/19/17 22:23	1
Carbazole	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Chrysene	ND		0.58	0.0097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Dibenz(a,h)anthracene	ND		0.58	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Dibenzofuran	ND		0.39	0.058	ug/L		12/14/17 12:44	12/19/17 22:23	1
Diethyl phthalate	ND		12	2.7	ug/L		12/14/17 12:44	12/19/17 22:23	1
Dimethyl phthalate	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/14/17 12:44	12/19/17 22:23	1
Di-n-octyl phthalate	ND		0.97	0.17	ug/L		12/14/17 12:44	12/19/17 22:23	1
Fluoranthene	**0.022**	**J**	2.9	0.0097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Fluorene	ND		1.9	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Hexachlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Hexachlorobutadiene	ND		0.97	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Hexachlorocyclopentadiene	ND		1.9	0.38	ug/L		12/14/17 12:44	12/19/17 22:23	1
Hexachloroethane	ND		0.97	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Indeno[1,2,3-cd]pyrene	ND	*	0.97	0.048	ug/L		12/14/17 12:44	12/19/17 22:23	1
Isophorone	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Naphthalene	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Nitrobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
N-Nitrosodi-n-propylamine	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
N-Nitrosodiphenylamine	ND		2.9	0.097	ug/L		12/14/17 12:44	12/19/17 22:23	1
Pentachlorophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 22:23	1
Phenanthrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 22:23	1
Phenol	ND		3.9	0.048	ug/L		12/14/17 12:44	12/19/17 22:23	1
Pyrene	ND		1.9	0.039	ug/L		12/14/17 12:44	12/19/17 22:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*100*		*48 - 125*	*12/14/17 12:44*	*12/19/17 22:23*	*1*
2-Fluorobiphenyl	*89*		*50 - 120*	*12/14/17 12:44*	*12/19/17 22:23*	*1*
2-Fluorophenol (Surr)	*101*		*50 - 120*	*12/14/17 12:44*	*12/19/17 22:23*	*1*
Nitrobenzene-d5 (Surr)	*113*		*52 - 120*	*12/14/17 12:44*	*12/19/17 22:23*	*1*
Phenol-d5 (Surr)	*103*		*52 - 120*	*12/14/17 12:44*	*12/19/17 22:23*	*1*
Terphenyl-d14 (Surr)	*123*		*49 - 133*	*12/14/17 12:44*	*12/19/17 22:23*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**4.8**		0.20	0.039	mg/L			12/12/17 10:08	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0029**		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 11:57	1
Antimony	**0.00013**	**J**	0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 11:57	1
Barium	**0.053**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 11:57	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:57	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 11:57	1
Chromium	**0.00024**	**J**	0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 11:57	1
Copper	**0.0020**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 11:57	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 11:57	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 11:57	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 11:57	1
Nickel	**0.00049**	**J**	0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 11:57	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 11:57	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:57	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 11:57	1
Vanadium	**0.0060**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 11:57	1
Zinc	**0.0024**	**J**	0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 11:57	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0032**		0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 09:07	1
Antimony	**0.00011**	**J**	0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 09:07	1
Barium	**0.049**	**B**	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 09:07	1
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 09:07	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 09:07	1
Chromium	**0.00030**	**J**	0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 09:07	1
Copper	**0.0013**	**J**	0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 09:07	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 09:07	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 09:07	1
Manganese	ND		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 09:07	1
Nickel	**0.00057**	**J**	0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 09:07	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 09:07	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 09:07	1
Thallium	ND		0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 09:07	1
Vanadium	**0.0061**		0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 09:07	1
Zinc	**0.0026**	**J**	0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 09:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:46	1

Client Sample ID: MW-1A:121117

Lab Sample ID: 590-7685-3

Date Collected: 12/11/17 14:32

Matrix: Water

Date Received: 12/11/17 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 14:16	1
1,1,1-Trichloroethane	**0.22**	**J**	1.0	0.17	ug/L			12/15/17 14:16	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 14:16	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 14:16	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 14:16	1
1,1-Dichloroethane	**0.61**	**J**	1.0	0.29	ug/L			12/15/17 14:16	1
1,1-Dichloroethene	**1.5**		1.0	0.20	ug/L			12/15/17 14:16	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 14:16	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Client Sample ID: MW-1A:121117
Date Collected: 12/11/17 14:32
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 14:16	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 14:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 14:16	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 14:16	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 14:16	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 14:16	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 14:16	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 14:16	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 14:16	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 14:16	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 14:16	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 14:16	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 14:16	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 14:16	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 14:16	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 14:16	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 14:16	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 14:16	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 14:16	1
Acetone	ND		30	14	ug/L			12/15/17 14:16	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 14:16	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 14:16	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 14:16	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 14:16	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 14:16	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 14:16	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 14:16	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 14:16	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 14:16	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 14:16	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 14:16	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 14:16	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 14:16	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 14:16	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 14:16	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 14:16	1
Dichlorodifluoromethane	**0.31**	**J**	2.0	0.26	ug/L			12/15/17 14:16	1
Dichlorofluoromethane	**1.4**		1.0	0.30	ug/L			12/15/17 14:16	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 14:16	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 14:16	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 14:16	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 14:16	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 14:16	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 14:16	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 14:16	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 14:16	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 14:16	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 14:16	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 14:16	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Client Sample ID: MW-1A:121117
Date Collected: 12/11/17 14:32
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 14:16	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 14:16	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 14:16	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 14:16	1
Tetrachloroethene	**1.5**		1.0	0.22	ug/L			12/15/17 14:16	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 14:16	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 14:16	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 14:16	1
Trichloroethene	**0.34**	**J**	1.0	0.20	ug/L			12/15/17 14:16	1
Trichlorofluoromethane	**1.9**		1.0	0.074	ug/L			12/15/17 14:16	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 14:16	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 125*		*12/15/17 14:16*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/15/17 14:16*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/15/17 14:16*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/15/17 14:16*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:40	1
2,4-D	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 17:40	1
2,4-DB	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 17:40	1
Dalapon	ND		0.44	0.11	ug/L		12/18/17 09:34	12/23/17 17:40	1
Dicamba	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:40	1
Dichlorprop	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:40	1
MCPA	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 17:40	1
Silvex (2,4,5-TP)	ND		0.27	0.055	ug/L		12/18/17 09:34	12/23/17 17:40	1
MCPP	**0.68**		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*110*		*51 - 150*	*12/18/17 09:34*	*12/23/17 17:40*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**4.8**		0.11	0.012	ug/L		12/14/17 12:44	12/19/17 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*59 - 120*	*12/14/17 12:44*	*12/19/17 21:21*	*1*
Terphenyl-d14	*76*		*17 - 149*	*12/14/17 12:44*	*12/19/17 21:21*	*1*
2-Fluorobiphenyl	*76*		*50 - 120*	*12/14/17 12:44*	*12/19/17 21:21*	*1*
2,4,6-Tribromophenol	*104*		*43 - 122*	*12/14/17 12:44*	*12/19/17 21:21*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.45	0.045	ug/L		12/14/17 12:44	12/26/17 19:18	1
1,2-Dichlorobenzene	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
1,3-Dichlorobenzene	ND		0.45	0.045	ug/L		12/14/17 12:44	12/26/17 19:18	1
1,4-Dichlorobenzene	ND		0.45	0.068	ug/L		12/14/17 12:44	12/26/17 19:18	1
1-Methylnaphthalene	ND		1.1	0.034	ug/L		12/14/17 12:44	12/26/17 19:18	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Client Sample ID: MW-1A:121117
Date Collected: 12/11/17 14:32
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		0.45	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
2,4,6-Trichlorophenol	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
2,4-Dichlorophenol	ND		4.5	1.0	ug/L		12/14/17 12:44	12/26/17 19:18	1
2,4-Dimethylphenol	ND		4.5	0.94	ug/L		12/14/17 12:44	12/26/17 19:18	1
2,4-Dinitrophenol	ND		5.6	1.1	ug/L		12/14/17 12:44	12/26/17 19:18	1
2,4-Dinitrotoluene	ND		1.1	0.27	ug/L		12/14/17 12:44	12/26/17 19:18	1
2,6-Dinitrotoluene	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
2-Chloronaphthalene	ND		1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
2-Chlorophenol	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
2-Methylnaphthalene	ND		0.45	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
2-Methylphenol	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
2-Nitroaniline	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
2-Nitrophenol	ND		1.1	0.27	ug/L		12/14/17 12:44	12/26/17 19:18	1
3 & 4 Methylphenol	ND		0.90	0.045	ug/L		12/14/17 12:44	12/26/17 19:18	1
3,3'-Dichlorobenzidine	ND		17	3.5	ug/L		12/14/17 12:44	12/26/17 19:18	1
3-Nitroaniline	ND		3.4	0.82	ug/L		12/14/17 12:44	12/26/17 19:18	1
4,6-Dinitro-2-methylphenol	ND		5.6	1.1	ug/L		12/14/17 12:44	12/26/17 19:18	1
4-Bromophenyl phenyl ether	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
4-Chloro-3-methylphenol	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
4-Chloroaniline	ND		11	2.4	ug/L		12/14/17 12:44	12/26/17 19:18	1
4-Chlorophenyl phenyl ether	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
4-Nitroaniline	ND		2.3	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
4-Nitrophenol	ND	*	17	4.2	ug/L		12/14/17 12:44	12/26/17 19:18	1
Acenaphthene	ND		0.45	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Acenaphthylene	ND		1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Anthracene	ND		0.045	0.011	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzo[a]anthracene	ND		1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzo[a]pyrene	ND		1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzo[b]fluoranthene	ND		1.1	0.056	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzo[g,h,i]perylene	ND		1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzo[k]fluoranthene	ND	*	1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzoic acid	**1.1**	**J**	3.4	0.68	ug/L		12/14/17 12:44	12/26/17 19:18	1
Benzyl alcohol	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Bis(2-chloroethoxy)methane	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Bis(2-chloroethyl)ether	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Bis(2-ethylhexyl) phthalate	ND		17	2.5	ug/L		12/14/17 12:44	12/26/17 19:18	1
bis(chloroisopropyl) ether	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Butyl benzyl phthalate	ND		11	0.83	ug/L		12/14/17 12:44	12/26/17 19:18	1
Carbazole	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Chrysene	ND		0.68	0.011	ug/L		12/14/17 12:44	12/26/17 19:18	1
Dibenz(a,h)anthracene	ND		0.68	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Dibenzofuran	ND		0.45	0.068	ug/L		12/14/17 12:44	12/26/17 19:18	1
Diethyl phthalate	ND		14	3.2	ug/L		12/14/17 12:44	12/26/17 19:18	1
Dimethyl phthalate	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Di-n-butyl phthalate	ND		3.4	0.62	ug/L		12/14/17 12:44	12/26/17 19:18	1
Di-n-octyl phthalate	ND		1.1	0.20	ug/L		12/14/17 12:44	12/26/17 19:18	1
Fluoranthene	ND		3.4	0.011	ug/L		12/14/17 12:44	12/26/17 19:18	1
Fluorene	ND		2.3	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Hexachlorobenzene	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1

Client Sample ID: MW-1A:121117
Date Collected: 12/11/17 14:32
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		1.1	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Hexachlorocyclopentadiene	ND		2.3	0.44	ug/L		12/14/17 12:44	12/26/17 19:18	1
Hexachloroethane	ND		1.1	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Indeno[1,2,3-cd]pyrene	ND	*	1.1	0.056	ug/L		12/14/17 12:44	12/26/17 19:18	1
Isophorone	ND		0.45	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Naphthalene	ND		0.45	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Nitrobenzene	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
N-Nitrosodi-n-propylamine	ND		0.68	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
N-Nitrosodiphenylamine	ND		3.4	0.11	ug/L		12/14/17 12:44	12/26/17 19:18	1
Pentachlorophenol	ND		5.6	1.1	ug/L		12/14/17 12:44	12/26/17 19:18	1
Phenanthrene	ND		1.1	0.023	ug/L		12/14/17 12:44	12/26/17 19:18	1
Phenol	ND		4.5	0.056	ug/L		12/14/17 12:44	12/26/17 19:18	1
Pyrene	ND		2.3	0.045	ug/L		12/14/17 12:44	12/26/17 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*102*		*48 - 125*	*12/14/17 12:44*	*12/26/17 19:18*	*1*
2-Fluorobiphenyl	*73*		*50 - 120*	*12/14/17 12:44*	*12/26/17 19:18*	*1*
2-Fluorophenol (Surr)	*75*		*50 - 120*	*12/14/17 12:44*	*12/26/17 19:18*	*1*
Nitrobenzene-d5 (Surr)	*81*		*52 - 120*	*12/14/17 12:44*	*12/26/17 19:18*	*1*
Phenol-d5 (Surr)	*74*		*52 - 120*	*12/14/17 12:44*	*12/26/17 19:18*	*1*
Terphenyl-d14 (Surr)	*78*		*49 - 133*	*12/14/17 12:44*	*12/26/17 19:18*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**70**		1.0	0.20	mg/L			12/12/17 12:21	5

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:00	1
Antimony	**0.00049**		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:00	1
Barium	**0.49**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:00	1
Beryllium	**0.00064**		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:00	1
Cadmium	**0.0036**		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:00	1
Chromium	**0.0035**		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:00	1
Copper	**0.037**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:00	1
Iron	**2.5**		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:00	1
Lead	**0.040**		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:00	1
Manganese	**0.078**		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:00	1
Nickel	**0.015**		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:00	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:00	1
Silver	**0.000096**	**J**	0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:00	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:00	1
Vanadium	**0.011**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:00	1
Zinc	**2.7**		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:00	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0018**		0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 09:11	1
Antimony	**0.00020**	**J**	0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 09:11	1
Barium	**0.44**	**B**	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 09:11	1

Client Sample ID: MW-1A:121117

Lab Sample ID: 590-7685-3

Date Collected: 12/11/17 14:32

Matrix: Water

Date Received: 12/11/17 16:30

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 09:11	1
Cadmium	**0.00033**	**J**	0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 09:11	1
Chromium	**0.00024**	**J**	0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 09:11	1
Copper	**0.0088**		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 09:11	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 09:11	1
Lead	**0.00086**		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 09:11	1
Manganese	**0.024**		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 09:11	1
Nickel	**0.011**		0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 09:11	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 09:11	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 09:11	1
Thallium	ND		0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 09:11	1
Vanadium	**0.0066**		0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 09:11	1
Zinc	**0.37**		0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 09:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:48	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-7685-4

Date Collected: 12/11/17 00:00

Matrix: Water

Date Received: 12/11/17 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/13/17 20:17	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/13/17 20:17	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/13/17 20:17	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/13/17 20:17	1
1,1,2-Trichlorotrifluoroethane	ND	*	1.0	0.11	ug/L			12/13/17 20:17	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/13/17 20:17	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/13/17 20:17	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/13/17 20:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/13/17 20:17	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/13/17 20:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/13/17 20:17	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/13/17 20:17	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/13/17 20:17	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/13/17 20:17	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/13/17 20:17	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/13/17 20:17	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/13/17 20:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/13/17 20:17	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/13/17 20:17	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/13/17 20:17	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/13/17 20:17	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/13/17 20:17	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/13/17 20:17	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/13/17 20:17	1
2-Hexanone	ND		10	0.75	ug/L			12/13/17 20:17	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/13/17 20:17	1

Client Sample ID: Trip Blank
Date Collected: 12/11/17 00:00
Date Received: 12/11/17 16:30

Lab Sample ID: 590-7685-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/13/17 20:17	1
Acetone	ND	*	30	14	ug/L			12/13/17 20:17	1
Benzene	ND		0.40	0.093	ug/L			12/13/17 20:17	1
Bromobenzene	ND		1.0	0.28	ug/L			12/13/17 20:17	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/13/17 20:17	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/13/17 20:17	1
Bromoform	ND		5.0	1.6	ug/L			12/13/17 20:17	1
Bromomethane	ND		5.0	0.22	ug/L			12/13/17 20:17	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/13/17 20:17	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/13/17 20:17	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/13/17 20:17	1
Chloroethane	ND		2.0	0.16	ug/L			12/13/17 20:17	1
Chloroform	ND		1.0	0.91	ug/L			12/13/17 20:17	1
Chloromethane	ND		3.0	0.22	ug/L			12/13/17 20:17	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/13/17 20:17	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/13/17 20:17	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/13/17 20:17	1
Dibromomethane	ND		2.0	0.50	ug/L			12/13/17 20:17	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/13/17 20:17	1
Dichlorofluoromethane	ND	*	1.0	0.30	ug/L			12/13/17 20:17	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/17 20:17	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/13/17 20:17	1
Hexane	ND	*	1.0	0.084	ug/L			12/13/17 20:17	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/13/17 20:17	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/13/17 20:17	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/13/17 20:17	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/13/17 20:17	1
Naphthalene	ND		2.0	0.63	ug/L			12/13/17 20:17	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/13/17 20:17	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/13/17 20:17	1
o-Xylene	ND		1.0	0.16	ug/L			12/13/17 20:17	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/13/17 20:17	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/13/17 20:17	1
Styrene	ND		1.0	0.24	ug/L			12/13/17 20:17	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/13/17 20:17	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/13/17 20:17	1
Toluene	ND		1.0	0.31	ug/L			12/13/17 20:17	1
trans-1,2-Dichloroethene	ND	*	1.0	0.20	ug/L			12/13/17 20:17	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/13/17 20:17	1
Trichloroethene	ND		1.0	0.20	ug/L			12/13/17 20:17	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/13/17 20:17	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/13/17 20:17	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/13/17 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 125*		*12/13/17 20:17*	*1*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*		*12/13/17 20:17*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/13/17 20:17*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/13/17 20:17*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-15052/6
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/13/17 17:57	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/13/17 17:57	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/13/17 17:57	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/13/17 17:57	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/13/17 17:57	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/13/17 17:57	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/13/17 17:57	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/13/17 17:57	1
1,2,3-Trichlorobenzene	0.613	J	1.0	0.33	ug/L			12/13/17 17:57	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/13/17 17:57	1
1,2,4-Trichlorobenzene	0.305	J	1.0	0.16	ug/L			12/13/17 17:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/13/17 17:57	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/13/17 17:57	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/13/17 17:57	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/13/17 17:57	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/13/17 17:57	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/13/17 17:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/13/17 17:57	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/13/17 17:57	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/13/17 17:57	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/13/17 17:57	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/13/17 17:57	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/13/17 17:57	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/13/17 17:57	1
2-Hexanone	ND		10	0.75	ug/L			12/13/17 17:57	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/13/17 17:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/13/17 17:57	1
Acetone	ND		30	14	ug/L			12/13/17 17:57	1
Benzene	ND		0.40	0.093	ug/L			12/13/17 17:57	1
Bromobenzene	ND		1.0	0.28	ug/L			12/13/17 17:57	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/13/17 17:57	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/13/17 17:57	1
Bromoform	ND		5.0	1.6	ug/L			12/13/17 17:57	1
Bromomethane	ND		5.0	0.22	ug/L			12/13/17 17:57	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/13/17 17:57	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/13/17 17:57	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/13/17 17:57	1
Chloroethane	ND		2.0	0.16	ug/L			12/13/17 17:57	1
Chloroform	ND		1.0	0.91	ug/L			12/13/17 17:57	1
Chloromethane	ND		3.0	0.22	ug/L			12/13/17 17:57	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/13/17 17:57	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/13/17 17:57	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/13/17 17:57	1
Dibromomethane	ND		2.0	0.50	ug/L			12/13/17 17:57	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/13/17 17:57	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/13/17 17:57	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/17 17:57	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/13/17 17:57	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15052/6
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/13/17 17:57	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/13/17 17:57	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/13/17 17:57	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/13/17 17:57	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/13/17 17:57	1
Naphthalene	ND		2.0	0.63	ug/L			12/13/17 17:57	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/13/17 17:57	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/13/17 17:57	1
o-Xylene	ND		1.0	0.16	ug/L			12/13/17 17:57	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/13/17 17:57	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/13/17 17:57	1
Styrene	ND		1.0	0.24	ug/L			12/13/17 17:57	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/13/17 17:57	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/13/17 17:57	1
Toluene	ND		1.0	0.31	ug/L			12/13/17 17:57	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/13/17 17:57	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/13/17 17:57	1
Trichloroethene	ND		1.0	0.20	ug/L			12/13/17 17:57	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/13/17 17:57	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/13/17 17:57	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/13/17 17:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*12/13/17 17:57*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/13/17 17:57*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/13/17 17:57*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/13/17 17:57*	*1*

Lab Sample ID: LCS 590-15052/1005
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	11.3		ug/L		113	75 - 124
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	71 - 130
1,1,2,2-Tetrachloroethane	10.0	10.8		ug/L		108	66 - 122
1,1,2-Trichloroethane	10.0	10.6		ug/L		106	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	12.1		ug/L		121	70 - 127
1,1-Dichloroethane	10.0	10.9		ug/L		109	79 - 121
1,1-Dichloroethene	10.0	11.9		ug/L		119	69 - 127
1,1-Dichloropropene	10.0	11.9		ug/L		119	76 - 125
1,2,3-Trichlorobenzene	10.0	10.3		ug/L		103	60 - 125
1,2,3-Trichloropropane	10.0	10.7		ug/L		107	60 - 124
1,2,4-Trichlorobenzene	10.0	10.7		ug/L		107	66 - 124
1,2,4-Trimethylbenzene	10.0	11.1		ug/L		111	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	10.6		ug/L		106	36 - 140
1,2-Dichlorobenzene	10.0	11.3		ug/L		113	78 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15052/1005
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.0		ug/L		110	76 - 121
1,3,5-Trimethylbenzene	10.0	11.3		ug/L		113	75 - 122
1,3-Dichlorobenzene	10.0	11.1		ug/L		111	77 - 120
1,3-Dichloropropane	10.0	10.6		ug/L		106	75 - 120
1,4-Dichlorobenzene	10.0	11.2		ug/L		112	77 - 121
2,2-Dichloropropane	10.0	12.3		ug/L		123	49 - 147
2-Butanone (MEK)	50.0	62.4		ug/L		125	40 - 150
2-Chlorotoluene	10.0	11.9		ug/L		119	75 - 121
2-Hexanone	50.0	57.6		ug/L		115	46 - 146
4-Chlorotoluene	10.0	11.3		ug/L		113	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	51.6		ug/L		103	60 - 127
Acetone	50.0	80.2	*	ug/L		160	20 - 150
Benzene	10.0	11.4		ug/L		114	80 - 120
Bromobenzene	10.0	11.1		ug/L		111	74 - 121
Bromochloromethane	10.0	10.2		ug/L		102	70 - 126
Bromodichloromethane	10.0	10.8		ug/L		108	67 - 125
Bromoform	10.0	10.4		ug/L		104	60 - 122
Bromomethane	10.0	11.2		ug/L		112	45 - 150
Carbon disulfide	10.0	12.0		ug/L		120	67 - 129
Carbon tetrachloride	10.0	10.9		ug/L		109	68 - 134
Chlorobenzene	10.0	10.8		ug/L		108	79 - 125
Chloroethane	10.0	11.3		ug/L		113	48 - 150
Chloroform	10.0	11.3		ug/L		113	73 - 126
Chloromethane	10.0	12.2		ug/L		122	51 - 150
cis-1,2-Dichloroethene	10.0	11.2		ug/L		112	76 - 121
cis-1,3-Dichloropropene	10.0	10.2		ug/L		102	72 - 120
Dibromochloromethane	10.0	10.2		ug/L		102	72 - 120
Dibromomethane	10.0	10.4		ug/L		104	71 - 120
Dichlorodifluoromethane	10.0	11.9		ug/L		119	32 - 150
Dichlorofluoromethane	10.0	12.5		ug/L		125	60 - 140
Ethylbenzene	10.0	11.4		ug/L		114	80 - 120
Hexachlorobutadiene	10.0	10.5		ug/L		105	62 - 132
Hexane	10.0	12.0		ug/L		120	68 - 125
Isopropylbenzene	10.0	11.1		ug/L		111	77 - 123
m,p-Xylene	10.0	11.4		ug/L		114	80 - 120
Methyl tert-butyl ether	10.0	11.0		ug/L		110	71 - 128
Methylene Chloride	10.0	10.8		ug/L		108	20 - 150
Naphthalene	10.0	10.3		ug/L		103	63 - 124
n-Butylbenzene	10.0	11.1		ug/L		111	71 - 120
N-Propylbenzene	10.0	11.2		ug/L		112	76 - 120
o-Xylene	10.0	11.5		ug/L		115	80 - 120
p-Isopropyltoluene	10.0	11.1		ug/L		111	77 - 120
sec-Butylbenzene	10.0	11.1		ug/L		111	74 - 121
Styrene	10.0	10.8		ug/L		108	73 - 120
tert-Butylbenzene	10.0	11.2		ug/L		112	79 - 120
Tetrachloroethene	10.0	11.4		ug/L		114	71 - 132
Toluene	10.0	11.3		ug/L		113	80 - 123
trans-1,2-Dichloroethene	10.0	13.0	*	ug/L		130	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15052/1005
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
trans-1,3-Dichloropropene			10.0	10.9		ug/L		109	70 - 121		
Trichloroethene			10.0	10.8		ug/L		108	75 - 129		
Trichlorofluoromethane			10.0	11.7		ug/L		117	60 - 140		
Vinyl chloride			10.0	11.7		ug/L		117	42 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 125*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: LCSD 590-15052/7
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			10.0	11.8		ug/L		118	75 - 124	5	15
1,1,1-Trichloroethane			10.0	11.6		ug/L		116	71 - 130	10	25
1,1,2,2-Tetrachloroethane			10.0	10.8		ug/L		108	66 - 122	1	15
1,1,2-Trichloroethane			10.0	10.5		ug/L		105	76 - 120	1	15
1,1,2-Trichlorotrifluoroethane			10.0	13.1	*	ug/L		131	70 - 127	8	25
1,1-Dichloroethane			10.0	11.2		ug/L		112	79 - 121	3	25
1,1-Dichloroethene			10.0	12.7		ug/L		127	69 - 127	7	14
1,1-Dichloropropene			10.0	12.4		ug/L		124	76 - 125	4	15
1,2,3-Trichlorobenzene			10.0	10.6		ug/L		106	60 - 125	2	15
1,2,3-Trichloropropane			10.0	11.0		ug/L		110	60 - 124	2	15
1,2,4-Trichlorobenzene			10.0	11.0		ug/L		110	66 - 124	3	15
1,2,4-Trimethylbenzene			10.0	11.1		ug/L		111	77 - 120	0	15
1,2-Dibromo-3-Chloropropane			10.0	10.4		ug/L		104	36 - 140	2	15
1,2-Dichlorobenzene			10.0	11.6		ug/L		116	78 - 120	2	15
1,2-Dichloroethane			10.0	10.6		ug/L		106	68 - 127	3	12
1,2-Dichloropropane			10.0	11.5		ug/L		115	76 - 121	4	15
1,3,5-Trimethylbenzene			10.0	11.5		ug/L		115	75 - 122	2	15
1,3-Dichlorobenzene			10.0	11.5		ug/L		115	77 - 120	3	15
1,3-Dichloropropane			10.0	10.7		ug/L		107	75 - 120	1	15
1,4-Dichlorobenzene			10.0	11.3		ug/L		113	77 - 121	2	15
2,2-Dichloropropane			10.0	14.7		ug/L		147	49 - 147	18	25
2-Butanone (MEK)			50.0	56.8		ug/L		114	40 - 150	9	25
2-Chlorotoluene			10.0	12.0		ug/L		120	75 - 121	1	15
2-Hexanone			50.0	52.7		ug/L		105	46 - 146	9	15
4-Chlorotoluene			10.0	11.5		ug/L		115	74 - 120	2	15
4-Methyl-2-pentanone (MIBK)			50.0	49.5		ug/L		99	60 - 127	4	15
Acetone			50.0	64.9		ug/L		130	20 - 150	21	25
Benzene			10.0	11.5		ug/L		115	80 - 120	1	25
Bromobenzene			10.0	11.4		ug/L		114	74 - 121	3	15
Bromochloromethane			10.0	12.2		ug/L		122	70 - 126	18	25
Bromodichloromethane			10.0	10.9		ug/L		109	67 - 125	1	15
Bromoform			10.0	9.98		ug/L		100	60 - 122	4	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-15052/7
Matrix: Water
Analysis Batch: 15052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			10.0	12.5		ug/L		125	45 - 150	10	25
Carbon disulfide			10.0	12.9		ug/L		129	67 - 129	8	25
Carbon tetrachloride			10.0	11.7		ug/L		117	68 - 134	8	25
Chlorobenzene			10.0	11.0		ug/L		110	79 - 125	2	25
Chloroethane			10.0	13.3		ug/L		133	48 - 150	16	25
Chloroform			10.0	11.4		ug/L		114	73 - 126	1	25
Chloromethane			10.0	13.1		ug/L		131	51 - 150	7	15
cis-1,2-Dichloroethene			10.0	11.7		ug/L		117	76 - 121	4	25
cis-1,3-Dichloropropene			10.0	10.7		ug/L		107	72 - 120	5	15
Dibromochloromethane			10.0	10.2		ug/L		102	72 - 120	0	15
Dibromomethane			10.0	10.2		ug/L		102	71 - 120	1	15
Dichlorodifluoromethane			10.0	12.2		ug/L		122	32 - 150	3	25
Dichlorofluoromethane			10.0	14.2	*	ug/L		142	60 - 140	13	25
Ethylbenzene			10.0	11.7		ug/L		117	80 - 120	3	25
Hexachlorobutadiene			10.0	10.6		ug/L		106	62 - 132	1	15
Hexane			10.0	12.6	*	ug/L		126	68 - 125	4	15
Isopropylbenzene			10.0	11.4		ug/L		114	77 - 123	3	15
m,p-Xylene			10.0	11.8		ug/L		118	80 - 120	4	25
Methyl tert-butyl ether			10.0	11.2		ug/L		112	71 - 128	1	12
Methylene Chloride			10.0	11.5		ug/L		115	20 - 150	6	25
Naphthalene			10.0	10.1		ug/L		101	63 - 124	2	25
n-Butylbenzene			10.0	11.9		ug/L		119	71 - 120	7	15
N-Propylbenzene			10.0	11.9		ug/L		119	76 - 120	6	15
o-Xylene			10.0	11.7		ug/L		117	80 - 120	2	25
p-Isopropyltoluene			10.0	11.7		ug/L		117	77 - 120	5	15
sec-Butylbenzene			10.0	11.4		ug/L		114	74 - 121	3	15
Styrene			10.0	11.1		ug/L		111	73 - 120	3	15
tert-Butylbenzene			10.0	11.6		ug/L		116	79 - 120	3	15
Tetrachloroethene			10.0	11.8		ug/L		118	71 - 132	4	15
Toluene			10.0	11.8		ug/L		118	80 - 123	4	25
trans-1,2-Dichloroethene			10.0	14.0	*	ug/L		140	75 - 124	7	25
trans-1,3-Dichloropropene			10.0	10.9		ug/L		109	70 - 121	0	15
Trichloroethene			10.0	11.2		ug/L		112	75 - 129	4	25
Trichlorofluoromethane			10.0	13.0		ug/L		130	60 - 140	10	25
Vinyl chloride			10.0	12.9		ug/L		129	42 - 150	10	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 12:49	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 12:49	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 12:49	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 12:49	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 12:49	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 12:49	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 12:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 12:49	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 12:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 12:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 12:49	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 12:49	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 12:49	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 12:49	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 12:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 12:49	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 12:49	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 12:49	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 12:49	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 12:49	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 12:49	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 12:49	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 12:49	1
Acetone	ND		30	14	ug/L			12/15/17 12:49	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 12:49	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 12:49	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 12:49	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 12:49	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 12:49	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 12:49	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 12:49	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 12:49	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 12:49	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 12:49	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 12:49	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 12:49	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 12:49	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 12:49	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 12:49	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 12:49	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 12:49	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 12:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 12:49	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 12:49	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 12:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 12:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 12:49	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 12:49	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 12:49	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 12:49	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 12:49	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 12:49	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 12:49	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 12:49	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 12:49	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 12:49	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 12:49	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 12:49	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 12:49	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 12:49	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*12/15/17 12:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/15/17 12:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/15/17 12:49*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/15/17 12:49*	*1*

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.78		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	9.98		ug/L		100	71 - 130
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	66 - 122
1,1,2-Trichloroethane	10.0	9.92		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	9.85		ug/L		99	70 - 127
1,1-Dichloroethane	10.0	10.5		ug/L		105	79 - 121
1,1-Dichloroethene	10.0	9.66		ug/L		97	69 - 127
1,1-Dichloropropene	10.0	10.5		ug/L		105	76 - 125
1,2,3-Trichlorobenzene	10.0	10.6		ug/L		106	60 - 125
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	60 - 124
1,2,4-Trichlorobenzene	10.0	10.6		ug/L		106	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.3		ug/L		113	36 - 140
1,2-Dichlorobenzene	10.0	10.5		ug/L		105	78 - 120
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 127
1,2-Dichloropropane	10.0	10.5		ug/L		105	76 - 121

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	10.0	10.5		ug/L		105	75 - 122
1,3-Dichlorobenzene	10.0	10.4		ug/L		104	77 - 120
1,3-Dichloropropane	10.0	10.8		ug/L		108	75 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 121
2,2-Dichloropropane	10.0	10.3		ug/L		103	49 - 147
2-Butanone (MEK)	50.0	44.1		ug/L		88	40 - 150
2-Chlorotoluene	10.0	11.0		ug/L		110	75 - 121
2-Hexanone	50.0	46.6		ug/L		93	46 - 146
4-Chlorotoluene	10.0	10.5		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	50.3		ug/L		101	60 - 127
Acetone	50.0	39.7		ug/L		79	20 - 150
Benzene	10.0	10.4		ug/L		104	80 - 120
Bromobenzene	10.0	10.8		ug/L		108	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	10.9		ug/L		109	67 - 125
Bromoform	10.0	10.0		ug/L		100	60 - 122
Bromomethane	10.0	10.4		ug/L		104	45 - 150
Carbon disulfide	10.0	9.57		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.89		ug/L		99	68 - 134
Chlorobenzene	10.0	9.85		ug/L		98	79 - 125
Chloroethane	10.0	10.0		ug/L		100	48 - 150
Chloroform	10.0	10.3		ug/L		103	73 - 126
Chloromethane	10.0	9.41		ug/L		94	51 - 150
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	76 - 121
cis-1,3-Dichloropropene	10.0	10.9		ug/L		109	72 - 120
Dibromochloromethane	10.0	10.1		ug/L		101	72 - 120
Dibromomethane	10.0	10.4		ug/L		104	71 - 120
Dichlorodifluoromethane	10.0	8.61		ug/L		86	32 - 150
Dichlorofluoromethane	10.0	10.3		ug/L		103	60 - 140
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
Hexachlorobutadiene	10.0	10.0		ug/L		100	62 - 132
Hexane	10.0	9.90		ug/L		99	68 - 125
Isopropylbenzene	10.0	9.93		ug/L		99	77 - 123
m,p-Xylene	10.0	10.3		ug/L		103	80 - 120
Methyl tert-butyl ether	10.0	10.7		ug/L		107	71 - 128
Methylene Chloride	10.0	10.7		ug/L		107	20 - 150
Naphthalene	10.0	10.9		ug/L		109	63 - 124
n-Butylbenzene	10.0	10.4		ug/L		104	71 - 120
N-Propylbenzene	10.0	10.6		ug/L		106	76 - 120
o-Xylene	10.0	10.2		ug/L		102	80 - 120
p-Isopropyltoluene	10.0	10.3		ug/L		103	77 - 120
sec-Butylbenzene	10.0	10.7		ug/L		107	74 - 121
Styrene	10.0	10.1		ug/L		101	73 - 120
tert-Butylbenzene	10.0	10.6		ug/L		106	79 - 120
Tetrachloroethene	10.0	9.71		ug/L		97	71 - 132
Toluene	10.0	10.2		ug/L		102	80 - 123
trans-1,2-Dichloroethene	10.0	9.86		ug/L		99	75 - 124
trans-1,3-Dichloropropene	10.0	10.4		ug/L		104	70 - 121

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichloroethene			10.0	10.3		ug/L		103	75 - 129		
Trichlorofluoromethane			10.0	10.2		ug/L		102	60 - 140		
Vinyl chloride			10.0	10.0		ug/L		100	42 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-15078/9
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			10.0	9.75		ug/L		98	75 - 124	0	15
1,1,1-Trichloroethane			10.0	10.1		ug/L		101	71 - 130	2	25
1,1,2,2-Tetrachloroethane			10.0	10.7		ug/L		107	66 - 122	3	15
1,1,2-Trichloroethane			10.0	9.61		ug/L		96	76 - 120	3	15
1,1,2-Trichlorotrifluoroethane			10.0	9.35		ug/L		93	70 - 127	5	25
1,1-Dichloroethane			10.0	10.4		ug/L		104	79 - 121	1	25
1,1-Dichloroethene			10.0	10.3		ug/L		103	69 - 127	6	14
1,1-Dichloropropene			10.0	10.4		ug/L		104	76 - 125	1	15
1,2,3-Trichlorobenzene			10.0	10.1		ug/L		101	60 - 125	5	15
1,2,3-Trichloropropane			10.0	10.5		ug/L		105	60 - 124	1	15
1,2,4-Trichlorobenzene			10.0	10.4		ug/L		104	66 - 124	2	15
1,2,4-Trimethylbenzene			10.0	10.1		ug/L		101	77 - 120	3	15
1,2-Dibromo-3-Chloropropane			10.0	9.99	J	ug/L		100	36 - 140	12	15
1,2-Dichlorobenzene			10.0	10.2		ug/L		102	78 - 120	3	15
1,2-Dichloroethane			10.0	10.7		ug/L		107	68 - 127	0	12
1,2-Dichloropropane			10.0	10.3		ug/L		103	76 - 121	1	15
1,3,5-Trimethylbenzene			10.0	10.2		ug/L		102	75 - 122	3	15
1,3-Dichlorobenzene			10.0	9.95		ug/L		99	77 - 120	4	15
1,3-Dichloropropane			10.0	10.5		ug/L		105	75 - 120	4	15
1,4-Dichlorobenzene			10.0	9.84		ug/L		98	77 - 121	8	15
2,2-Dichloropropane			10.0	10.3		ug/L		103	49 - 147	0	25
2-Butanone (MEK)			50.0	43.8		ug/L		88	40 - 150	1	25
2-Chlorotoluene			10.0	10.3		ug/L		103	75 - 121	6	15
2-Hexanone			50.0	43.3		ug/L		87	46 - 146	7	15
4-Chlorotoluene			10.0	10.5		ug/L		105	74 - 120	0	15
4-Methyl-2-pentanone (MIBK)			50.0	49.5		ug/L		99	60 - 127	2	15
Acetone			50.0	40.0		ug/L		80	20 - 150	1	25
Benzene			10.0	10.2		ug/L		102	80 - 120	2	25
Bromobenzene			10.0	10.2		ug/L		102	74 - 121	5	15
Bromochloromethane			10.0	10.1		ug/L		101	70 - 126	1	25
Bromodichloromethane			10.0	10.5		ug/L		105	67 - 125	4	15
Bromoform			10.0	9.34		ug/L		93	60 - 122	7	15
Bromomethane			10.0	10.2		ug/L		102	45 - 150	2	25

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-15078/9
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide			10.0	9.47		ug/L		95	67 - 129	1	25
Carbon tetrachloride			10.0	10.1		ug/L		101	68 - 134	2	25
Chlorobenzene			10.0	9.92		ug/L		99	79 - 125	1	25
Chloroethane			10.0	10.0		ug/L		100	48 - 150	0	25
Chloroform			10.0	10.1		ug/L		101	73 - 126	2	25
Chloromethane			10.0	9.46		ug/L		95	51 - 150	1	15
cis-1,2-Dichloroethene			10.0	10.2		ug/L		102	76 - 121	2	25
cis-1,3-Dichloropropene			10.0	10.3		ug/L		103	72 - 120	6	15
Dibromochloromethane			10.0	9.67		ug/L		97	72 - 120	4	15
Dibromomethane			10.0	10.3		ug/L		103	71 - 120	1	15
Dichlorodifluoromethane			10.0	8.61		ug/L		86	32 - 150	0	25
Dichlorofluoromethane			10.0	10.8		ug/L		108	60 - 140	5	25
Ethylbenzene			10.0	9.86		ug/L		99	80 - 120	2	25
Hexachlorobutadiene			10.0	9.93		ug/L		99	62 - 132	1	15
Hexane			10.0	9.94		ug/L		99	68 - 125	0	15
Isopropylbenzene			10.0	10.0		ug/L		100	77 - 123	1	15
m,p-Xylene			10.0	10.0		ug/L		100	80 - 120	2	25
Methyl tert-butyl ether			10.0	10.6		ug/L		106	71 - 128	2	12
Methylene Chloride			10.0	10.3		ug/L		103	20 - 150	4	25
Naphthalene			10.0	10.0		ug/L		100	63 - 124	8	25
n-Butylbenzene			10.0	9.96		ug/L		100	71 - 120	4	15
N-Propylbenzene			10.0	10.2		ug/L		102	76 - 120	4	15
o-Xylene			10.0	9.96		ug/L		100	80 - 120	2	25
p-Isopropyltoluene			10.0	10.0		ug/L		100	77 - 120	3	15
sec-Butylbenzene			10.0	10.3		ug/L		103	74 - 121	4	15
Styrene			10.0	9.77		ug/L		98	73 - 120	3	15
tert-Butylbenzene			10.0	10.4		ug/L		104	79 - 120	1	15
Tetrachloroethene			10.0	9.23		ug/L		92	71 - 132	5	15
Toluene			10.0	9.91		ug/L		99	80 - 123	3	25
trans-1,2-Dichloroethene			10.0	10.0		ug/L		100	75 - 124	2	25
trans-1,3-Dichloropropene			10.0	10.0		ug/L		100	70 - 121	4	15
Trichloroethene			10.0	10.1		ug/L		101	75 - 129	2	25
Trichlorofluoromethane			10.0	10.4		ug/L		104	60 - 140	1	25
Vinyl chloride			10.0	10.1		ug/L		101	42 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8151A - Herbicides (GC/MS)

Lab Sample ID: MB 580-263609/1-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263609

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
2,4-D	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1
2,4-DB	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dalapon	ND		0.40	0.10	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dicamba	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dichlorprop	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
MCPA	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
Silvex (2,4,5-TP)	ND		0.25	0.050	ug/L		12/18/17 09:34	12/23/17 15:07	1
MCPP	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*116*		*51 - 150*	*12/18/17 09:34*	*12/23/17 15:07*	*1*

Lab Sample ID: LCS 580-263609/2-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263609

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	4.48		ug/L		90	20 - 150		
2,4-D			5.00	4.80		ug/L		96	20 - 150		
2,4-DB			5.00	5.68		ug/L		114	50 - 150		
Dalapon			5.00	4.01		ug/L		80	20 - 120		
Dicamba			5.00	4.97		ug/L		99	20 - 150		
Dichlorprop			5.00	5.51		ug/L		110	23 - 150		
MCPA			5.00	4.48		ug/L		90	21 - 150		
Silvex (2,4,5-TP)			5.00	5.61		ug/L		112	24 - 150		
MCPP			5.00	5.65		ug/L		113	51 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*118*		*51 - 150*

Lab Sample ID: LCSD 580-263609/3-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263609

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.70		ug/L		94	20 - 150	5	35
2,4-D			5.00	5.46		ug/L		109	20 - 150	13	35
2,4-DB			5.00	5.46		ug/L		109	50 - 150	4	35
Dalapon			5.00	4.67		ug/L		93	20 - 120	15	35
Dicamba			5.00	4.84		ug/L		97	20 - 150	3	35
Dichlorprop			5.00	6.17		ug/L		123	23 - 150	11	35
MCPA			5.00	4.55		ug/L		91	21 - 150	2	35
Silvex (2,4,5-TP)			5.00	6.01		ug/L		120	24 - 150	7	35
MCPP			5.00	5.64		ug/L		113	51 - 150	0	35

Method: 8151A - Herbicides (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263609/3-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263609

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	120		51 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 264116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/14/17 12:44	12/26/17 14:52	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dichlorophenol	ND		4.0	0.91	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/14/17 12:44	12/26/17 14:52	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/14/17 12:44	12/26/17 14:52	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/14/17 12:44	12/26/17 14:52	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chloroaniline	ND		10	2.1	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Nitrophenol	ND		15	3.7	ug/L		12/14/17 12:44	12/26/17 14:52	1
Acenaphthene	ND		0.40	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Anthracene	ND		0.040	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[b]fluoranthene	ND		1.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[g,h,i]perylene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[k]fluoranthene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzoic acid	ND		3.0	0.60	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 264116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/14/17 12:44	12/26/17 14:52	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/14/17 12:44	12/26/17 14:52	1
Carbazole	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Chrysene	ND		0.60	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dibenz(a,h)anthracene	ND		0.60	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/14/17 12:44	12/26/17 14:52	1
Diethyl phthalate	ND		12	2.8	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/14/17 12:44	12/26/17 14:52	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/14/17 12:44	12/26/17 14:52	1
Fluoranthene	ND		3.0	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Fluorene	ND		2.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Isophorone	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Naphthalene	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
Phenanthrene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Phenol	ND		4.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Pyrene	ND		2.0	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*46*	*X*	*48 - 125*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
2-Fluorophenol (Surr)	*60*		*50 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Nitrobenzene-d5 (Surr)	*73*		*52 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Phenol-d5 (Surr)	*64*		*52 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Terphenyl-d14 (Surr)	*87*		*49 - 133*	*12/14/17 12:44*	*12/26/17 14:52*	*1*

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.47		ug/L		74	46 - 120
1,2-Dichlorobenzene	2.00	1.47		ug/L		73	44 - 120
1,3-Dichlorobenzene	2.00	1.35		ug/L		67	34 - 121
1,4-Dichlorobenzene	2.00	1.27		ug/L		63	40 - 120
1-Methylnaphthalene	2.00	1.66		ug/L		83	65 - 120
2,4,5-Trichlorophenol	2.00	1.75		ug/L		87	56 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2.00	1.42		ug/L		71	55 - 129
2,4-Dichlorophenol	2.00	1.60	J	ug/L		80	60 - 140
2,4-Dimethylphenol	2.00	1.18	J	ug/L		59	20 - 129
2,4-Dinitrophenol	4.00	3.55	J	ug/L		89	20 - 132
2,4-Dinitrotoluene	2.00	2.06		ug/L		103	53 - 143
2,6-Dinitrotoluene	2.00	2.01		ug/L		100	59 - 134
2-Chloronaphthalene	2.00	1.76		ug/L		88	64 - 125
2-Chlorophenol	2.00	1.94		ug/L		97	69 - 125
2-Methylnaphthalene	2.00	1.63		ug/L		82	56 - 120
2-Methylphenol	2.00	1.70		ug/L		85	53 - 120
2-Nitroaniline	10.0	7.99		ug/L		80	58 - 142
2-Nitrophenol	2.00	1.64		ug/L		82	20 - 143
3 & 4 Methylphenol	2.00	1.45		ug/L		73	54 - 120
3,3'-Dichlorobenzidine	12.0	11.1	J	ug/L		92	20 - 146
3-Nitroaniline	10.0	9.23		ug/L		92	22 - 139
4,6-Dinitro-2-methylphenol	4.00	3.52	J	ug/L		88	20 - 144
4-Bromophenyl phenyl ether	2.00	1.93		ug/L		97	70 - 123
4-Chloro-3-methylphenol	2.00	2.05		ug/L		102	63 - 126
4-Chloroaniline	10.0	6.12	J	ug/L		61	20 - 120
4-Chlorophenyl phenyl ether	2.00	1.84		ug/L		92	69 - 125
4-Nitroaniline	10.0	9.81		ug/L		98	40 - 130
4-Nitrophenol	4.00	6.25	J *	ug/L		156	27 - 150
Acenaphthene	2.00	1.85		ug/L		93	62 - 120
Acenaphthylene	2.00	1.89		ug/L		94	24 - 141
Anthracene	2.00	1.87		ug/L		93	20 - 140
Benzo[a]anthracene	2.00	2.12		ug/L		106	59 - 123
Benzo[a]pyrene	2.00	1.76		ug/L		88	20 - 133
Benzo[b]fluoranthene	2.00	2.10		ug/L		105	72 - 129
Benzo[g,h,i]perylene	2.00	2.26		ug/L		113	67 - 133
Benzo[k]fluoranthene	2.00	2.14		ug/L		107	72 - 120
Benzoic acid	4.00	1.15	J	ug/L		29	20 - 145
Benzyl alcohol	2.00	1.81		ug/L		90	42 - 129
Bis(2-chloroethoxy)methane	2.00	1.82		ug/L		91	59 - 125
Bis(2-chloroethyl)ether	2.00	1.79		ug/L		90	64 - 120
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		107	58 - 150
bis(chloroisopropyl) ether	2.00	1.45		ug/L		72	53 - 133
Butyl benzyl phthalate	2.00	2.17	J	ug/L		109	72 - 150
Carbazole	2.00	2.33		ug/L		116	80 - 135
Chrysene	2.00	1.77		ug/L		88	74 - 120
Dibenz(a,h)anthracene	2.00	2.24		ug/L		112	56 - 135
Dibenzofuran	2.00	1.96		ug/L		98	70 - 125
Diethyl phthalate	2.00	ND		ug/L		103	66 - 139
Dimethyl phthalate	2.00	2.10		ug/L		105	74 - 128
Di-n-butyl phthalate	2.00	2.06	J	ug/L		103	74 - 140
Di-n-octyl phthalate	2.00	2.20		ug/L		110	65 - 150
Fluoranthene	2.00	1.92	J	ug/L		96	70 - 135
Fluorene	2.00	1.94	J	ug/L		97	70 - 125
Hexachlorobenzene	2.00	1.65		ug/L		83	55 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	2.00	1.18		ug/L		59	20 - 125
Hexachlorocyclopentadiene	10.0	3.80		ug/L		38	20 - 120
Hexachloroethane	2.00	1.31		ug/L		65	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.37		ug/L		119	64 - 133
Isophorone	2.00	1.56		ug/L		78	64 - 125
Naphthalene	2.00	1.52		ug/L		76	56 - 120
Nitrobenzene	2.00	1.98		ug/L		99	54 - 133
N-Nitrosodi-n-propylamine	10.0	9.13		ug/L		91	54 - 120
N-Nitrosodiphenylamine	11.4	8.35		ug/L		73	22 - 135
Pentachlorophenol	4.00	2.43	J	ug/L		61	20 - 135
Phenanthrene	2.00	1.81		ug/L		91	71 - 120
Phenol	2.00	1.58	J	ug/L		79	53 - 126
Pyrene	2.00	1.88	J	ug/L		94	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*89*		*48 - 125*
2-Fluorobiphenyl	*84*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*101*		*52 - 120*
Phenol-d5 (Surr)	*96*		*52 - 120*
Terphenyl-d14 (Surr)	*102*		*49 - 133*

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	46 - 120	2	20
1,2-Dichlorobenzene	2.00	1.27		ug/L		63	44 - 120	15	20
1,3-Dichlorobenzene	2.00	1.23		ug/L		61	34 - 121	9	29
1,4-Dichlorobenzene	2.00	1.19		ug/L		59	40 - 120	7	25
1-Methylnaphthalene	2.00	1.63		ug/L		82	65 - 120	1	20
2,4,5-Trichlorophenol	2.00	1.76		ug/L		88	56 - 122	1	25
2,4,6-Trichlorophenol	2.00	1.33		ug/L		66	55 - 129	7	20
2,4-Dichlorophenol	2.00	1.59	J	ug/L		79	60 - 140	1	26
2,4-Dimethylphenol	2.00	1.21	J	ug/L		60	20 - 129	2	35
2,4-Dinitrophenol	4.00	3.63	J	ug/L		91	20 - 132	2	35
2,4-Dinitrotoluene	2.00	2.01		ug/L		101	53 - 143	2	29
2,6-Dinitrotoluene	2.00	1.93		ug/L		96	59 - 134	4	24
2-Chloronaphthalene	2.00	1.68		ug/L		84	64 - 125	4	20
2-Chlorophenol	2.00	1.76		ug/L		88	69 - 125	10	20
2-Methylnaphthalene	2.00	1.62		ug/L		81	56 - 120	1	20
2-Methylphenol	2.00	1.63		ug/L		81	53 - 120	4	33
2-Nitroaniline	10.0	7.42		ug/L		74	58 - 142	7	20
2-Nitrophenol	2.00	1.67		ug/L		84	20 - 143	2	35
3 & 4 Methylphenol	2.00	1.40		ug/L		70	54 - 120	4	20
3,3'-Dichlorobenzidine	12.0	10.9	J	ug/L		91	20 - 146	2	35
3-Nitroaniline	10.0	8.62		ug/L		86	22 - 139	7	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	4.00	3.61	J	ug/L		90	20 - 144	2	35
4-Bromophenyl phenyl ether	2.00	1.90		ug/L		95	70 - 123	2	20
4-Chloro-3-methylphenol	2.00	2.02		ug/L		101	63 - 126	1	20
4-Chloroaniline	10.0	5.76	J	ug/L		58	20 - 120	6	35
4-Chlorophenyl phenyl ether	2.00	1.79		ug/L		89	69 - 125	3	20
4-Nitroaniline	10.0	9.26		ug/L		93	40 - 130	6	35
4-Nitrophenol	4.00	6.02	J *	ug/L		151	27 - 150	4	23
Acenaphthene	2.00	1.78		ug/L		89	62 - 120	4	20
Acenaphthylene	2.00	1.80		ug/L		90	24 - 141	5	20
Anthracene	2.00	1.80		ug/L		90	20 - 140	4	26
Benzo[a]anthracene	2.00	2.19		ug/L		109	59 - 123	3	20
Benzo[a]pyrene	2.00	1.98		ug/L		99	20 - 133	12	35
Benzo[b]fluoranthene	2.00	2.35		ug/L		117	72 - 129	11	20
Benzo[g,h,i]perylene	2.00	2.55		ug/L		127	67 - 133	12	20
Benzo[k]fluoranthene	2.00	2.44	*	ug/L		122	72 - 120	13	20
Benzoic acid	4.00	1.41	J	ug/L		35	20 - 145	20	35
Benzyl alcohol	2.00	1.36		ug/L		68	42 - 129	28	35
Bis(2-chloroethoxy)methane	2.00	1.65		ug/L		82	59 - 125	10	26
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	64 - 120	8	20
Bis(2-ethylhexyl) phthalate	2.00	2.49	J	ug/L		124	58 - 150	15	35
bis(chloroisopropyl) ether	2.00	1.29		ug/L		64	53 - 133	12	20
Butyl benzyl phthalate	2.00	2.14	J	ug/L		107	72 - 150	2	20
Carbazole	2.00	2.32		ug/L		116	80 - 135	0	20
Chrysene	2.00	1.75		ug/L		87	74 - 120	1	20
Dibenz(a,h)anthracene	2.00	2.49		ug/L		125	56 - 135	11	20
Dibenzofuran	2.00	1.90		ug/L		95	70 - 125	3	20
Diethyl phthalate	2.00	ND		ug/L		92	66 - 139	11	20
Dimethyl phthalate	2.00	1.99		ug/L		99	74 - 128	6	20
Di-n-butyl phthalate	2.00	1.96	J	ug/L		98	74 - 140	5	20
Di-n-octyl phthalate	2.00	2.49		ug/L		125	65 - 150	13	20
Fluoranthene	2.00	1.90	J	ug/L		95	70 - 135	1	20
Fluorene	2.00	1.85	J	ug/L		92	70 - 125	5	20
Hexachlorobenzene	2.00	1.65		ug/L		83	55 - 122	0	20
Hexachlorobutadiene	2.00	1.23		ug/L		61	20 - 125	4	31
Hexachlorocyclopentadiene	10.0	3.55		ug/L		36	20 - 120	7	35
Hexachloroethane	2.00	1.14		ug/L		57	24 - 125	14	35
Indeno[1,2,3-cd]pyrene	2.00	2.71	*	ug/L		136	64 - 133	13	20
Isophorone	2.00	1.33		ug/L		66	64 - 125	16	20
Naphthalene	2.00	1.53		ug/L		77	56 - 120	1	20
Nitrobenzene	2.00	1.85		ug/L		92	54 - 133	7	20
N-Nitrosodi-n-propylamine	10.0	8.07		ug/L		81	54 - 120	12	20
N-Nitrosodiphenylamine	11.4	8.10		ug/L		71	22 - 135	3	29
Pentachlorophenol	4.00	2.48	J	ug/L		62	20 - 135	2	35
Phenanthrene	2.00	1.78		ug/L		89	71 - 120	2	20
Phenol	2.00	1.50	J	ug/L		75	53 - 126	5	26
Pyrene	2.00	1.86	J	ug/L		93	64 - 128	1	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	89		48 - 125
2-Fluorobiphenyl	81		50 - 120
2-Fluorophenol (Surr)	78		50 - 120
Nitrobenzene-d5 (Surr)	97		52 - 120
Phenol-d5 (Surr)	89		52 - 120
Terphenyl-d14 (Surr)	95		49 - 133

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.10	0.011	ug/L		12/14/17 12:44	12/19/17 13:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		59 - 120	12/14/17 12:44	12/19/17 13:33	1
Terphenyl-d14	83		17 - 149	12/14/17 12:44	12/19/17 13:33	1
2-Fluorobiphenyl	72		50 - 120	12/14/17 12:44	12/19/17 13:33	1
2,4,6-Tribromophenol	68		43 - 122	12/14/17 12:44	12/19/17 13:33	1

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.67		ug/L		83	40 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	77		59 - 120
Terphenyl-d14	83		17 - 149
2-Fluorobiphenyl	74		50 - 120
2,4,6-Tribromophenol	92		43 - 122

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.71		ug/L		86	40 - 140	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	76		59 - 120
Terphenyl-d14	81		17 - 149
2-Fluorobiphenyl	74		50 - 120
2,4,6-Tribromophenol	90		43 - 122

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-15021/1011
Matrix: Water
Analysis Batch: 15021

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/12/17 10:45	1

Lab Sample ID: LCS 590-15021/1010
Matrix: Water
Analysis Batch: 15021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	5.09		mg/L		102	90 - 110		

Lab Sample ID: 590-7685-1 MS
Matrix: Water
Analysis Batch: 15021

Client Sample ID: MW-11A:121117
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	3.5		4.55	8.20		mg/L		103	80 - 120		

Lab Sample ID: 590-7685-1 MSD
Matrix: Water
Analysis Batch: 15021

Client Sample ID: MW-11A:121117
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	3.5		4.55	8.23		mg/L		104	80 - 120	0	12.1

Lab Sample ID: 590-7685-1 DU
Matrix: Water
Analysis Batch: 15021

Client Sample ID: MW-11A:121117
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	3.5		3.52		mg/L		0	13.1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-263646/11-A
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263646

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			0.100	0.0941		mg/L		94	85 - 115		
Antimony			0.100	0.0920		mg/L		92	85 - 115		
Barium			0.100	0.0924		mg/L		92	85 - 115		
Beryllium			0.100	0.0940		mg/L		94	85 - 115		
Cadmium			0.100	0.0933		mg/L		93	85 - 115		
Chromium			0.100	0.0929		mg/L		93	85 - 115		
Copper			0.100	0.0915		mg/L		92	85 - 115		
Iron			10.0	9.46		mg/L		95	85 - 115		
Lead			0.100	0.0954		mg/L		95	85 - 115		
Manganese			0.100	0.0920		mg/L		92	85 - 115		
Nickel			0.100	0.0907		mg/L		91	85 - 115		
Selenium			0.100	0.0954		mg/L		95	85 - 115		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-263646/11-A
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.100	0.0937		mg/L		94	85 - 115
Thallium	0.100	0.0945		mg/L		94	85 - 115
Vanadium	0.100	0.0925		mg/L		92	85 - 115
Zinc	0.100	0.0928		mg/L		93	85 - 115

Lab Sample ID: LCSD 580-263646/12-A
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263646

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0958		mg/L		96	85 - 115	2	20
Antimony	0.100	0.0936		mg/L		94	85 - 115	2	20
Barium	0.100	0.0935		mg/L		94	85 - 115	1	20
Beryllium	0.100	0.0946		mg/L		95	85 - 115	1	20
Cadmium	0.100	0.0955		mg/L		95	85 - 115	2	20
Chromium	0.100	0.0948		mg/L		95	85 - 115	2	20
Copper	0.100	0.0935		mg/L		94	85 - 115	2	20
Iron	10.0	9.66		mg/L		97	85 - 115	2	20
Lead	0.100	0.0984		mg/L		98	85 - 115	3	20
Manganese	0.100	0.0935		mg/L		94	85 - 115	2	20
Nickel	0.100	0.0928		mg/L		93	85 - 115	2	20
Selenium	0.100	0.0966		mg/L		97	85 - 115	1	20
Silver	0.100	0.0963		mg/L		96	85 - 115	3	20
Thallium	0.100	0.0953		mg/L		95	85 - 115	1	20
Vanadium	0.100	0.0944		mg/L		94	85 - 115	2	20
Zinc	0.100	0.0949		mg/L		95	85 - 115	2	20

Lab Sample ID: MB 580-264059/13-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 264059

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 11:21	1
Antimony	ND		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Barium	ND		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 11:21	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 11:21	1
Chromium	ND		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 11:21	1
Copper	ND		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 11:21	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 11:21	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 11:21	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Nickel	ND		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 11:21	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 11:21	1
Vanadium	ND		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Zinc	ND		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 11:21	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-264059/14-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	85 - 115
Antimony	0.100	0.0987		mg/L		99	85 - 115
Barium	0.100	0.0996		mg/L		100	85 - 115
Beryllium	0.100	0.0997		mg/L		100	85 - 115
Cadmium	0.100	0.0972		mg/L		97	85 - 115
Chromium	0.100	0.100		mg/L		100	85 - 115
Copper	0.100	0.100		mg/L		100	85 - 115
Iron	10.0	10.0		mg/L		100	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0954		mg/L		95	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Selenium	0.100	0.0955		mg/L		96	85 - 115
Silver	0.100	0.100		mg/L		100	85 - 115
Thallium	0.100	0.0959		mg/L		96	85 - 115
Vanadium	0.100	0.0977		mg/L		98	85 - 115
Zinc	0.100	0.0991		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-264059/15-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0973		mg/L		97	85 - 115	3	20
Antimony	0.100	0.0983		mg/L		98	85 - 115	0	20
Barium	0.100	0.0989		mg/L		99	85 - 115	1	20
Beryllium	0.100	0.0955		mg/L		95	85 - 115	4	20
Cadmium	0.100	0.0971		mg/L		97	85 - 115	0	20
Chromium	0.100	0.0980		mg/L		98	85 - 115	2	20
Copper	0.100	0.0981		mg/L		98	85 - 115	2	20
Iron	10.0	9.66		mg/L		97	85 - 115	4	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0937		mg/L		94	85 - 115	2	20
Nickel	0.100	0.0982		mg/L		98	85 - 115	2	20
Selenium	0.100	0.0960		mg/L		96	85 - 115	1	20
Silver	0.100	0.0995		mg/L		99	85 - 115	0	20
Thallium	0.100	0.0947		mg/L		95	85 - 115	1	20
Vanadium	0.100	0.0959		mg/L		96	85 - 115	2	20
Zinc	0.100	0.0967		mg/L		97	85 - 115	2	20

Lab Sample ID: 590-7685-1 MS
Matrix: Water
Analysis Batch: 264199

Client Sample ID: MW-11A:121117
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0016		0.100	0.0974		mg/L		96	70 - 130
Antimony	ND		0.100	0.0967		mg/L		97	70 - 130
Barium	0.085		0.100	0.183		mg/L		98	70 - 130
Beryllium	ND		0.100	0.0958		mg/L		96	70 - 130

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7685-1 MS
Matrix: Water
Analysis Batch: 264199

Client Sample ID: MW-11A:121117
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		0.100	0.0953		mg/L		95	70 - 130
Chromium	0.00046		0.100	0.0960		mg/L		96	70 - 130
Copper	ND		0.100	0.0952		mg/L		95	70 - 130
Iron	ND		10.0	9.52		mg/L		95	70 - 130
Lead	ND		0.100	0.0971		mg/L		97	70 - 130
Manganese	ND		0.100	0.0916		mg/L		92	70 - 130
Nickel	ND		0.100	0.0943		mg/L		94	70 - 130
Selenium	ND		0.100	0.0916		mg/L		92	70 - 130
Silver	ND		0.100	0.0968		mg/L		97	70 - 130
Thallium	ND		0.100	0.0923		mg/L		92	70 - 130
Vanadium	0.0024	J	0.100	0.0967		mg/L		94	70 - 130
Zinc	ND		0.100	0.0944		mg/L		94	70 - 130

Lab Sample ID: 590-7685-1 MSD
Matrix: Water
Analysis Batch: 264199

Client Sample ID: MW-11A:121117
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0016		0.100	0.0993		mg/L		98	70 - 130	2	20
Antimony	ND		0.100	0.100		mg/L		100	70 - 130	3	20
Barium	0.085		0.100	0.190		mg/L		105	70 - 130	3	20
Beryllium	ND		0.100	0.0964		mg/L		96	70 - 130	1	20
Cadmium	ND		0.100	0.0979		mg/L		98	70 - 130	3	20
Chromium	0.00046		0.100	0.0980		mg/L		98	70 - 130	2	20
Copper	ND		0.100	0.0961		mg/L		96	70 - 130	1	20
Iron	ND		10.0	9.63		mg/L		96	70 - 130	1	20
Lead	ND		0.100	0.0989		mg/L		99	70 - 130	2	20
Manganese	ND		0.100	0.0934		mg/L		93	70 - 130	2	20
Nickel	ND		0.100	0.0954		mg/L		95	70 - 130	1	20
Selenium	ND		0.100	0.0933		mg/L		93	70 - 130	2	20
Silver	ND		0.100	0.0998		mg/L		100	70 - 130	3	20
Thallium	ND		0.100	0.0931		mg/L		93	70 - 130	1	20
Vanadium	0.0024	J	0.100	0.0976		mg/L		95	70 - 130	1	20
Zinc	ND		0.100	0.0962		mg/L		96	70 - 130	2	20

Lab Sample ID: 590-7685-1 DU
Matrix: Water
Analysis Batch: 264199

Client Sample ID: MW-11A:121117
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0016		0.00159		mg/L		2	20
Antimony	ND		ND		mg/L		NC	20
Barium	0.085		0.0911		mg/L		7	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.00046		0.000445		mg/L		4	20
Copper	ND		ND		mg/L		NC	20
Iron	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7685-1 DU — **Client Sample ID: MW-11A:121117**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 264199 — **Prep Batch: 264059**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Manganese	ND		ND		mg/L		NC	20
Nickel	ND		0.000112	J	mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0024	J	0.00257	J	mg/L		9	20
Zinc	ND		ND		mg/L		NC	20

Lab Sample ID: MB 580-263373/4-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 263734 — **Prep Batch: 263646**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 08:08	1
Antimony	ND		0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 08:08	1
Barium	0.0000613	J	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 08:08	1
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:08	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 08:08	1
Chromium	ND		0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 08:08	1
Copper	ND		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 08:08	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 08:08	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 08:08	1
Manganese	ND		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 08:08	1
Nickel	ND		0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 08:08	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 08:08	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:08	1
Thallium	0.000112	J	0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 08:08	1
Vanadium	ND		0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 08:08	1
Zinc	ND		0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 08:08	1

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-483722/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 483913 — **Prep Batch: 483722**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:32	1

Lab Sample ID: LCS 490-483722/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 483913 — **Prep Batch: 483722**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.101		mg/L		101	90 - 110

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: 590-7685-2 MS
Matrix: Water
Analysis Batch: 483913

Client Sample ID: MW-15A:121117
Prep Type: Total/NA
Prep Batch: 483722

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.100	0.0812	F1	mg/L		81	90 - 110

Client Sample ID: MW-11A:121117

Lab Sample ID: 590-7685-1

Date Collected: 12/11/17 11:40

Matrix: Water

Date Received: 12/11/17 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 13:33	MRS	TAL SPK
Total/NA	Prep	8151A			932.6 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 16:49	ERZ	TAL SEA
Total/NA	Prep	3520C			1019.8 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1			264116	12/26/17 18:54	ERZ	TAL SEA
Total/NA	Prep	3520C			1019.8 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263824	12/20/17 11:05	ERZ	TAL SEA
Total/NA	Analysis	300.0		1			15021	12/12/17 09:20	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263373	12/13/17 14:48	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263646	12/18/17 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263734	12/19/17 09:03	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 11:24	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:44	SDL	TAL NSH

Client Sample ID: MW-15A:121117

Lab Sample ID: 590-7685-2

Date Collected: 12/11/17 13:10

Matrix: Water

Date Received: 12/11/17 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 13:55	MRS	TAL SPK
Total/NA	Prep	8151A			918.6 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 17:14	ERZ	TAL SEA
Total/NA	Prep	3520C			1032.1 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1	1 mL	1.0 mL	263784	12/19/17 22:23	W1T	TAL SEA
Total/NA	Prep	3520C			1032.1 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 20:56	W1T	TAL SEA
Total/NA	Analysis	300.0		1			15021	12/12/17 10:08	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263373	12/13/17 14:48	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263646	12/18/17 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263734	12/19/17 09:07	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 11:57	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:46	SDL	TAL NSH

Client Sample ID: MW-1A:121117

Lab Sample ID: 590-7685-3

Date Collected: 12/11/17 14:32

Matrix: Water

Date Received: 12/11/17 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 14:16	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Client Sample ID: MW-1A:121117

Lab Sample ID: 590-7685-3

Date Collected: 12/11/17 14:32

Matrix: Water

Date Received: 12/11/17 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			912.1 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 17:40	ERZ	TAL SEA
Total/NA	Prep	3520C			886.5 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1			264116	12/26/17 19:18	ERZ	TAL SEA
Total/NA	Prep	3520C			886.5 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 21:21	W1T	TAL SEA
Total/NA	Analysis	300.0		5			15021	12/12/17 12:21	MRS	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263373	12/13/17 14:48	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263646	12/18/17 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263734	12/19/17 09:11	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:00	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:48	SDL	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 590-7685-4

Date Collected: 12/11/17 00:00

Matrix: Water

Date Received: 12/11/17 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15052	12/13/17 20:17	CBW	TAL SPK

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Laboratory: TestAmerica Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-071	12-31-17
Oregon	NELAP Primary AB	10	4137	12-07-18
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C789	07-19-18

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis(chloroisopropyl) ether
8270D SIM	3520C	Water	1,4-Dioxane

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7685-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
8151A	Herbicides (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3266-1070.1
Client Contact: Josh Lee	Phone: 406-239-7516	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4 - Total Cyanide	200.8_CWA - Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8151A_MS, 8270D	8270D_SIM_AK - 1,4-Dioxane only	200.8_CWA - Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	300_ORGFMS - Nitrate only	8260C - 8260C - Volatiles	Total Number of containers	Special Instructions/Note:
			Preservation Code:				B	D	N	N	N	N	A		
MW-11A:121117	12/11/2017	1140	G	Water	N		X	X	X	X	X	X	X	12	
MW-15A:121117	↓	1310	↓	Water	↓		X	X	X	X	X	X	X	12	
MW-1A:121117	↓	1432	↓	Water	↓		X	X	X	X	X	X	X	12	
Trip Blank				Water									X		
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											

590-7685 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Josh Lee	Date/Time: 12/11/2017 1630	Company: GEI	Received by: Randee Arrington	Date/Time: 12/11/17 1630	Company: TestAmerica
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.3°C IR004

Ver: 08/04/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-7685 Chain of Custody

Cooler Received/Opened On 12/13/2017 @ 0945

Time Samples Removed From Cooler 11:45 *Time Samples Placed In Storage* 11:49 (2 Hour Window)

1. Tracking # 4830 (last 4 digits, FedEx) Courier: _FedEx_

   IR Gun ID 17960357 pH Strip Lot_____ Chlorine Strip Lot_____

2. *Temperature of rep. sample or temp blank when opened:* 0.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? YES (NO) NA

   If yes, how many and where:_____

5. Were the seals intact, signed, and dated correctly? YES...NO...(NA)

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) ES

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES (NO) NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

 Larger than this.

14. Was there a Trip Blank in this cooler? YES (NO)...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) JJ

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) JJ

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) JJ

I certify that I attached a label with the unique LIMS number to each container (intial) JJ

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Loc: 590
7685

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-3258.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-7685-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/21/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-11A:121117 (590-7685-1)	12/11/17	11:40 Pacific		Water			X	1	
MW-15A:121117 (590-7685-2)	12/11/17	13:10 Pacific		Water			X	1	
MW-1A:121117 (590-7685-3)	12/11/17	14:32 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Shawna Frahm	12/12/17 1520	TAL SPK	[illegible]	12/13/17 09:45	TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.9

Ver: 09/20/2016

12/28/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3254.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-7685-1
Address: 5755 8th Street East,	Due Date Requested: 12/21/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	200.8_CWA/200.8_P_TOT Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8270D_SIM_AK/3520C (MOD) 1,4-Dioxane only	8151A_MS/8151A_AP Herbicide (Aqueous)	8270D/3520C Semivolatiles, standard list	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MW-11A:121117 (590-7685-1)	12/11/17	11:40 Pacific		Water			X	X	X	X	X	8	
MW-15A:121117 (590-7685-2)	12/11/17	13:10 Pacific		Water			X	X	X	X	X	8	
MW-1A:121117 (590-7685-3)	12/11/17	14:32 Pacific		Water			X	X	X	X	X	7	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Mack	12/12/17 930	TAS	[signature]	12-13-17 0935	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

A2=02.0.7 . 0.4

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7685-1

Login Number: 7685

List Source: TestAmerica Spokane

List Number: 1

Creator: Arrington, Randee E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7685-1

Login Number: 7685
List Number: 3
Creator: Hobbs, Kenneth F

List Source: TestAmerica Seattle
List Creation: 12/13/17 02:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
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TestAmerica Job ID: 590-7700-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/28/2017 3:13:17 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-7700-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/12/2017 3:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-15078 recovered above the upper control limit for Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Dup:121217 (590-7700-1), MW-7D:121217 (590-7700-2), MW-7B:121217 (590-7700-3) and Trip Blank (590-7700-4).

The following sample was received with headspace: Trip Blank (590-7700-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263784 recovered outside acceptance criteria, low biased, for Isophorone, Hexachlorocyclopentadiene, 2,2'oxybis[1-chloropropane], and 2,4,6-Trichlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) for preparation batch 580-263471 and analytical batch 580-263784 recovered outside control limits for the following analytes: 4-Nitrophenol, Benzo[k]fluoranthene (LCSD only), and Indeno[1,2,3-cd]pyrene (LCSD only). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: Surrogate 2,4,6-Tribromophenol (Surr) was 2% low in the method blank (MB 580-263471/1-A). Since all other surrogates in the MB met acceptance criteria, the CCV associated with the MB was within the 20%D limits, and the LCS/LCSD pair and all samples met acceptance criteria for this surrogate data was reported. This appears to be an isolated event and any re-extraction would be outside of holding time, therefore data is qualified and reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-264116 recovered outside acceptance criteria, low biased, for Phenol, Benzyl alcohol, N-Nitrosodi-n-propylamine, Bis(2-ethylhexyl) phthalate, 2,2'-oxybis[1-chloropropane], and Di-n-octyl phthalate. A standard at or below the reporting limit (RL) was analyzed, and the target analytes were detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-264116 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8151A: The continuing calibration verification (CCV) associated with batch 580-264093 recovered outside acceptance criteria, low biased, for 2,4,5-T. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Job ID: 590-7700-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Method 200.8: The method blank for preparation batch 580-263646 and analytical batch 580-263734 contained Barium and Thallium above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7700-1	Dup:121217	Water	12/12/17 08:00	12/12/17 15:45
590-7700-2	MW-7D:121217	Water	12/12/17 10:20	12/12/17 15:45
590-7700-3	MW-7B:121217	Water	12/12/17 11:25	12/12/17 15:45
590-7700-4	Trip Blank	Water	12/12/17 00:00	12/12/17 15:45

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Client Sample ID: Dup:121217
Date Collected: 12/12/17 08:00
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 18:18	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 18:18	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 18:18	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 18:18	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 18:18	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 18:18	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 18:18	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 18:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 18:18	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 18:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 18:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 18:18	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 18:18	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 18:18	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 18:18	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 18:18	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 18:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 18:18	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 18:18	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 18:18	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 18:18	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 18:18	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 18:18	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 18:18	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 18:18	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 18:18	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 18:18	1
Acetone	ND		30	14	ug/L			12/15/17 18:18	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 18:18	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 18:18	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 18:18	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 18:18	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 18:18	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 18:18	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 18:18	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 18:18	1
Chlorobenzene	**0.20**	**J**	1.0	0.14	ug/L			12/15/17 18:18	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 18:18	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 18:18	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 18:18	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 18:18	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 18:18	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 18:18	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 18:18	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 18:18	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 18:18	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 18:18	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 18:18	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 18:18	1

Client Sample ID: Dup:121217
Date Collected: 12/12/17 08:00
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 18:18	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 18:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 18:18	1
Methylene Chloride	**1.2**	**J**	5.0	1.0	ug/L			12/15/17 18:18	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 18:18	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 18:18	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 18:18	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 18:18	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 18:18	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 18:18	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 18:18	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 18:18	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 18:18	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 18:18	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 18:18	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 18:18	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 18:18	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 18:18	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 18:18	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 125*		*12/15/17 18:18*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/15/17 18:18*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/15/17 18:18*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*12/15/17 18:18*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 18:05	1
2,4-D	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 18:05	1
2,4-DB	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 18:05	1
Dalapon	ND		0.44	0.11	ug/L		12/18/17 09:34	12/23/17 18:05	1
Dicamba	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 18:05	1
Dichlorprop	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 18:05	1
MCPA	ND		0.27	0.044	ug/L		12/18/17 09:34	12/23/17 18:05	1
Silvex (2,4,5-TP)	ND		0.27	0.055	ug/L		12/18/17 09:34	12/23/17 18:05	1
MCPP	ND		0.27	0.022	ug/L		12/18/17 09:34	12/23/17 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*102*		*51 - 150*	*12/18/17 09:34*	*12/23/17 18:05*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.050**	**J**	0.097	0.011	ug/L		12/14/17 12:44	12/19/17 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*86*		*59 - 120*	*12/14/17 12:44*	*12/19/17 21:46*	*1*
Terphenyl-d14	*93*		*17 - 149*	*12/14/17 12:44*	*12/19/17 21:46*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/14/17 12:44*	*12/19/17 21:46*	*1*
2,4,6-Tribromophenol	*98*		*43 - 122*	*12/14/17 12:44*	*12/19/17 21:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/19/17 23:13	1
1,2-Dichlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/19/17 23:13	1
1,4-Dichlorobenzene	ND		0.39	0.058	ug/L		12/14/17 12:44	12/19/17 23:13	1
1-Methylnaphthalene	ND		0.97	0.029	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,4-Dichlorophenol	ND		3.9	0.88	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,4-Dimethylphenol	ND		3.9	0.80	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,4-Dinitrotoluene	ND		0.97	0.23	ug/L		12/14/17 12:44	12/19/17 23:13	1
2,6-Dinitrotoluene	**0.24**	**J**	0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
2-Chloronaphthalene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
2-Chlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
2-Methylnaphthalene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
2-Methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
2-Nitroaniline	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
2-Nitrophenol	ND		0.97	0.23	ug/L		12/14/17 12:44	12/19/17 23:13	1
3 & 4 Methylphenol	ND		0.77	0.039	ug/L		12/14/17 12:44	12/19/17 23:13	1
3,3'-Dichlorobenzidine	ND		15	3.0	ug/L		12/14/17 12:44	12/19/17 23:13	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/14/17 12:44	12/19/17 23:13	1
4,6-Dinitro-2-methylphenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 23:13	1
4-Bromophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
4-Chloro-3-methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
4-Chloroaniline	ND		9.7	2.0	ug/L		12/14/17 12:44	12/19/17 23:13	1
4-Chlorophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
4-Nitroaniline	ND		1.9	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
4-Nitrophenol	ND	*	15	3.6	ug/L		12/14/17 12:44	12/19/17 23:13	1
Acenaphthene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Acenaphthylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Anthracene	ND		0.039	0.0097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzo[a]anthracene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzo[a]pyrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzo[b]fluoranthene	ND		0.97	0.048	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzo[g,h,i]perylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzo[k]fluoranthene	ND	*	0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzoic acid	**0.95**	**J**	2.9	0.58	ug/L		12/14/17 12:44	12/19/17 23:13	1
Benzyl alcohol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Bis(2-chloroethoxy)methane	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Bis(2-chloroethyl)ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/14/17 12:44	12/19/17 23:13	1
bis(chloroisopropyl) ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Butyl benzyl phthalate	ND		9.7	0.72	ug/L		12/14/17 12:44	12/19/17 23:13	1
Carbazole	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Chrysene	ND		0.58	0.0097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Dibenz(a,h)anthracene	ND		0.58	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Dibenzofuran	ND		0.39	0.058	ug/L		12/14/17 12:44	12/19/17 23:13	1
Diethyl phthalate	ND		12	2.7	ug/L		12/14/17 12:44	12/19/17 23:13	1
Dimethyl phthalate	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/14/17 12:44	12/19/17 23:13	1
Di-n-octyl phthalate	ND		0.97	0.17	ug/L		12/14/17 12:44	12/19/17 23:13	1
Fluoranthene	ND		2.9	0.0097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Fluorene	ND		1.9	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1

Client Sample ID: Dup:121217
Date Collected: 12/12/17 08:00
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Hexachlorobutadiene	ND		0.97	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Hexachlorocyclopentadiene	ND		1.9	0.38	ug/L		12/14/17 12:44	12/19/17 23:13	1
Hexachloroethane	ND		0.97	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Indeno[1,2,3-cd]pyrene	ND	*	0.97	0.048	ug/L		12/14/17 12:44	12/19/17 23:13	1
Isophorone	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Naphthalene	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Nitrobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
N-Nitrosodi-n-propylamine	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
N-Nitrosodiphenylamine	ND		2.9	0.097	ug/L		12/14/17 12:44	12/19/17 23:13	1
Pentachlorophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 23:13	1
Phenanthrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:13	1
Phenol	ND		3.9	0.048	ug/L		12/14/17 12:44	12/19/17 23:13	1
Pyrene	ND		1.9	0.039	ug/L		12/14/17 12:44	12/19/17 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*104*		*48 - 125*	*12/14/17 12:44*	*12/19/17 23:13*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*	*12/14/17 12:44*	*12/19/17 23:13*	*1*
2-Fluorophenol (Surr)	*96*		*50 - 120*	*12/14/17 12:44*	*12/19/17 23:13*	*1*
Nitrobenzene-d5 (Surr)	*106*		*52 - 120*	*12/14/17 12:44*	*12/19/17 23:13*	*1*
Phenol-d5 (Surr)	*102*		*52 - 120*	*12/14/17 12:44*	*12/19/17 23:13*	*1*
Terphenyl-d14 (Surr)	*121*		*49 - 133*	*12/14/17 12:44*	*12/19/17 23:13*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.30**		0.20	0.039	mg/L			12/13/17 12:38	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00095**	**J**	0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:12	1
Antimony	**0.00086**		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:12	1
Barium	**0.11**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:12	1
Beryllium	**0.00018**	**J**	0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:12	1
Cadmium	**0.00042**		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:12	1
Chromium	**0.0075**		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:12	1
Copper	**0.24**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:12	1
Iron	**13**		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:12	1
Lead	**0.069**		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:12	1
Manganese	**0.076**		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:12	1
Nickel	**0.0082**		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:12	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:12	1
Silver	**0.0017**		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:12	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:12	1
Vanadium	**0.0074**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:12	1
Zinc	**0.39**		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:12	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00056**	**J**	0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 08:12	1
Antimony	**0.00055**		0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 08:12	1

Client Sample ID: Dup:121217 — **Lab Sample ID: 590-7700-1**
Date Collected: 12/12/17 08:00 — **Matrix: Water**
Date Received: 12/12/17 15:45

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.051	B	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 08:12	1
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:12	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 08:12	1
Chromium	0.0019		0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 08:12	1
Copper	0.0024		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 08:12	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 08:12	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 08:12	1
Manganese	0.00086	J	0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 08:12	1
Nickel	0.0012	J	0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 08:12	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 08:12	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:12	1
Thallium	0.000078	J B	0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 08:12	1
Vanadium	0.0025	J	0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 08:12	1
Zinc	0.016		0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 08:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:49	1

Client Sample ID: MW-7D:121217 — **Lab Sample ID: 590-7700-2**
Date Collected: 12/12/17 10:20 — **Matrix: Water**
Date Received: 12/12/17 15:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 18:40	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 18:40	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 18:40	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 18:40	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 18:40	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 18:40	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 18:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 18:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 18:40	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 18:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 18:40	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 18:40	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 18:40	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 18:40	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 18:40	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 18:40	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 18:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 18:40	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 18:40	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 18:40	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 18:40	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 18:40	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 18:40	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 18:40	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 18:40	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Client Sample ID: MW-7D:121217
Date Collected: 12/12/17 10:20
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 18:40	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 18:40	1
Acetone	ND		30	14	ug/L			12/15/17 18:40	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 18:40	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 18:40	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 18:40	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 18:40	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 18:40	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 18:40	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 18:40	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 18:40	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 18:40	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 18:40	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 18:40	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 18:40	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 18:40	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 18:40	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 18:40	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 18:40	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 18:40	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 18:40	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 18:40	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 18:40	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 18:40	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 18:40	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 18:40	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 18:40	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 18:40	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 18:40	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 18:40	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 18:40	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 18:40	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 18:40	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 18:40	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 18:40	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 18:40	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 18:40	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 18:40	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 18:40	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 18:40	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 18:40	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 18:40	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 18:40	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 125*		*12/15/17 18:40*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/15/17 18:40*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/15/17 18:40*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/15/17 18:40*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 18:30	1
2,4-D	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 18:30	1
2,4-DB	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 18:30	1
Dalapon	ND		0.45	0.11	ug/L		12/18/17 09:34	12/23/17 18:30	1
Dicamba	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 18:30	1
Dichlorprop	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 18:30	1
MCPA	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 18:30	1
Silvex (2,4,5-TP)	ND		0.28	0.056	ug/L		12/18/17 09:34	12/23/17 18:30	1
MCPP	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*123*		*51 - 150*	*12/18/17 09:34*	*12/23/17 18:30*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.097	0.011	ug/L		12/14/17 12:44	12/19/17 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*85*		*59 - 120*	*12/14/17 12:44*	*12/19/17 22:10*	*1*
Terphenyl-d14	*94*		*17 - 149*	*12/14/17 12:44*	*12/19/17 22:10*	*1*
2-Fluorobiphenyl	*83*		*50 - 120*	*12/14/17 12:44*	*12/19/17 22:10*	*1*
2,4,6-Tribromophenol	*85*		*43 - 122*	*12/14/17 12:44*	*12/19/17 22:10*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/19/17 23:38	1
1,2-Dichlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/19/17 23:38	1
1,4-Dichlorobenzene	ND		0.39	0.058	ug/L		12/14/17 12:44	12/19/17 23:38	1
1-Methylnaphthalene	ND		0.97	0.029	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,4-Dichlorophenol	ND		3.9	0.88	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,4-Dimethylphenol	ND		3.9	0.80	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,4-Dinitrotoluene	ND		0.97	0.23	ug/L		12/14/17 12:44	12/19/17 23:38	1
2,6-Dinitrotoluene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
2-Chloronaphthalene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
2-Chlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
2-Methylnaphthalene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
2-Methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
2-Nitroaniline	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
2-Nitrophenol	ND		0.97	0.23	ug/L		12/14/17 12:44	12/19/17 23:38	1
3 & 4 Methylphenol	ND		0.77	0.039	ug/L		12/14/17 12:44	12/19/17 23:38	1
3,3'-Dichlorobenzidine	ND		15	3.0	ug/L		12/14/17 12:44	12/19/17 23:38	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/14/17 12:44	12/19/17 23:38	1
4,6-Dinitro-2-methylphenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 23:38	1
4-Bromophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
4-Chloro-3-methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
4-Chloroaniline	ND		9.7	2.0	ug/L		12/14/17 12:44	12/19/17 23:38	1
4-Chlorophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
4-Nitroaniline	ND		1.9	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
4-Nitrophenol	ND	*	15	3.6	ug/L		12/14/17 12:44	12/19/17 23:38	1
Acenaphthene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1

Client Sample ID: MW-7D:121217
Date Collected: 12/12/17 10:20
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Anthracene	ND		0.039	0.0097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzo[a]anthracene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzo[a]pyrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzo[b]fluoranthene	ND		0.97	0.048	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzo[g,h,i]perylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzo[k]fluoranthene	ND	*	0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzoic acid	ND		2.9	0.58	ug/L		12/14/17 12:44	12/19/17 23:38	1
Benzyl alcohol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Bis(2-chloroethoxy)methane	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Bis(2-chloroethyl)ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Bis(2-ethylhexyl) phthalate	**8.5**	**J**	15	2.1	ug/L		12/14/17 12:44	12/19/17 23:38	1
bis(chloroisopropyl) ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Butyl benzyl phthalate	ND		9.7	0.72	ug/L		12/14/17 12:44	12/19/17 23:38	1
Carbazole	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Chrysene	ND		0.58	0.0097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Dibenz(a,h)anthracene	ND		0.58	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Dibenzofuran	ND		0.39	0.058	ug/L		12/14/17 12:44	12/19/17 23:38	1
Diethyl phthalate	ND		12	2.7	ug/L		12/14/17 12:44	12/19/17 23:38	1
Dimethyl phthalate	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/14/17 12:44	12/19/17 23:38	1
Di-n-octyl phthalate	ND		0.97	0.17	ug/L		12/14/17 12:44	12/19/17 23:38	1
Fluoranthene	ND		2.9	0.0097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Fluorene	ND		1.9	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Hexachlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Hexachlorobutadiene	ND		0.97	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Hexachlorocyclopentadiene	ND		1.9	0.38	ug/L		12/14/17 12:44	12/19/17 23:38	1
Hexachloroethane	ND		0.97	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Indeno[1,2,3-cd]pyrene	ND	*	0.97	0.048	ug/L		12/14/17 12:44	12/19/17 23:38	1
Isophorone	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Naphthalene	ND		0.39	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Nitrobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
N-Nitrosodi-n-propylamine	ND		0.58	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
N-Nitrosodiphenylamine	ND		2.9	0.097	ug/L		12/14/17 12:44	12/19/17 23:38	1
Pentachlorophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/19/17 23:38	1
Phenanthrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/19/17 23:38	1
Phenol	ND		3.9	0.048	ug/L		12/14/17 12:44	12/19/17 23:38	1
Pyrene	ND		1.9	0.039	ug/L		12/14/17 12:44	12/19/17 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*48 - 125*	*12/14/17 12:44*	*12/19/17 23:38*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*	*12/14/17 12:44*	*12/19/17 23:38*	*1*
2-Fluorophenol (Surr)	*104*		*50 - 120*	*12/14/17 12:44*	*12/19/17 23:38*	*1*
Nitrobenzene-d5 (Surr)	*100*		*52 - 120*	*12/14/17 12:44*	*12/19/17 23:38*	*1*
Phenol-d5 (Surr)	*114*		*52 - 120*	*12/14/17 12:44*	*12/19/17 23:38*	*1*
Terphenyl-d14 (Surr)	*115*		*49 - 133*	*12/14/17 12:44*	*12/19/17 23:38*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.19**	**J**	0.20	0.039	mg/L			12/13/17 12:50	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:15	1
Antimony	ND		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:15	1
Barium	**0.021**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:15	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:15	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:15	1
Chromium	**0.0015**		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:15	1
Copper	ND		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:15	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:15	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:15	1
Manganese	**0.0028**		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:15	1
Nickel	**0.00011**	**J**	0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:15	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:15	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:15	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:15	1
Vanadium	**0.011**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:15	1
Zinc	**0.0082**		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:15	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00041**	**J**	0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 08:55	1
Antimony	ND		0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 08:55	1
Barium	**0.021**	**B**	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 08:55	1
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:55	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 08:55	1
Chromium	**0.0017**		0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 08:55	1
Copper	ND		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 08:55	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 08:55	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 08:55	1
Manganese	ND		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 08:55	1
Nickel	**0.00025**	**J**	0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 08:55	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 08:55	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:55	1
Thallium	**0.00013**	**J B**	0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 08:55	1
Vanadium	**0.012**		0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 08:55	1
Zinc	**0.0065**	**J**	0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 08:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:50	1

Client Sample ID: MW-7B:121217

Lab Sample ID: 590-7700-3

Date Collected: 12/12/17 11:25

Matrix: Water

Date Received: 12/12/17 15:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 19:01	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 19:01	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 19:01	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 19:01	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 19:01	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 19:01	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:01	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 19:01	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Client Sample ID: MW-7B:121217
Date Collected: 12/12/17 11:25
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 19:01	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 19:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 19:01	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 19:01	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 19:01	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 19:01	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 19:01	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 19:01	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 19:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 19:01	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 19:01	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 19:01	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 19:01	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 19:01	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 19:01	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 19:01	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 19:01	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 19:01	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 19:01	1
Acetone	ND		30	14	ug/L			12/15/17 19:01	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 19:01	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 19:01	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 19:01	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 19:01	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 19:01	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 19:01	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 19:01	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 19:01	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 19:01	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 19:01	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 19:01	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 19:01	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 19:01	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 19:01	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 19:01	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 19:01	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 19:01	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 19:01	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 19:01	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 19:01	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 19:01	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 19:01	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 19:01	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 19:01	1
Methylene Chloride	**1.2**	**J**	5.0	1.0	ug/L			12/15/17 19:01	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 19:01	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 19:01	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 19:01	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 19:01	1

Client Sample ID: MW-7B:121217
Date Collected: 12/12/17 11:25
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 19:01	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 19:01	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 19:01	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 19:01	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 19:01	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 19:01	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:01	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 19:01	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:01	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 19:01	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 19:01	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 125*		*12/15/17 19:01*	*1*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*12/15/17 19:01*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/15/17 19:01*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*12/15/17 19:01*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.044	ug/L		12/18/17 09:34	12/23/17 18:55	1
2,4-D	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 18:55	1
2,4-DB	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 18:55	1
Dalapon	ND		0.44	0.11	ug/L		12/18/17 09:34	12/23/17 18:55	1
Dicamba	ND		0.28	0.044	ug/L		12/18/17 09:34	12/23/17 18:55	1
Dichlorprop	ND		0.28	0.044	ug/L		12/18/17 09:34	12/23/17 18:55	1
MCPA	ND		0.28	0.044	ug/L		12/18/17 09:34	12/23/17 18:55	1
Silvex (2,4,5-TP)	ND		0.28	0.055	ug/L		12/18/17 09:34	12/23/17 18:55	1
MCPP	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*103*		*51 - 150*	*12/18/17 09:34*	*12/23/17 18:55*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.055**	**J**	0.097	0.011	ug/L		12/14/17 12:44	12/19/17 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*81*		*59 - 120*	*12/14/17 12:44*	*12/19/17 22:34*	*1*
Terphenyl-d14	*83*		*17 - 149*	*12/14/17 12:44*	*12/19/17 22:34*	*1*
2-Fluorobiphenyl	*79*		*50 - 120*	*12/14/17 12:44*	*12/19/17 22:34*	*1*
2,4,6-Tribromophenol	*86*		*43 - 122*	*12/14/17 12:44*	*12/19/17 22:34*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/20/17 00:03	1
1,2-Dichlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/20/17 00:03	1
1,4-Dichlorobenzene	ND		0.39	0.058	ug/L		12/14/17 12:44	12/20/17 00:03	1
1-Methylnaphthalene	ND		0.97	0.029	ug/L		12/14/17 12:44	12/20/17 00:03	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Client Sample ID: MW-7B:121217
Date Collected: 12/12/17 11:25
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		0.39	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
2,4,6-Trichlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
2,4-Dichlorophenol	ND		3.9	0.88	ug/L		12/14/17 12:44	12/20/17 00:03	1
2,4-Dimethylphenol	ND		3.9	0.80	ug/L		12/14/17 12:44	12/20/17 00:03	1
2,4-Dinitrophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/20/17 00:03	1
2,4-Dinitrotoluene	ND		0.97	0.23	ug/L		12/14/17 12:44	12/20/17 00:03	1
2,6-Dinitrotoluene	**0.25**	**J**	0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
2-Chloronaphthalene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
2-Chlorophenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
2-Methylnaphthalene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
2-Methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
2-Nitroaniline	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
2-Nitrophenol	ND		0.97	0.23	ug/L		12/14/17 12:44	12/20/17 00:03	1
3 & 4 Methylphenol	ND		0.77	0.039	ug/L		12/14/17 12:44	12/20/17 00:03	1
3,3'-Dichlorobenzidine	ND		14	3.0	ug/L		12/14/17 12:44	12/20/17 00:03	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/14/17 12:44	12/20/17 00:03	1
4,6-Dinitro-2-methylphenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/20/17 00:03	1
4-Bromophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
4-Chloro-3-methylphenol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
4-Chloroaniline	ND		9.7	2.0	ug/L		12/14/17 12:44	12/20/17 00:03	1
4-Chlorophenyl phenyl ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
4-Nitroaniline	ND		1.9	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
4-Nitrophenol	ND	*	14	3.6	ug/L		12/14/17 12:44	12/20/17 00:03	1
Acenaphthene	ND		0.39	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Acenaphthylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Anthracene	ND		0.039	0.0097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzo[a]anthracene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzo[a]pyrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzo[b]fluoranthene	ND		0.97	0.048	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzo[g,h,i]perylene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzo[k]fluoranthene	ND	*	0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzoic acid	ND		2.9	0.58	ug/L		12/14/17 12:44	12/20/17 00:03	1
Benzyl alcohol	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Bis(2-chloroethoxy)methane	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Bis(2-chloroethyl)ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Bis(2-ethylhexyl) phthalate	**4.5**	**J**	14	2.1	ug/L		12/14/17 12:44	12/20/17 00:03	1
bis(chloroisopropyl) ether	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Butyl benzyl phthalate	ND		9.7	0.72	ug/L		12/14/17 12:44	12/20/17 00:03	1
Carbazole	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Chrysene	ND		0.58	0.0097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Dibenz(a,h)anthracene	ND		0.58	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Dibenzofuran	ND		0.39	0.058	ug/L		12/14/17 12:44	12/20/17 00:03	1
Diethyl phthalate	ND		12	2.7	ug/L		12/14/17 12:44	12/20/17 00:03	1
Dimethyl phthalate	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Di-n-butyl phthalate	ND		2.9	0.53	ug/L		12/14/17 12:44	12/20/17 00:03	1
Di-n-octyl phthalate	ND		0.97	0.17	ug/L		12/14/17 12:44	12/20/17 00:03	1
Fluoranthene	**0.017**	**J**	2.9	0.0097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Fluorene	ND		1.9	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Hexachlorobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1

Client Sample ID: MW-7B:121217
Date Collected: 12/12/17 11:25
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.97	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Hexachlorocyclopentadiene	ND		1.9	0.38	ug/L		12/14/17 12:44	12/20/17 00:03	1
Hexachloroethane	ND		0.97	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Indeno[1,2,3-cd]pyrene	ND	*	0.97	0.048	ug/L		12/14/17 12:44	12/20/17 00:03	1
Isophorone	ND		0.39	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Naphthalene	ND		0.39	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Nitrobenzene	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
N-Nitrosodi-n-propylamine	ND		0.58	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
N-Nitrosodiphenylamine	ND		2.9	0.097	ug/L		12/14/17 12:44	12/20/17 00:03	1
Pentachlorophenol	ND		4.8	0.97	ug/L		12/14/17 12:44	12/20/17 00:03	1
Phenanthrene	ND		0.97	0.019	ug/L		12/14/17 12:44	12/20/17 00:03	1
Phenol	ND		3.9	0.048	ug/L		12/14/17 12:44	12/20/17 00:03	1
Pyrene	ND		1.9	0.039	ug/L		12/14/17 12:44	12/20/17 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*90*		*48 - 125*	*12/14/17 12:44*	*12/20/17 00:03*	*1*
2-Fluorobiphenyl	*87*		*50 - 120*	*12/14/17 12:44*	*12/20/17 00:03*	*1*
2-Fluorophenol (Surr)	*93*		*50 - 120*	*12/14/17 12:44*	*12/20/17 00:03*	*1*
Nitrobenzene-d5 (Surr)	*104*		*52 - 120*	*12/14/17 12:44*	*12/20/17 00:03*	*1*
Phenol-d5 (Surr)	*95*		*52 - 120*	*12/14/17 12:44*	*12/20/17 00:03*	*1*
Terphenyl-d14 (Surr)	*102*		*49 - 133*	*12/14/17 12:44*	*12/20/17 00:03*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.29**		0.20	0.039	mg/L			12/13/17 13:02	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00080**	**J**	0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:18	1
Antimony	**0.00085**		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:18	1
Barium	**0.073**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:18	1
Beryllium	**0.00010**	**J**	0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:18	1
Cadmium	**0.00020**	**J**	0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:18	1
Chromium	**0.0043**		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:18	1
Copper	**0.087**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:18	1
Iron	**6.0**		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:18	1
Lead	**0.030**		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:18	1
Manganese	**0.034**		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:18	1
Nickel	**0.0044**		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:18	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:18	1
Silver	**0.0011**		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:18	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:18	1
Vanadium	**0.0047**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:18	1
Zinc	**0.18**		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:18	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00054**	**J**	0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 08:59	1
Antimony	**0.00051**		0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 08:59	1
Barium	**0.051**	**B**	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 08:59	1

Client Sample ID: MW-7B:121217

Lab Sample ID: 590-7700-3

Date Collected: 12/12/17 11:25

Matrix: Water

Date Received: 12/12/17 15:45

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:59	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 08:59	1
Chromium	**0.0015**		0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 08:59	1
Copper	**0.0022**		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 08:59	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 08:59	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 08:59	1
Manganese	ND		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 08:59	1
Nickel	**0.0010**	**J**	0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 08:59	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 08:59	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:59	1
Thallium	**0.000086**	**J B**	0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 08:59	1
Vanadium	**0.0024**	**J**	0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 08:59	1
Zinc	**0.014**		0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 08:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:51	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-7700-4

Date Collected: 12/12/17 00:00

Matrix: Water

Date Received: 12/12/17 15:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 19:23	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 19:23	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 19:23	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 19:23	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 19:23	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 19:23	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:23	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 19:23	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 19:23	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 19:23	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 19:23	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 19:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 19:23	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 19:23	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 19:23	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 19:23	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 19:23	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 19:23	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 19:23	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 19:23	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 19:23	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 19:23	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 19:23	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 19:23	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 19:23	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 19:23	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Client Sample ID: Trip Blank
Date Collected: 12/12/17 00:00
Date Received: 12/12/17 15:45

Lab Sample ID: 590-7700-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 19:23	1
Acetone	ND		30	14	ug/L			12/15/17 19:23	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 19:23	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 19:23	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 19:23	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 19:23	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 19:23	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 19:23	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 19:23	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 19:23	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 19:23	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 19:23	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 19:23	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 19:23	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 19:23	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 19:23	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 19:23	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 19:23	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 19:23	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 19:23	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 19:23	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 19:23	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 19:23	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 19:23	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 19:23	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 19:23	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 19:23	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 19:23	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 19:23	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 19:23	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 19:23	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 19:23	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 19:23	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 19:23	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 19:23	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 19:23	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 19:23	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:23	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 19:23	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:23	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 19:23	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 19:23	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*		*12/15/17 19:23*	*1*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*12/15/17 19:23*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/15/17 19:23*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/15/17 19:23*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 12:49	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 12:49	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 12:49	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 12:49	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 12:49	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 12:49	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 12:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 12:49	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 12:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 12:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 12:49	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 12:49	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 12:49	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 12:49	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 12:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 12:49	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 12:49	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 12:49	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 12:49	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 12:49	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 12:49	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 12:49	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 12:49	1
Acetone	ND		30	14	ug/L			12/15/17 12:49	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 12:49	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 12:49	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 12:49	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 12:49	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 12:49	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 12:49	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 12:49	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 12:49	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 12:49	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 12:49	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 12:49	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 12:49	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 12:49	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 12:49	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 12:49	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 12:49	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 12:49	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 12:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 12:49	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/15/17 12:49	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 12:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 12:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 12:49	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 12:49	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 12:49	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 12:49	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 12:49	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 12:49	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 12:49	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 12:49	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 12:49	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 12:49	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 12:49	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 12:49	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 12:49	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 12:49	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*12/15/17 12:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/15/17 12:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/15/17 12:49*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/15/17 12:49*	*1*

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.78		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	9.98		ug/L		100	71 - 130
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	66 - 122
1,1,2-Trichloroethane	10.0	9.92		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	9.85		ug/L		99	70 - 127
1,1-Dichloroethane	10.0	10.5		ug/L		105	79 - 121
1,1-Dichloroethene	10.0	9.66		ug/L		97	69 - 127
1,1-Dichloropropene	10.0	10.5		ug/L		105	76 - 125
1,2,3-Trichlorobenzene	10.0	10.6		ug/L		106	60 - 125
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	60 - 124
1,2,4-Trichlorobenzene	10.0	10.6		ug/L		106	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.3		ug/L		113	36 - 140
1,2-Dichlorobenzene	10.0	10.5		ug/L		105	78 - 120
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.5		ug/L		105	76 - 121
1,3,5-Trimethylbenzene	10.0	10.5		ug/L		105	75 - 122
1,3-Dichlorobenzene	10.0	10.4		ug/L		104	77 - 120
1,3-Dichloropropane	10.0	10.8		ug/L		108	75 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 121
2,2-Dichloropropane	10.0	10.3		ug/L		103	49 - 147
2-Butanone (MEK)	50.0	44.1		ug/L		88	40 - 150
2-Chlorotoluene	10.0	11.0		ug/L		110	75 - 121
2-Hexanone	50.0	46.6		ug/L		93	46 - 146
4-Chlorotoluene	10.0	10.5		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	50.3		ug/L		101	60 - 127
Acetone	50.0	39.7		ug/L		79	20 - 150
Benzene	10.0	10.4		ug/L		104	80 - 120
Bromobenzene	10.0	10.8		ug/L		108	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	10.9		ug/L		109	67 - 125
Bromoform	10.0	10.0		ug/L		100	60 - 122
Bromomethane	10.0	10.4		ug/L		104	45 - 150
Carbon disulfide	10.0	9.57		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.89		ug/L		99	68 - 134
Chlorobenzene	10.0	9.85		ug/L		98	79 - 125
Chloroethane	10.0	10.0		ug/L		100	48 - 150
Chloroform	10.0	10.3		ug/L		103	73 - 126
Chloromethane	10.0	9.41		ug/L		94	51 - 150
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	76 - 121
cis-1,3-Dichloropropene	10.0	10.9		ug/L		109	72 - 120
Dibromochloromethane	10.0	10.1		ug/L		101	72 - 120
Dibromomethane	10.0	10.4		ug/L		104	71 - 120
Dichlorodifluoromethane	10.0	8.61		ug/L		86	32 - 150
Dichlorofluoromethane	10.0	10.3		ug/L		103	60 - 140
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
Hexachlorobutadiene	10.0	10.0		ug/L		100	62 - 132
Hexane	10.0	9.90		ug/L		99	68 - 125
Isopropylbenzene	10.0	9.93		ug/L		99	77 - 123
m,p-Xylene	10.0	10.3		ug/L		103	80 - 120
Methyl tert-butyl ether	10.0	10.7		ug/L		107	71 - 128
Methylene Chloride	10.0	10.7		ug/L		107	20 - 150
Naphthalene	10.0	10.9		ug/L		109	63 - 124
n-Butylbenzene	10.0	10.4		ug/L		104	71 - 120
N-Propylbenzene	10.0	10.6		ug/L		106	76 - 120
o-Xylene	10.0	10.2		ug/L		102	80 - 120
p-Isopropyltoluene	10.0	10.3		ug/L		103	77 - 120
sec-Butylbenzene	10.0	10.7		ug/L		107	74 - 121
Styrene	10.0	10.1		ug/L		101	73 - 120
tert-Butylbenzene	10.0	10.6		ug/L		106	79 - 120
Tetrachloroethene	10.0	9.71		ug/L		97	71 - 132
Toluene	10.0	10.2		ug/L		102	80 - 123
trans-1,2-Dichloroethene	10.0	9.86		ug/L		99	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.4		ug/L		104	70 - 121
Trichloroethene	10.0	10.3		ug/L		103	75 - 129
Trichlorofluoromethane	10.0	10.2		ug/L		102	60 - 140
Vinyl chloride	10.0	10.0		ug/L		100	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-15078/9
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	9.75		ug/L		98	75 - 124	0	15
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	71 - 130	2	25
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	66 - 122	3	15
1,1,2-Trichloroethane	10.0	9.61		ug/L		96	76 - 120	3	15
1,1,2-Trichlorotrifluoroethane	10.0	9.35		ug/L		93	70 - 127	5	25
1,1-Dichloroethane	10.0	10.4		ug/L		104	79 - 121	1	25
1,1-Dichloroethene	10.0	10.3		ug/L		103	69 - 127	6	14
1,1-Dichloropropene	10.0	10.4		ug/L		104	76 - 125	1	15
1,2,3-Trichlorobenzene	10.0	10.1		ug/L		101	60 - 125	5	15
1,2,3-Trichloropropane	10.0	10.5		ug/L		105	60 - 124	1	15
1,2,4-Trichlorobenzene	10.0	10.4		ug/L		104	66 - 124	2	15
1,2,4-Trimethylbenzene	10.0	10.1		ug/L		101	77 - 120	3	15
1,2-Dibromo-3-Chloropropane	10.0	9.99	J	ug/L		100	36 - 140	12	15
1,2-Dichlorobenzene	10.0	10.2		ug/L		102	78 - 120	3	15
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 127	0	12
1,2-Dichloropropane	10.0	10.3		ug/L		103	76 - 121	1	15
1,3,5-Trimethylbenzene	10.0	10.2		ug/L		102	75 - 122	3	15
1,3-Dichlorobenzene	10.0	9.95		ug/L		99	77 - 120	4	15
1,3-Dichloropropane	10.0	10.5		ug/L		105	75 - 120	4	15
1,4-Dichlorobenzene	10.0	9.84		ug/L		98	77 - 121	8	15
2,2-Dichloropropane	10.0	10.3		ug/L		103	49 - 147	0	25
2-Butanone (MEK)	50.0	43.8		ug/L		88	40 - 150	1	25
2-Chlorotoluene	10.0	10.3		ug/L		103	75 - 121	6	15
2-Hexanone	50.0	43.3		ug/L		87	46 - 146	7	15
4-Chlorotoluene	10.0	10.5		ug/L		105	74 - 120	0	15
4-Methyl-2-pentanone (MIBK)	50.0	49.5		ug/L		99	60 - 127	2	15
Acetone	50.0	40.0		ug/L		80	20 - 150	1	25
Benzene	10.0	10.2		ug/L		102	80 - 120	2	25
Bromobenzene	10.0	10.2		ug/L		102	74 - 121	5	15
Bromochloromethane	10.0	10.1		ug/L		101	70 - 126	1	25
Bromodichloromethane	10.0	10.5		ug/L		105	67 - 125	4	15
Bromoform	10.0	9.34		ug/L		93	60 - 122	7	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-15078/9
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			10.0	10.2		ug/L		102	45 - 150	2	25
Carbon disulfide			10.0	9.47		ug/L		95	67 - 129	1	25
Carbon tetrachloride			10.0	10.1		ug/L		101	68 - 134	2	25
Chlorobenzene			10.0	9.92		ug/L		99	79 - 125	1	25
Chloroethane			10.0	10.0		ug/L		100	48 - 150	0	25
Chloroform			10.0	10.1		ug/L		101	73 - 126	2	25
Chloromethane			10.0	9.46		ug/L		95	51 - 150	1	15
cis-1,2-Dichloroethene			10.0	10.2		ug/L		102	76 - 121	2	25
cis-1,3-Dichloropropene			10.0	10.3		ug/L		103	72 - 120	6	15
Dibromochloromethane			10.0	9.67		ug/L		97	72 - 120	4	15
Dibromomethane			10.0	10.3		ug/L		103	71 - 120	1	15
Dichlorodifluoromethane			10.0	8.61		ug/L		86	32 - 150	0	25
Dichlorofluoromethane			10.0	10.8		ug/L		108	60 - 140	5	25
Ethylbenzene			10.0	9.86		ug/L		99	80 - 120	2	25
Hexachlorobutadiene			10.0	9.93		ug/L		99	62 - 132	1	15
Hexane			10.0	9.94		ug/L		99	68 - 125	0	15
Isopropylbenzene			10.0	10.0		ug/L		100	77 - 123	1	15
m,p-Xylene			10.0	10.0		ug/L		100	80 - 120	2	25
Methyl tert-butyl ether			10.0	10.6		ug/L		106	71 - 128	2	12
Methylene Chloride			10.0	10.3		ug/L		103	20 - 150	4	25
Naphthalene			10.0	10.0		ug/L		100	63 - 124	8	25
n-Butylbenzene			10.0	9.96		ug/L		100	71 - 120	4	15
N-Propylbenzene			10.0	10.2		ug/L		102	76 - 120	4	15
o-Xylene			10.0	9.96		ug/L		100	80 - 120	2	25
p-Isopropyltoluene			10.0	10.0		ug/L		100	77 - 120	3	15
sec-Butylbenzene			10.0	10.3		ug/L		103	74 - 121	4	15
Styrene			10.0	9.77		ug/L		98	73 - 120	3	15
tert-Butylbenzene			10.0	10.4		ug/L		104	79 - 120	1	15
Tetrachloroethene			10.0	9.23		ug/L		92	71 - 132	5	15
Toluene			10.0	9.91		ug/L		99	80 - 123	3	25
trans-1,2-Dichloroethene			10.0	10.0		ug/L		100	75 - 124	2	25
trans-1,3-Dichloropropene			10.0	10.0		ug/L		100	70 - 121	4	15
Trichloroethene			10.0	10.1		ug/L		101	75 - 129	2	25
Trichlorofluoromethane			10.0	10.4		ug/L		104	60 - 140	1	25
Vinyl chloride			10.0	10.1		ug/L		101	42 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8151A - Herbicides (GC/MS)

Lab Sample ID: MB 580-263609/1-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263609

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
2,4-D	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1
2,4-DB	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dalapon	ND		0.40	0.10	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dicamba	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dichlorprop	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
MCPA	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
Silvex (2,4,5-TP)	ND		0.25	0.050	ug/L		12/18/17 09:34	12/23/17 15:07	1
MCPP	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*116*		*51 - 150*	*12/18/17 09:34*	*12/23/17 15:07*	*1*

Lab Sample ID: LCS 580-263609/2-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263609

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	4.48		ug/L		90	20 - 150		
2,4-D			5.00	4.80		ug/L		96	20 - 150		
2,4-DB			5.00	5.68		ug/L		114	50 - 150		
Dalapon			5.00	4.01		ug/L		80	20 - 120		
Dicamba			5.00	4.97		ug/L		99	20 - 150		
Dichlorprop			5.00	5.51		ug/L		110	23 - 150		
MCPA			5.00	4.48		ug/L		90	21 - 150		
Silvex (2,4,5-TP)			5.00	5.61		ug/L		112	24 - 150		
MCPP			5.00	5.65		ug/L		113	51 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*118*		*51 - 150*

Lab Sample ID: LCSD 580-263609/3-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263609

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.70		ug/L		94	20 - 150	5	35
2,4-D			5.00	5.46		ug/L		109	20 - 150	13	35
2,4-DB			5.00	5.46		ug/L		109	50 - 150	4	35
Dalapon			5.00	4.67		ug/L		93	20 - 120	15	35
Dicamba			5.00	4.84		ug/L		97	20 - 150	3	35
Dichlorprop			5.00	6.17		ug/L		123	23 - 150	11	35
MCPA			5.00	4.55		ug/L		91	21 - 150	2	35
Silvex (2,4,5-TP)			5.00	6.01		ug/L		120	24 - 150	7	35
MCPP			5.00	5.64		ug/L		113	51 - 150	0	35

Method: 8151A - Herbicides (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263609/3-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263609

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	120		51 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 264116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/14/17 12:44	12/26/17 14:52	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dichlorophenol	ND		4.0	0.91	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/14/17 12:44	12/26/17 14:52	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/14/17 12:44	12/26/17 14:52	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/14/17 12:44	12/26/17 14:52	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chloroaniline	ND		10	2.1	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Nitrophenol	ND		15	3.7	ug/L		12/14/17 12:44	12/26/17 14:52	1
Acenaphthene	ND		0.40	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Anthracene	ND		0.040	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[b]fluoranthene	ND		1.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[g,h,i]perylene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[k]fluoranthene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzoic acid	ND		3.0	0.60	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 264116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/14/17 12:44	12/26/17 14:52	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/14/17 12:44	12/26/17 14:52	1
Carbazole	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Chrysene	ND		0.60	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dibenz(a,h)anthracene	ND		0.60	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/14/17 12:44	12/26/17 14:52	1
Diethyl phthalate	ND		12	2.8	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/14/17 12:44	12/26/17 14:52	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/14/17 12:44	12/26/17 14:52	1
Fluoranthene	ND		3.0	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Fluorene	ND		2.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Isophorone	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Naphthalene	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
Phenanthrene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Phenol	ND		4.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Pyrene	ND		2.0	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*46*	*X*	*48 - 125*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
2-Fluorophenol (Surr)	*60*		*50 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Nitrobenzene-d5 (Surr)	*73*		*52 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Phenol-d5 (Surr)	*64*		*52 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Terphenyl-d14 (Surr)	*87*		*49 - 133*	*12/14/17 12:44*	*12/26/17 14:52*	*1*

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.47		ug/L		74	46 - 120
1,2-Dichlorobenzene	2.00	1.47		ug/L		73	44 - 120
1,3-Dichlorobenzene	2.00	1.35		ug/L		67	34 - 121
1,4-Dichlorobenzene	2.00	1.27		ug/L		63	40 - 120
1-Methylnaphthalene	2.00	1.66		ug/L		83	65 - 120
2,4,5-Trichlorophenol	2.00	1.75		ug/L		87	56 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2.00	1.42		ug/L		71	55 - 129
2,4-Dichlorophenol	2.00	1.60	J	ug/L		80	60 - 140
2,4-Dimethylphenol	2.00	1.18	J	ug/L		59	20 - 129
2,4-Dinitrophenol	4.00	3.55	J	ug/L		89	20 - 132
2,4-Dinitrotoluene	2.00	2.06		ug/L		103	53 - 143
2,6-Dinitrotoluene	2.00	2.01		ug/L		100	59 - 134
2-Chloronaphthalene	2.00	1.76		ug/L		88	64 - 125
2-Chlorophenol	2.00	1.94		ug/L		97	69 - 125
2-Methylnaphthalene	2.00	1.63		ug/L		82	56 - 120
2-Methylphenol	2.00	1.70		ug/L		85	53 - 120
2-Nitroaniline	10.0	7.99		ug/L		80	58 - 142
2-Nitrophenol	2.00	1.64		ug/L		82	20 - 143
3 & 4 Methylphenol	2.00	1.45		ug/L		73	54 - 120
3,3'-Dichlorobenzidine	12.0	11.1	J	ug/L		92	20 - 146
3-Nitroaniline	10.0	9.23		ug/L		92	22 - 139
4,6-Dinitro-2-methylphenol	4.00	3.52	J	ug/L		88	20 - 144
4-Bromophenyl phenyl ether	2.00	1.93		ug/L		97	70 - 123
4-Chloro-3-methylphenol	2.00	2.05		ug/L		102	63 - 126
4-Chloroaniline	10.0	6.12	J	ug/L		61	20 - 120
4-Chlorophenyl phenyl ether	2.00	1.84		ug/L		92	69 - 125
4-Nitroaniline	10.0	9.81		ug/L		98	40 - 130
4-Nitrophenol	4.00	6.25	J *	ug/L		156	27 - 150
Acenaphthene	2.00	1.85		ug/L		93	62 - 120
Acenaphthylene	2.00	1.89		ug/L		94	24 - 141
Anthracene	2.00	1.87		ug/L		93	20 - 140
Benzo[a]anthracene	2.00	2.12		ug/L		106	59 - 123
Benzo[a]pyrene	2.00	1.76		ug/L		88	20 - 133
Benzo[b]fluoranthene	2.00	2.10		ug/L		105	72 - 129
Benzo[g,h,i]perylene	2.00	2.26		ug/L		113	67 - 133
Benzo[k]fluoranthene	2.00	2.14		ug/L		107	72 - 120
Benzoic acid	4.00	1.15	J	ug/L		29	20 - 145
Benzyl alcohol	2.00	1.81		ug/L		90	42 - 129
Bis(2-chloroethoxy)methane	2.00	1.82		ug/L		91	59 - 125
Bis(2-chloroethyl)ether	2.00	1.79		ug/L		90	64 - 120
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		107	58 - 150
bis(chloroisopropyl) ether	2.00	1.45		ug/L		72	53 - 133
Butyl benzyl phthalate	2.00	2.17	J	ug/L		109	72 - 150
Carbazole	2.00	2.33		ug/L		116	80 - 135
Chrysene	2.00	1.77		ug/L		88	74 - 120
Dibenz(a,h)anthracene	2.00	2.24		ug/L		112	56 - 135
Dibenzofuran	2.00	1.96		ug/L		98	70 - 125
Diethyl phthalate	2.00	ND		ug/L		103	66 - 139
Dimethyl phthalate	2.00	2.10		ug/L		105	74 - 128
Di-n-butyl phthalate	2.00	2.06	J	ug/L		103	74 - 140
Di-n-octyl phthalate	2.00	2.20		ug/L		110	65 - 150
Fluoranthene	2.00	1.92	J	ug/L		96	70 - 135
Fluorene	2.00	1.94	J	ug/L		97	70 - 125
Hexachlorobenzene	2.00	1.65		ug/L		83	55 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	2.00	1.18		ug/L		59	20 - 125
Hexachlorocyclopentadiene	10.0	3.80		ug/L		38	20 - 120
Hexachloroethane	2.00	1.31		ug/L		65	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.37		ug/L		119	64 - 133
Isophorone	2.00	1.56		ug/L		78	64 - 125
Naphthalene	2.00	1.52		ug/L		76	56 - 120
Nitrobenzene	2.00	1.98		ug/L		99	54 - 133
N-Nitrosodi-n-propylamine	10.0	9.13		ug/L		91	54 - 120
N-Nitrosodiphenylamine	11.4	8.35		ug/L		73	22 - 135
Pentachlorophenol	4.00	2.43	J	ug/L		61	20 - 135
Phenanthrene	2.00	1.81		ug/L		91	71 - 120
Phenol	2.00	1.58	J	ug/L		79	53 - 126
Pyrene	2.00	1.88	J	ug/L		94	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*89*		*48 - 125*
2-Fluorobiphenyl	*84*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*101*		*52 - 120*
Phenol-d5 (Surr)	*96*		*52 - 120*
Terphenyl-d14 (Surr)	*102*		*49 - 133*

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	46 - 120	2	20
1,2-Dichlorobenzene	2.00	1.27		ug/L		63	44 - 120	15	20
1,3-Dichlorobenzene	2.00	1.23		ug/L		61	34 - 121	9	29
1,4-Dichlorobenzene	2.00	1.19		ug/L		59	40 - 120	7	25
1-Methylnaphthalene	2.00	1.63		ug/L		82	65 - 120	1	20
2,4,5-Trichlorophenol	2.00	1.76		ug/L		88	56 - 122	1	25
2,4,6-Trichlorophenol	2.00	1.33		ug/L		66	55 - 129	7	20
2,4-Dichlorophenol	2.00	1.59	J	ug/L		79	60 - 140	1	26
2,4-Dimethylphenol	2.00	1.21	J	ug/L		60	20 - 129	2	35
2,4-Dinitrophenol	4.00	3.63	J	ug/L		91	20 - 132	2	35
2,4-Dinitrotoluene	2.00	2.01		ug/L		101	53 - 143	2	29
2,6-Dinitrotoluene	2.00	1.93		ug/L		96	59 - 134	4	24
2-Chloronaphthalene	2.00	1.68		ug/L		84	64 - 125	4	20
2-Chlorophenol	2.00	1.76		ug/L		88	69 - 125	10	20
2-Methylnaphthalene	2.00	1.62		ug/L		81	56 - 120	1	20
2-Methylphenol	2.00	1.63		ug/L		81	53 - 120	4	33
2-Nitroaniline	10.0	7.42		ug/L		74	58 - 142	7	20
2-Nitrophenol	2.00	1.67		ug/L		84	20 - 143	2	35
3 & 4 Methylphenol	2.00	1.40		ug/L		70	54 - 120	4	20
3,3'-Dichlorobenzidine	12.0	10.9	J	ug/L		91	20 - 146	2	35
3-Nitroaniline	10.0	8.62		ug/L		86	22 - 139	7	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	4.00	3.61	J	ug/L		90	20 - 144	2	35
4-Bromophenyl phenyl ether	2.00	1.90		ug/L		95	70 - 123	2	20
4-Chloro-3-methylphenol	2.00	2.02		ug/L		101	63 - 126	1	20
4-Chloroaniline	10.0	5.76	J	ug/L		58	20 - 120	6	35
4-Chlorophenyl phenyl ether	2.00	1.79		ug/L		89	69 - 125	3	20
4-Nitroaniline	10.0	9.26		ug/L		93	40 - 130	6	35
4-Nitrophenol	4.00	6.02	J *	ug/L		151	27 - 150	4	23
Acenaphthene	2.00	1.78		ug/L		89	62 - 120	4	20
Acenaphthylene	2.00	1.80		ug/L		90	24 - 141	5	20
Anthracene	2.00	1.80		ug/L		90	20 - 140	4	26
Benzo[a]anthracene	2.00	2.19		ug/L		109	59 - 123	3	20
Benzo[a]pyrene	2.00	1.98		ug/L		99	20 - 133	12	35
Benzo[b]fluoranthene	2.00	2.35		ug/L		117	72 - 129	11	20
Benzo[g,h,i]perylene	2.00	2.55		ug/L		127	67 - 133	12	20
Benzo[k]fluoranthene	2.00	2.44	*	ug/L		122	72 - 120	13	20
Benzoic acid	4.00	1.41	J	ug/L		35	20 - 145	20	35
Benzyl alcohol	2.00	1.36		ug/L		68	42 - 129	28	35
Bis(2-chloroethoxy)methane	2.00	1.65		ug/L		82	59 - 125	10	26
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	64 - 120	8	20
Bis(2-ethylhexyl) phthalate	2.00	2.49	J	ug/L		124	58 - 150	15	35
bis(chloroisopropyl) ether	2.00	1.29		ug/L		64	53 - 133	12	20
Butyl benzyl phthalate	2.00	2.14	J	ug/L		107	72 - 150	2	20
Carbazole	2.00	2.32		ug/L		116	80 - 135	0	20
Chrysene	2.00	1.75		ug/L		87	74 - 120	1	20
Dibenz(a,h)anthracene	2.00	2.49		ug/L		125	56 - 135	11	20
Dibenzofuran	2.00	1.90		ug/L		95	70 - 125	3	20
Diethyl phthalate	2.00	ND		ug/L		92	66 - 139	11	20
Dimethyl phthalate	2.00	1.99		ug/L		99	74 - 128	6	20
Di-n-butyl phthalate	2.00	1.96	J	ug/L		98	74 - 140	5	20
Di-n-octyl phthalate	2.00	2.49		ug/L		125	65 - 150	13	20
Fluoranthene	2.00	1.90	J	ug/L		95	70 - 135	1	20
Fluorene	2.00	1.85	J	ug/L		92	70 - 125	5	20
Hexachlorobenzene	2.00	1.65		ug/L		83	55 - 122	0	20
Hexachlorobutadiene	2.00	1.23		ug/L		61	20 - 125	4	31
Hexachlorocyclopentadiene	10.0	3.55		ug/L		36	20 - 120	7	35
Hexachloroethane	2.00	1.14		ug/L		57	24 - 125	14	35
Indeno[1,2,3-cd]pyrene	2.00	2.71	*	ug/L		136	64 - 133	13	20
Isophorone	2.00	1.33		ug/L		66	64 - 125	16	20
Naphthalene	2.00	1.53		ug/L		77	56 - 120	1	20
Nitrobenzene	2.00	1.85		ug/L		92	54 - 133	7	20
N-Nitrosodi-n-propylamine	10.0	8.07		ug/L		81	54 - 120	12	20
N-Nitrosodiphenylamine	11.4	8.10		ug/L		71	22 - 135	3	29
Pentachlorophenol	4.00	2.48	J	ug/L		62	20 - 135	2	35
Phenanthrene	2.00	1.78		ug/L		89	71 - 120	2	20
Phenol	2.00	1.50	J	ug/L		75	53 - 126	5	26
Pyrene	2.00	1.86	J	ug/L		93	64 - 128	1	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*89*		*48 - 125*
2-Fluorobiphenyl	*81*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*97*		*52 - 120*
Phenol-d5 (Surr)	*89*		*52 - 120*
Terphenyl-d14 (Surr)	*95*		*49 - 133*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.10	0.011	ug/L		12/14/17 12:44	12/19/17 13:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*67*		*59 - 120*	*12/14/17 12:44*	*12/19/17 13:33*	*1*
Terphenyl-d14	*83*		*17 - 149*	*12/14/17 12:44*	*12/19/17 13:33*	*1*
2-Fluorobiphenyl	*72*		*50 - 120*	*12/14/17 12:44*	*12/19/17 13:33*	*1*
2,4,6-Tribromophenol	*68*		*43 - 122*	*12/14/17 12:44*	*12/19/17 13:33*	*1*

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.67		ug/L		83	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*77*		*59 - 120*
Terphenyl-d14	*83*		*17 - 149*
2-Fluorobiphenyl	*74*		*50 - 120*
2,4,6-Tribromophenol	*92*		*43 - 122*

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.71		ug/L		86	40 - 140	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*76*		*59 - 120*
Terphenyl-d14	*81*		*17 - 149*
2-Fluorobiphenyl	*74*		*50 - 120*
2,4,6-Tribromophenol	*90*		*43 - 122*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-15043/1014
Matrix: Water
Analysis Batch: 15043

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/13/17 13:52	1

Lab Sample ID: LCS 590-15043/1013
Matrix: Water
Analysis Batch: 15043

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.25		mg/L		105	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-263646/11-A
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0941		mg/L		94	85 - 115
Antimony	0.100	0.0920		mg/L		92	85 - 115
Barium	0.100	0.0924		mg/L		92	85 - 115
Beryllium	0.100	0.0940		mg/L		94	85 - 115
Cadmium	0.100	0.0933		mg/L		93	85 - 115
Chromium	0.100	0.0929		mg/L		93	85 - 115
Copper	0.100	0.0915		mg/L		92	85 - 115
Iron	10.0	9.46		mg/L		95	85 - 115
Lead	0.100	0.0954		mg/L		95	85 - 115
Manganese	0.100	0.0920		mg/L		92	85 - 115
Nickel	0.100	0.0907		mg/L		91	85 - 115
Selenium	0.100	0.0954		mg/L		95	85 - 115
Silver	0.100	0.0937		mg/L		94	85 - 115
Thallium	0.100	0.0945		mg/L		94	85 - 115
Vanadium	0.100	0.0925		mg/L		92	85 - 115
Zinc	0.100	0.0928		mg/L		93	85 - 115

Lab Sample ID: LCSD 580-263646/12-A
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263646

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0958		mg/L		96	85 - 115	2	20
Antimony	0.100	0.0936		mg/L		94	85 - 115	2	20
Barium	0.100	0.0935		mg/L		94	85 - 115	1	20
Beryllium	0.100	0.0946		mg/L		95	85 - 115	1	20
Cadmium	0.100	0.0955		mg/L		95	85 - 115	2	20
Chromium	0.100	0.0948		mg/L		95	85 - 115	2	20
Copper	0.100	0.0935		mg/L		94	85 - 115	2	20
Iron	10.0	9.66		mg/L		97	85 - 115	2	20
Lead	0.100	0.0984		mg/L		98	85 - 115	3	20
Manganese	0.100	0.0935		mg/L		94	85 - 115	2	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-263646/12-A
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263646

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nickel	0.100	0.0928		mg/L		93	85 - 115	2	20
Selenium	0.100	0.0966		mg/L		97	85 - 115	1	20
Silver	0.100	0.0963		mg/L		96	85 - 115	3	20
Thallium	0.100	0.0953		mg/L		95	85 - 115	1	20
Vanadium	0.100	0.0944		mg/L		94	85 - 115	2	20
Zinc	0.100	0.0949		mg/L		95	85 - 115	2	20

Lab Sample ID: MB 580-264059/13-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 264059

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 11:21	1
Antimony	ND		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Barium	ND		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 11:21	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 11:21	1
Chromium	ND		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 11:21	1
Copper	ND		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 11:21	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 11:21	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 11:21	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Nickel	ND		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 11:21	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 11:21	1
Vanadium	ND		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Zinc	ND		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 11:21	1

Lab Sample ID: LCS 580-264059/14-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	85 - 115
Antimony	0.100	0.0987		mg/L		99	85 - 115
Barium	0.100	0.0996		mg/L		100	85 - 115
Beryllium	0.100	0.0997		mg/L		100	85 - 115
Cadmium	0.100	0.0972		mg/L		97	85 - 115
Chromium	0.100	0.100		mg/L		100	85 - 115
Copper	0.100	0.100		mg/L		100	85 - 115
Iron	10.0	10.0		mg/L		100	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0954		mg/L		95	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Selenium	0.100	0.0955		mg/L		96	85 - 115
Silver	0.100	0.100		mg/L		100	85 - 115
Thallium	0.100	0.0959		mg/L		96	85 - 115
Vanadium	0.100	0.0977		mg/L		98	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-264059/14-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.100	0.0991		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-264059/15-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0973		mg/L		97	85 - 115	3	20
Antimony	0.100	0.0983		mg/L		98	85 - 115	0	20
Barium	0.100	0.0989		mg/L		99	85 - 115	1	20
Beryllium	0.100	0.0955		mg/L		95	85 - 115	4	20
Cadmium	0.100	0.0971		mg/L		97	85 - 115	0	20
Chromium	0.100	0.0980		mg/L		98	85 - 115	2	20
Copper	0.100	0.0981		mg/L		98	85 - 115	2	20
Iron	10.0	9.66		mg/L		97	85 - 115	4	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0937		mg/L		94	85 - 115	2	20
Nickel	0.100	0.0982		mg/L		98	85 - 115	2	20
Selenium	0.100	0.0960		mg/L		96	85 - 115	1	20
Silver	0.100	0.0995		mg/L		99	85 - 115	0	20
Thallium	0.100	0.0947		mg/L		95	85 - 115	1	20
Vanadium	0.100	0.0959		mg/L		96	85 - 115	2	20
Zinc	0.100	0.0967		mg/L		97	85 - 115	2	20

Lab Sample ID: MB 580-263373/4-B
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 263646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/18/17 13:28	12/19/17 08:08	1
Antimony	ND		0.00040	0.00011	mg/L		12/18/17 13:28	12/19/17 08:08	1
Barium	0.0000613	J	0.0012	0.000054	mg/L		12/18/17 13:28	12/19/17 08:08	1
Beryllium	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:08	1
Cadmium	ND		0.00040	0.00010	mg/L		12/18/17 13:28	12/19/17 08:08	1
Chromium	ND		0.00040	0.00014	mg/L		12/18/17 13:28	12/19/17 08:08	1
Copper	ND		0.0020	0.00060	mg/L		12/18/17 13:28	12/19/17 08:08	1
Iron	ND		0.20	0.036	mg/L		12/18/17 13:28	12/19/17 08:08	1
Lead	ND		0.00080	0.00020	mg/L		12/18/17 13:28	12/19/17 08:08	1
Manganese	ND		0.0020	0.00046	mg/L		12/18/17 13:28	12/19/17 08:08	1
Nickel	ND		0.0030	0.00011	mg/L		12/18/17 13:28	12/19/17 08:08	1
Selenium	ND		0.0080	0.0021	mg/L		12/18/17 13:28	12/19/17 08:08	1
Silver	ND		0.00040	0.000043	mg/L		12/18/17 13:28	12/19/17 08:08	1
Thallium	0.000112	J	0.0010	0.000065	mg/L		12/18/17 13:28	12/19/17 08:08	1
Vanadium	ND		0.0040	0.00046	mg/L		12/18/17 13:28	12/19/17 08:08	1
Zinc	ND		0.0070	0.0019	mg/L		12/18/17 13:28	12/19/17 08:08	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7700-1 MS
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Dup:121217
Prep Type: Dissolved
Prep Batch: 263646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00056	J	0.100	0.0997		mg/L		99	70 - 130
Antimony	0.00055		0.100	0.0972		mg/L		97	70 - 130
Barium	0.051	B	0.100	0.149		mg/L		98	70 - 130
Beryllium	ND		0.100	0.100		mg/L		100	70 - 130
Cadmium	ND		0.100	0.0991		mg/L		99	70 - 130
Chromium	0.0019		0.100	0.0997		mg/L		98	70 - 130
Copper	0.0024		0.100	0.0966		mg/L		94	70 - 130
Iron	ND		10.0	9.93		mg/L		99	70 - 130
Lead	ND		0.100	0.102		mg/L		102	70 - 130
Manganese	0.00086	J	0.100	0.0967		mg/L		96	70 - 130
Nickel	0.0012	J	0.100	0.0949		mg/L		94	70 - 130
Selenium	ND		0.100	0.0996		mg/L		100	70 - 130
Silver	ND		0.100	0.0982		mg/L		98	70 - 130
Thallium	0.000078	J B	0.100	0.0993		mg/L		99	70 - 130
Vanadium	0.0025	J	0.100	0.101		mg/L		98	70 - 130
Zinc	0.016		0.100	0.110		mg/L		94	70 - 130

Lab Sample ID: 590-7700-1 MSD
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Dup:121217
Prep Type: Dissolved
Prep Batch: 263646

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.00056	J	0.100	0.0957		mg/L		95	70 - 130	4	20
Antimony	0.00055		0.100	0.0927		mg/L		92	70 - 130	5	20
Barium	0.051	B	0.100	0.144		mg/L		93	70 - 130	3	20
Beryllium	ND		0.100	0.0953		mg/L		95	70 - 130	5	20
Cadmium	ND		0.100	0.0952		mg/L		95	70 - 130	4	20
Chromium	0.0019		0.100	0.0955		mg/L		94	70 - 130	4	20
Copper	0.0024		0.100	0.0933		mg/L		91	70 - 130	4	20
Iron	ND		10.0	9.67		mg/L		97	70 - 130	3	20
Lead	ND		0.100	0.0977		mg/L		98	70 - 130	5	20
Manganese	0.00086	J	0.100	0.0927		mg/L		92	70 - 130	4	20
Nickel	0.0012	J	0.100	0.0911		mg/L		90	70 - 130	4	20
Selenium	ND		0.100	0.0953		mg/L		95	70 - 130	4	20
Silver	ND		0.100	0.0945		mg/L		95	70 - 130	4	20
Thallium	0.000078	J B	0.100	0.0955		mg/L		95	70 - 130	4	20
Vanadium	0.0025	J	0.100	0.0964		mg/L		94	70 - 130	4	20
Zinc	0.016		0.100	0.108		mg/L		92	70 - 130	2	20

Lab Sample ID: 590-7700-1 DU
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Dup:121217
Prep Type: Dissolved
Prep Batch: 263646

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.00056	J	0.000584	J	mg/L		4	20
Antimony	0.00055		0.000487		mg/L		12	20
Barium	0.051	B	0.0492		mg/L		4	20
Beryllium	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7700-1 DU
Matrix: Water
Analysis Batch: 263734

Client Sample ID: Dup:121217
Prep Type: Dissolved
Prep Batch: 263646

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cadmium	ND			ND		mg/L				NC	20
Chromium	0.0019			0.00149	F3	mg/L				25	20
Copper	0.0024			0.00218		mg/L				8	20
Iron	ND			ND		mg/L				NC	20
Lead	ND			ND		mg/L				NC	20
Manganese	0.00086	J		ND		mg/L				NC	20
Nickel	0.0012	J		0.000958	J F5	mg/L				24	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Thallium	0.000078	J B		ND		mg/L				NC	20
Vanadium	0.0025	J		0.00268	J	mg/L				6	20
Zinc	0.016			0.0150		mg/L				4	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-483722/1-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/15/17 17:20	12/16/17 17:32	1

Lab Sample ID: LCS 490-483722/2-A
Matrix: Water
Analysis Batch: 483913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483722

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.101		mg/L		101	90 - 110		

Client Sample ID: Dup:121217

Lab Sample ID: 590-7700-1

Date Collected: 12/12/17 08:00

Matrix: Water

Date Received: 12/12/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 18:18	MRS	TAL SPK
Total/NA	Prep	8151A			917.2 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 18:05	ERZ	TAL SEA
Total/NA	Prep	3520C			1032.3 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1	1 mL	1.0 mL	263784	12/19/17 23:13	W1T	TAL SEA
Total/NA	Prep	3520C			1032.3 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 21:46	W1T	TAL SEA
Total/NA	Analysis	300.0		1			15043	12/13/17 12:38	CBW	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263373	12/13/17 13:37	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263646	12/18/17 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263734	12/19/17 08:12	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:12	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:49	SDL	TAL NSH

Client Sample ID: MW-7D:121217

Lab Sample ID: 590-7700-2

Date Collected: 12/12/17 10:20

Matrix: Water

Date Received: 12/12/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 18:40	MRS	TAL SPK
Total/NA	Prep	8151A			898.6 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 18:30	ERZ	TAL SEA
Total/NA	Prep	3520C			1033.6 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1	1 mL	1.0 mL	263784	12/19/17 23:38	W1T	TAL SEA
Total/NA	Prep	3520C			1033.6 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 22:10	W1T	TAL SEA
Total/NA	Analysis	300.0		1			15043	12/13/17 12:50	CBW	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263373	12/13/17 13:37	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263646	12/18/17 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263734	12/19/17 08:55	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:15	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:50	SDL	TAL NSH

Client Sample ID: MW-7B:121217

Lab Sample ID: 590-7700-3

Date Collected: 12/12/17 11:25

Matrix: Water

Date Received: 12/12/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 19:01	MRS	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Client Sample ID: MW-7B:121217

Lab Sample ID: 590-7700-3

Date Collected: 12/12/17 11:25

Matrix: Water

Date Received: 12/12/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			904.1 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 18:55	ERZ	TAL SEA
Total/NA	Prep	3520C			1034.7 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1	1 mL	1.0 mL	263784	12/20/17 00:03	W1T	TAL SEA
Total/NA	Prep	3520C			1034.7 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 22:34	W1T	TAL SEA
Total/NA	Analysis	300.0		1			15043	12/13/17 13:02	CBW	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263373	12/13/17 13:37	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263646	12/18/17 13:28	PAB	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263734	12/19/17 08:59	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:18	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483722	12/15/17 17:20	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	483913	12/16/17 17:51	SDL	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 590-7700-4

Date Collected: 12/12/17 00:00

Matrix: Water

Date Received: 12/12/17 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 19:23	MRS	TAL SPK

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Laboratory: TestAmerica Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-071	12-31-17
Oregon	NELAP Primary AB	10	4137	12-07-18
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C789	07-19-18

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis(chloroisopropyl) ether
8270D SIM	3520C	Water	1,4-Dioxane

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7700-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
8151A	Herbicides (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3266-1070.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 2 1
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested: Std.			
City: Spokane	TAT Requested (days): Std.			
State, Zip: WA, 99202				
Phone:	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4 - Total Cyanide	200.8_CWA - Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	8151A_MS, 8270D	8270D_SIM_AK - 1,4-Dioxane only	200.8_CWA - Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	300_ORGFMS - Nitrate only	8260C - 8260C - Volatiles	Total Number of containers	Special Instructions/Note:
			Preservation Code:				B	D	N	N	N	N	A		
dup: 121217	12/12/2017	0800	G	Water	N		X	X	X	X	X	X	X	12	
mw-7D: 121217	"	1020	"	Water	"		X	X	X	X	X	X	X	"	
mw-7B: 121217	"	1125	"	Water	"		X	X	X	X	X	X	X	"	
~~mw-9A: 121317~~	~~"~~		~~"~~	Water	~~"~~		X	X	X	X	X	X	X	~~"~~	
Trip Blank				Water									X	1	
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											

590-7700 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Josh Lee	12/12/17 1550	GEI	Sheila Trask	12/12/17 1555	TAS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.3 CF ICO4

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-7700 Chain of Custody

Cooler Received/Opened On 12/13/2017 @ 0945

Time Samples Removed From Cooler 1145 Time Samples Placed In Storage 1149 (2 Hour Window)

1. Tracking # 4830 (last 4 digits, FedEx) Courier: _FedEx_

IR Gun ID 17960357 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 0.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where:_____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) ES

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA


Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ZF

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ZF

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ZF

I certify that I attached a label with the unique LIMS number to each container (intial) ZF

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Loc: 590
7700

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-3261.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-7700-1
Address: 2960 Foster Creighton Drive,	Due Date Requested: 12/22/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Dup:121217 (590-7700-1)	12/12/17	08:00 Pacific		Water			X	1	
MW-7D:121217 (590-7700-2)	12/12/17	10:20 Pacific		Water			X	1	
MW-7B:121217 (590-7700-3)	12/12/17	11:25 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sharla Knapp	12/12/17 1600	TAS POC	[illegible]	12/13/17 09:45	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.9

Ver: 09/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3260.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-7700-1
Address: 5755 8th Street East, ,	Due Date Requested: 12/22/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	200.8_CWA/200.8_P_TOT Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8270D_SIM_AK/3520C (MOD) 1,4-Dioxane only	8151A_MS/8151A_AP Herbicide (Aqueous)	8270D/3520C Semivolatiles, standard list	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
Dup:121217 (590-7700-1)	12/12/17	08:00 Pacific		Water			X	X	X	X	X	8	
MW-7D:121217 (590-7700-2)	12/12/17	10:20 Pacific		Water			X	X	X	X	X	8	
MW-7B:121217 (590-7700-3)	12/12/17	11:25 Pacific		Water			X	X	X	X	X	7	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sheila Kratz	12/12/17 1600	TAL Spok	[illegible]	12-13-17 0935	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

A2 -0.9 0.0 0.0 0.9

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7700-1

Login Number: 7700

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7700-1

Login Number: 7700
List Number: 3
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 12/13/17 11:41 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-0.9°, 0.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	False	8 containers of sample -3 received; COC lists 7.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	verified at TA-Spo
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-7713-1
Client Project/Site: Marshall 0504-104-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Jon Rudders

Authorized for release by:
12/28/2017 3:23:36 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 590-7713-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 12/13/2017 4:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2º C.

Receipt Exceptions
The following sample was listed on the Chain of Custody (COC); however, no sample was received: Trip Blank (590-7713-4). Client was notifed and the sample was delivered to the lab on 12/14/17.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 590-15078 recovered above the upper control limit for Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-9A:121317 (590-7713-1), MW-5A:121317 (590-7713-2), MW-16:121317 (590-7713-3) and Trip Blank (590-7713-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-263784 recovered outside acceptance criteria, low biased, for Isophorone, Hexachlorocyclopentadiene, 2,2'oxybis[1-chloropropane], and 2,4,6-Trichlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) for preparation batch 580-263471 and analytical batch 580-263784 recovered outside control limits for the following analytes: 4-Nitrophenol, Benzo[k]fluoranthene (LCSD only), and Indeno[1,2,3-cd]pyrene (LCSD only). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: Surrogate 2,4,6-Tribromophenol (Surr) was 2% low in the method blank (MB 580-263471/1-A). Since all other surrogates in the MB met acceptance criteria, the CCV associated with the MB was within the 20%D limits, and the LCS/LCSD pair and all samples met acceptance criteria for this surrogate data was reported. This appears to be an isolated event and any re-extraction would be outside of holding time, therefore data is qualified and reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 580-264116 recovered outside acceptance criteria, low biased, for Phenol, Benzyl alcohol, N-Nitrosodi-n-propylamine, Bis(2-ethylhexyl) phthalate, 2,2'-oxybis[1-chloropropane], and Di-n-octyl phthalate. A standard at or below the reporting limit (RL) was analyzed, and the target analytes were detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-264116 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-263784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method 8151A: The continuing calibration verification (CCV) associated with batch 580-264093 recovered outside acceptance criteria, low biased, for 2,4,5-T. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 590-7713-1 (Continued)

Laboratory: TestAmerica Spokane (Continued)

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7713-1	MW-9A:121317	Water	12/13/17 12:34	12/13/17 16:10
590-7713-2	MW-5A:121317	Water	12/13/17 14:19	12/13/17 16:10
590-7713-3	MW-16:121317	Water	12/13/17 15:36	12/13/17 16:10
590-7713-4	Trip Blank	Water	12/13/17 00:01	12/13/17 16:10

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Client Sample ID: MW-9A:121317
Date Collected: 12/13/17 12:34
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 19:44	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 19:44	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 19:44	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 19:44	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 19:44	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 19:44	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 19:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 19:44	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 19:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 19:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 19:44	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 19:44	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 19:44	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 19:44	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 19:44	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 19:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 19:44	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 19:44	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 19:44	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 19:44	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 19:44	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 19:44	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 19:44	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 19:44	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 19:44	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 19:44	1
Acetone	ND		30	14	ug/L			12/15/17 19:44	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 19:44	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 19:44	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 19:44	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 19:44	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 19:44	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 19:44	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 19:44	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 19:44	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 19:44	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 19:44	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 19:44	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 19:44	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 19:44	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 19:44	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 19:44	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 19:44	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 19:44	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 19:44	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 19:44	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 19:44	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 19:44	1

Client Sample ID: MW-9A:121317
Date Collected: 12/13/17 12:34
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 19:44	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 19:44	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 19:44	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 19:44	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 19:44	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 19:44	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 19:44	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 19:44	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 19:44	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 19:44	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 19:44	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 19:44	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 19:44	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 19:44	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:44	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 19:44	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 19:44	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 19:44	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 19:44	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 125*		*12/15/17 19:44*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/15/17 19:44*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/15/17 19:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/15/17 19:44*	*1*

Method: 8151A - Herbicides (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 19:20	1
2,4-D	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 19:20	1
2,4-DB	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 19:20	1
Dalapon	ND		0.45	0.11	ug/L		12/18/17 09:34	12/23/17 19:20	1
Dicamba	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 19:20	1
Dichlorprop	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 19:20	1
MCPA	ND		0.28	0.045	ug/L		12/18/17 09:34	12/23/17 19:20	1
Silvex (2,4,5-TP)	ND		0.28	0.056	ug/L		12/18/17 09:34	12/23/17 19:20	1
MCPP	ND		0.28	0.022	ug/L		12/18/17 09:34	12/23/17 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*105*		*51 - 150*	*12/18/17 09:34*	*12/23/17 19:20*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.059**	**J**	0.098	0.011	ug/L		12/14/17 12:44	12/19/17 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*83*		*59 - 120*	*12/14/17 12:44*	*12/19/17 22:59*	*1*
Terphenyl-d14	*90*		*17 - 149*	*12/14/17 12:44*	*12/19/17 22:59*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/14/17 12:44*	*12/19/17 22:59*	*1*
2,4,6-Tribromophenol	*95*		*43 - 122*	*12/14/17 12:44*	*12/19/17 22:59*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/26/17 19:42	1
1,2-Dichlorobenzene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
1,3-Dichlorobenzene	ND		0.39	0.039	ug/L		12/14/17 12:44	12/26/17 19:42	1
1,4-Dichlorobenzene	ND		0.39	0.059	ug/L		12/14/17 12:44	12/26/17 19:42	1
1-Methylnaphthalene	ND		0.98	0.029	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,4,5-Trichlorophenol	ND		0.39	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,4,6-Trichlorophenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,4-Dichlorophenol	ND		3.9	0.89	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,4-Dimethylphenol	ND		3.9	0.81	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,4-Dinitrophenol	ND		4.9	0.98	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,4-Dinitrotoluene	ND		0.98	0.23	ug/L		12/14/17 12:44	12/26/17 19:42	1
2,6-Dinitrotoluene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
2-Chloronaphthalene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
2-Chlorophenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
2-Methylnaphthalene	ND		0.39	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
2-Methylphenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
2-Nitroaniline	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
2-Nitrophenol	ND		0.98	0.23	ug/L		12/14/17 12:44	12/26/17 19:42	1
3 & 4 Methylphenol	ND		0.78	0.039	ug/L		12/14/17 12:44	12/26/17 19:42	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/14/17 12:44	12/26/17 19:42	1
3-Nitroaniline	ND		2.9	0.71	ug/L		12/14/17 12:44	12/26/17 19:42	1
4,6-Dinitro-2-methylphenol	ND		4.9	0.98	ug/L		12/14/17 12:44	12/26/17 19:42	1
4-Bromophenyl phenyl ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
4-Chloro-3-methylphenol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
4-Chloroaniline	ND		9.8	2.1	ug/L		12/14/17 12:44	12/26/17 19:42	1
4-Chlorophenyl phenyl ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
4-Nitroaniline	ND		2.0	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
4-Nitrophenol	ND	*	15	3.6	ug/L		12/14/17 12:44	12/26/17 19:42	1
Acenaphthene	ND		0.39	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Acenaphthylene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Anthracene	ND		0.039	0.0098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzo[a]anthracene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzo[a]pyrene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzo[b]fluoranthene	ND		0.98	0.049	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzo[g,h,i]perylene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzo[k]fluoranthene	ND	*	0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzoic acid	**0.69**	**J**	2.9	0.59	ug/L		12/14/17 12:44	12/26/17 19:42	1
Benzyl alcohol	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Bis(2-chloroethoxy)methane	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Bis(2-chloroethyl)ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Bis(2-ethylhexyl) phthalate	ND		15	2.1	ug/L		12/14/17 12:44	12/26/17 19:42	1
bis(chloroisopropyl) ether	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Butyl benzyl phthalate	ND		9.8	0.72	ug/L		12/14/17 12:44	12/26/17 19:42	1
Carbazole	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Chrysene	ND		0.59	0.0098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Dibenz(a,h)anthracene	ND		0.59	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Dibenzofuran	ND		0.39	0.059	ug/L		12/14/17 12:44	12/26/17 19:42	1
Diethyl phthalate	ND		12	2.8	ug/L		12/14/17 12:44	12/26/17 19:42	1
Dimethyl phthalate	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Di-n-butyl phthalate	ND		2.9	0.54	ug/L		12/14/17 12:44	12/26/17 19:42	1
Di-n-octyl phthalate	ND		0.98	0.18	ug/L		12/14/17 12:44	12/26/17 19:42	1
Fluoranthene	ND		2.9	0.0098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Fluorene	ND		2.0	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1

Client Sample ID: MW-9A:121317
Date Collected: 12/13/17 12:34
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Hexachlorobutadiene	ND		0.98	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Hexachlorocyclopentadiene	ND		2.0	0.38	ug/L		12/14/17 12:44	12/26/17 19:42	1
Hexachloroethane	ND		0.98	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Indeno[1,2,3-cd]pyrene	ND	*	0.98	0.049	ug/L		12/14/17 12:44	12/26/17 19:42	1
Isophorone	ND		0.39	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Naphthalene	ND		0.39	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Nitrobenzene	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
N-Nitrosodi-n-propylamine	ND		0.59	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
N-Nitrosodiphenylamine	ND		2.9	0.098	ug/L		12/14/17 12:44	12/26/17 19:42	1
Pentachlorophenol	ND		4.9	0.98	ug/L		12/14/17 12:44	12/26/17 19:42	1
Phenanthrene	ND		0.98	0.020	ug/L		12/14/17 12:44	12/26/17 19:42	1
Phenol	ND		3.9	0.049	ug/L		12/14/17 12:44	12/26/17 19:42	1
Pyrene	ND		2.0	0.039	ug/L		12/14/17 12:44	12/26/17 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*94*		*48 - 125*	*12/14/17 12:44*	*12/26/17 19:42*	*1*
2-Fluorobiphenyl	*80*		*50 - 120*	*12/14/17 12:44*	*12/26/17 19:42*	*1*
2-Fluorophenol (Surr)	*65*		*50 - 120*	*12/14/17 12:44*	*12/26/17 19:42*	*1*
Nitrobenzene-d5 (Surr)	*82*		*52 - 120*	*12/14/17 12:44*	*12/26/17 19:42*	*1*
Phenol-d5 (Surr)	*67*		*52 - 120*	*12/14/17 12:44*	*12/26/17 19:42*	*1*
Terphenyl-d14 (Surr)	*90*		*49 - 133*	*12/14/17 12:44*	*12/26/17 19:42*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**1.3**		0.20	0.039	mg/L			12/13/17 21:09	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0020**		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 12:09	1
Antimony	**0.00011**	**J**	0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 12:09	1
Barium	**0.075**		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 12:09	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:09	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 12:09	1
Chromium	**0.00034**	**J**	0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 12:09	1
Copper	**0.0024**		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 12:09	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 12:09	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 12:09	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 12:09	1
Nickel	**0.0019**	**J**	0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 12:09	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 12:09	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 12:09	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 12:09	1
Vanadium	**0.0061**		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 12:09	1
Zinc	ND		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 12:09	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0022**		0.0010	0.00027	mg/L		12/19/17 11:54	12/20/17 12:36	1
Antimony	**0.00015**	**J**	0.00040	0.00011	mg/L		12/19/17 11:54	12/20/17 12:36	1

Client Sample ID: MW-9A:121317

Lab Sample ID: 590-7713-1

Date Collected: 12/13/17 12:34

Matrix: Water

Date Received: 12/13/17 16:10

Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.060**		0.0012	0.000054	mg/L		12/19/17 11:54	12/20/17 12:36	1
Beryllium	ND		0.00040	0.000043	mg/L		12/19/17 11:54	12/20/17 12:36	1
Cadmium	ND		0.00040	0.00010	mg/L		12/19/17 11:54	12/20/17 12:36	1
Chromium	**0.00016**	**J**	0.00040	0.00014	mg/L		12/19/17 11:54	12/20/17 12:36	1
Copper	**0.0019**	**J**	0.0020	0.00060	mg/L		12/19/17 11:54	12/20/17 12:36	1
Iron	ND		0.20	0.036	mg/L		12/19/17 11:54	12/20/17 12:36	1
Lead	ND		0.00080	0.00020	mg/L		12/19/17 11:54	12/20/17 12:36	1
Manganese	ND		0.0020	0.00046	mg/L		12/19/17 11:54	12/20/17 12:36	1
Nickel	**0.0011**	**J**	0.0030	0.00011	mg/L		12/19/17 11:54	12/20/17 12:36	1
Selenium	ND		0.0080	0.0021	mg/L		12/19/17 11:54	12/20/17 12:36	1
Silver	ND		0.00040	0.000043	mg/L		12/19/17 11:54	12/20/17 12:36	1
Thallium	ND		0.0010	0.000065	mg/L		12/19/17 11:54	12/20/17 12:36	1
Vanadium	**0.0066**		0.0040	0.00046	mg/L		12/19/17 11:54	12/20/17 12:36	1
Zinc	ND		0.0070	0.0019	mg/L		12/19/17 11:54	12/20/17 12:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/16/17 15:23	12/19/17 15:48	1

Client Sample ID: MW-5A:121317

Lab Sample ID: 590-7713-2

Date Collected: 12/13/17 14:19

Matrix: Water

Date Received: 12/13/17 16:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 20:06	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 20:06	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 20:06	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 20:06	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 20:06	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 20:06	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:06	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 20:06	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 20:06	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 20:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 20:06	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 20:06	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 20:06	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 20:06	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 20:06	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 20:06	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 20:06	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 20:06	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 20:06	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 20:06	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 20:06	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 20:06	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 20:06	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 20:06	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 20:06	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Client Sample ID: MW-5A:121317
Date Collected: 12/13/17 14:19
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 20:06	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 20:06	1
Acetone	ND		30	14	ug/L			12/15/17 20:06	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 20:06	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 20:06	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 20:06	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 20:06	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 20:06	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 20:06	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 20:06	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 20:06	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 20:06	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 20:06	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 20:06	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 20:06	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 20:06	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 20:06	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 20:06	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 20:06	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 20:06	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 20:06	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 20:06	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 20:06	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 20:06	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 20:06	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 20:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 20:06	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 20:06	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 20:06	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 20:06	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 20:06	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 20:06	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 20:06	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 20:06	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 20:06	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 20:06	1
Tetrachloroethene	**0.80**	**J**	1.0	0.22	ug/L			12/15/17 20:06	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 20:06	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:06	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 20:06	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:06	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 20:06	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 20:06	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 125*		*12/15/17 20:06*	*1*
4-Bromofluorobenzene (Surr)	*96*		*69 - 120*		*12/15/17 20:06*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/15/17 20:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/15/17 20:06*	*1*

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Client Sample ID: MW-16:121317
Date Collected: 12/13/17 15:36
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 20:27	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 20:27	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 20:27	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 20:27	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 20:27	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 20:27	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:27	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 20:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 20:27	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 20:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 20:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 20:27	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 20:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 20:27	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 20:27	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 20:27	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 20:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 20:27	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 20:27	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 20:27	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 20:27	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 20:27	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 20:27	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 20:27	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 20:27	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 20:27	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 20:27	1
Acetone	ND		30	14	ug/L			12/15/17 20:27	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 20:27	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 20:27	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 20:27	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 20:27	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 20:27	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 20:27	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 20:27	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 20:27	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 20:27	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 20:27	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 20:27	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 20:27	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 20:27	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 20:27	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 20:27	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 20:27	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 20:27	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 20:27	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 20:27	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 20:27	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 20:27	1

Client Sample ID: MW-16:121317 — **Lab Sample ID: 590-7713-3**
Date Collected: 12/13/17 15:36 — **Matrix: Water**
Date Received: 12/13/17 16:10

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 20:27	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 20:27	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 20:27	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 20:27	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 20:27	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 20:27	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 20:27	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 20:27	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 20:27	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 20:27	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 20:27	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 20:27	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 20:27	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 20:27	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:27	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 20:27	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:27	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 20:27	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 20:27	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 125*		*12/15/17 20:27*	*1*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*		*12/15/17 20:27*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/15/17 20:27*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/15/17 20:27*	*1*

Client Sample ID: Trip Blank — **Lab Sample ID: 590-7713-4**
Date Collected: 12/13/17 00:01 — **Matrix: Water**
Date Received: 12/13/17 16:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 20:49	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 20:49	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 20:49	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 20:49	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 20:49	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 20:49	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 20:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 20:49	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 20:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 20:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 20:49	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 20:49	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 20:49	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 20:49	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 20:49	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 20:49	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Client Sample ID: Trip Blank
Date Collected: 12/13/17 00:01
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 20:49	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 20:49	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 20:49	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 20:49	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 20:49	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 20:49	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 20:49	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 20:49	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 20:49	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 20:49	1
Acetone	ND		30	14	ug/L			12/15/17 20:49	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 20:49	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 20:49	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 20:49	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 20:49	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 20:49	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 20:49	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 20:49	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 20:49	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 20:49	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 20:49	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 20:49	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 20:49	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 20:49	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 20:49	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 20:49	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 20:49	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 20:49	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 20:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 20:49	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 20:49	1
Hexane	ND		1.0	0.084	ug/L			12/15/17 20:49	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 20:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 20:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 20:49	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 20:49	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 20:49	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 20:49	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 20:49	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 20:49	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 20:49	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 20:49	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 20:49	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 20:49	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 20:49	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 20:49	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:49	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 20:49	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 20:49	1

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Client Sample ID: Trip Blank
Date Collected: 12/13/17 00:01
Date Received: 12/13/17 16:10

Lab Sample ID: 590-7713-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 20:49	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 20:49	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 125*		*12/15/17 20:49*	*1*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*		*12/15/17 20:49*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/15/17 20:49*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/15/17 20:49*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/15/17 12:49	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/15/17 12:49	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.80	ug/L			12/15/17 12:49	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/15/17 12:49	1
1,1,2-Trichlorotrifluoroethane	ND		1.0	0.11	ug/L			12/15/17 12:49	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/15/17 12:49	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/15/17 12:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/15/17 12:49	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/15/17 12:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.16	ug/L			12/15/17 12:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/15/17 12:49	1
1,2-Dibromoethane (EDB)	ND		1.0	0.12	ug/L			12/15/17 12:49	1
1,2-Dichlorobenzene	ND		1.0	0.093	ug/L			12/15/17 12:49	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/15/17 12:49	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/15/17 12:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.074	ug/L			12/15/17 12:49	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/15/17 12:49	1
1,3-Dichloropropane	ND		2.0	0.51	ug/L			12/15/17 12:49	1
1,4-Dichlorobenzene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/15/17 12:49	1
2-Butanone (MEK)	ND		10	4.4	ug/L			12/15/17 12:49	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			12/15/17 12:49	1
2-Hexanone	ND		10	0.75	ug/L			12/15/17 12:49	1
4-Chlorotoluene	ND		1.0	0.13	ug/L			12/15/17 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.67	ug/L			12/15/17 12:49	1
Acetone	ND		30	14	ug/L			12/15/17 12:49	1
Benzene	ND		0.40	0.093	ug/L			12/15/17 12:49	1
Bromobenzene	ND		1.0	0.28	ug/L			12/15/17 12:49	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/15/17 12:49	1
Bromodichloromethane	ND		1.0	0.96	ug/L			12/15/17 12:49	1
Bromoform	ND		5.0	1.6	ug/L			12/15/17 12:49	1
Bromomethane	ND		5.0	0.22	ug/L			12/15/17 12:49	1
Carbon disulfide	ND		5.0	2.0	ug/L			12/15/17 12:49	1
Carbon tetrachloride	ND		1.0	0.12	ug/L			12/15/17 12:49	1
Chlorobenzene	ND		1.0	0.14	ug/L			12/15/17 12:49	1
Chloroethane	ND		2.0	0.16	ug/L			12/15/17 12:49	1
Chloroform	ND		1.0	0.91	ug/L			12/15/17 12:49	1
Chloromethane	ND		3.0	0.22	ug/L			12/15/17 12:49	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/15/17 12:49	1
cis-1,3-Dichloropropene	ND		1.0	0.098	ug/L			12/15/17 12:49	1
Dibromochloromethane	ND		2.0	1.8	ug/L			12/15/17 12:49	1
Dibromomethane	ND		2.0	0.50	ug/L			12/15/17 12:49	1
Dichlorodifluoromethane	ND		2.0	0.26	ug/L			12/15/17 12:49	1
Dichlorofluoromethane	ND		1.0	0.30	ug/L			12/15/17 12:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/15/17 12:49	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 590-15078/8
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.0	0.084	ug/L			12/15/17 12:49	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/15/17 12:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/15/17 12:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/15/17 12:49	1
Methylene Chloride	ND		5.0	1.0	ug/L			12/15/17 12:49	1
Naphthalene	ND		2.0	0.63	ug/L			12/15/17 12:49	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
N-Propylbenzene	ND		1.0	0.063	ug/L			12/15/17 12:49	1
o-Xylene	ND		1.0	0.16	ug/L			12/15/17 12:49	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/15/17 12:49	1
sec-Butylbenzene	ND		1.0	0.072	ug/L			12/15/17 12:49	1
Styrene	ND		1.0	0.24	ug/L			12/15/17 12:49	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/15/17 12:49	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/15/17 12:49	1
Toluene	ND		1.0	0.31	ug/L			12/15/17 12:49	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/15/17 12:49	1
Trichloroethene	ND		1.0	0.20	ug/L			12/15/17 12:49	1
Trichlorofluoromethane	ND		1.0	0.074	ug/L			12/15/17 12:49	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/15/17 12:49	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/15/17 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*12/15/17 12:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 120*		*12/15/17 12:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/15/17 12:49*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/15/17 12:49*	*1*

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.78		ug/L		98	75 - 124
1,1,1-Trichloroethane	10.0	9.98		ug/L		100	71 - 130
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	66 - 122
1,1,2-Trichloroethane	10.0	9.92		ug/L		99	76 - 120
1,1,2-Trichlorotrifluoroethane	10.0	9.85		ug/L		99	70 - 127
1,1-Dichloroethane	10.0	10.5		ug/L		105	79 - 121
1,1-Dichloroethene	10.0	9.66		ug/L		97	69 - 127
1,1-Dichloropropene	10.0	10.5		ug/L		105	76 - 125
1,2,3-Trichlorobenzene	10.0	10.6		ug/L		106	60 - 125
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	60 - 124
1,2,4-Trichlorobenzene	10.0	10.6		ug/L		106	66 - 124
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.3		ug/L		113	36 - 140
1,2-Dichlorobenzene	10.0	10.5		ug/L		105	78 - 120
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	10.5		ug/L		105	76 - 121
1,3,5-Trimethylbenzene	10.0	10.5		ug/L		105	75 - 122
1,3-Dichlorobenzene	10.0	10.4		ug/L		104	77 - 120
1,3-Dichloropropane	10.0	10.8		ug/L		108	75 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	77 - 121
2,2-Dichloropropane	10.0	10.3		ug/L		103	49 - 147
2-Butanone (MEK)	50.0	44.1		ug/L		88	40 - 150
2-Chlorotoluene	10.0	11.0		ug/L		110	75 - 121
2-Hexanone	50.0	46.6		ug/L		93	46 - 146
4-Chlorotoluene	10.0	10.5		ug/L		105	74 - 120
4-Methyl-2-pentanone (MIBK)	50.0	50.3		ug/L		101	60 - 127
Acetone	50.0	39.7		ug/L		79	20 - 150
Benzene	10.0	10.4		ug/L		104	80 - 120
Bromobenzene	10.0	10.8		ug/L		108	74 - 121
Bromochloromethane	10.0	10.3		ug/L		103	70 - 126
Bromodichloromethane	10.0	10.9		ug/L		109	67 - 125
Bromoform	10.0	10.0		ug/L		100	60 - 122
Bromomethane	10.0	10.4		ug/L		104	45 - 150
Carbon disulfide	10.0	9.57		ug/L		96	67 - 129
Carbon tetrachloride	10.0	9.89		ug/L		99	68 - 134
Chlorobenzene	10.0	9.85		ug/L		98	79 - 125
Chloroethane	10.0	10.0		ug/L		100	48 - 150
Chloroform	10.0	10.3		ug/L		103	73 - 126
Chloromethane	10.0	9.41		ug/L		94	51 - 150
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	76 - 121
cis-1,3-Dichloropropene	10.0	10.9		ug/L		109	72 - 120
Dibromochloromethane	10.0	10.1		ug/L		101	72 - 120
Dibromomethane	10.0	10.4		ug/L		104	71 - 120
Dichlorodifluoromethane	10.0	8.61		ug/L		86	32 - 150
Dichlorofluoromethane	10.0	10.3		ug/L		103	60 - 140
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
Hexachlorobutadiene	10.0	10.0		ug/L		100	62 - 132
Hexane	10.0	9.90		ug/L		99	68 - 125
Isopropylbenzene	10.0	9.93		ug/L		99	77 - 123
m,p-Xylene	10.0	10.3		ug/L		103	80 - 120
Methyl tert-butyl ether	10.0	10.7		ug/L		107	71 - 128
Methylene Chloride	10.0	10.7		ug/L		107	20 - 150
Naphthalene	10.0	10.9		ug/L		109	63 - 124
n-Butylbenzene	10.0	10.4		ug/L		104	71 - 120
N-Propylbenzene	10.0	10.6		ug/L		106	76 - 120
o-Xylene	10.0	10.2		ug/L		102	80 - 120
p-Isopropyltoluene	10.0	10.3		ug/L		103	77 - 120
sec-Butylbenzene	10.0	10.7		ug/L		107	74 - 121
Styrene	10.0	10.1		ug/L		101	73 - 120
tert-Butylbenzene	10.0	10.6		ug/L		106	79 - 120
Tetrachloroethene	10.0	9.71		ug/L		97	71 - 132
Toluene	10.0	10.2		ug/L		102	80 - 123
trans-1,2-Dichloroethene	10.0	9.86		ug/L		99	75 - 124

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-15078/1005
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	10.4		ug/L		104	70 - 121
Trichloroethene	10.0	10.3		ug/L		103	75 - 129
Trichlorofluoromethane	10.0	10.2		ug/L		102	60 - 140
Vinyl chloride	10.0	10.0		ug/L		100	42 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-15078/9
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	9.75		ug/L		98	75 - 124	0	15
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	71 - 130	2	25
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	66 - 122	3	15
1,1,2-Trichloroethane	10.0	9.61		ug/L		96	76 - 120	3	15
1,1,2-Trichlorotrifluoroethane	10.0	9.35		ug/L		93	70 - 127	5	25
1,1-Dichloroethane	10.0	10.4		ug/L		104	79 - 121	1	25
1,1-Dichloroethene	10.0	10.3		ug/L		103	69 - 127	6	14
1,1-Dichloropropene	10.0	10.4		ug/L		104	76 - 125	1	15
1,2,3-Trichlorobenzene	10.0	10.1		ug/L		101	60 - 125	5	15
1,2,3-Trichloropropane	10.0	10.5		ug/L		105	60 - 124	1	15
1,2,4-Trichlorobenzene	10.0	10.4		ug/L		104	66 - 124	2	15
1,2,4-Trimethylbenzene	10.0	10.1		ug/L		101	77 - 120	3	15
1,2-Dibromo-3-Chloropropane	10.0	9.99	J	ug/L		100	36 - 140	12	15
1,2-Dichlorobenzene	10.0	10.2		ug/L		102	78 - 120	3	15
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 127	0	12
1,2-Dichloropropane	10.0	10.3		ug/L		103	76 - 121	1	15
1,3,5-Trimethylbenzene	10.0	10.2		ug/L		102	75 - 122	3	15
1,3-Dichlorobenzene	10.0	9.95		ug/L		99	77 - 120	4	15
1,3-Dichloropropane	10.0	10.5		ug/L		105	75 - 120	4	15
1,4-Dichlorobenzene	10.0	9.84		ug/L		98	77 - 121	8	15
2,2-Dichloropropane	10.0	10.3		ug/L		103	49 - 147	0	25
2-Butanone (MEK)	50.0	43.8		ug/L		88	40 - 150	1	25
2-Chlorotoluene	10.0	10.3		ug/L		103	75 - 121	6	15
2-Hexanone	50.0	43.3		ug/L		87	46 - 146	7	15
4-Chlorotoluene	10.0	10.5		ug/L		105	74 - 120	0	15
4-Methyl-2-pentanone (MIBK)	50.0	49.5		ug/L		99	60 - 127	2	15
Acetone	50.0	40.0		ug/L		80	20 - 150	1	25
Benzene	10.0	10.2		ug/L		102	80 - 120	2	25
Bromobenzene	10.0	10.2		ug/L		102	74 - 121	5	15
Bromochloromethane	10.0	10.1		ug/L		101	70 - 126	1	25
Bromodichloromethane	10.0	10.5		ug/L		105	67 - 125	4	15
Bromoform	10.0	9.34		ug/L		93	60 - 122	7	15

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-15078/9
Matrix: Water
Analysis Batch: 15078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			10.0	10.2		ug/L		102	45 - 150	2	25
Carbon disulfide			10.0	9.47		ug/L		95	67 - 129	1	25
Carbon tetrachloride			10.0	10.1		ug/L		101	68 - 134	2	25
Chlorobenzene			10.0	9.92		ug/L		99	79 - 125	1	25
Chloroethane			10.0	10.0		ug/L		100	48 - 150	0	25
Chloroform			10.0	10.1		ug/L		101	73 - 126	2	25
Chloromethane			10.0	9.46		ug/L		95	51 - 150	1	15
cis-1,2-Dichloroethene			10.0	10.2		ug/L		102	76 - 121	2	25
cis-1,3-Dichloropropene			10.0	10.3		ug/L		103	72 - 120	6	15
Dibromochloromethane			10.0	9.67		ug/L		97	72 - 120	4	15
Dibromomethane			10.0	10.3		ug/L		103	71 - 120	1	15
Dichlorodifluoromethane			10.0	8.61		ug/L		86	32 - 150	0	25
Dichlorofluoromethane			10.0	10.8		ug/L		108	60 - 140	5	25
Ethylbenzene			10.0	9.86		ug/L		99	80 - 120	2	25
Hexachlorobutadiene			10.0	9.93		ug/L		99	62 - 132	1	15
Hexane			10.0	9.94		ug/L		99	68 - 125	0	15
Isopropylbenzene			10.0	10.0		ug/L		100	77 - 123	1	15
m,p-Xylene			10.0	10.0		ug/L		100	80 - 120	2	25
Methyl tert-butyl ether			10.0	10.6		ug/L		106	71 - 128	2	12
Methylene Chloride			10.0	10.3		ug/L		103	20 - 150	4	25
Naphthalene			10.0	10.0		ug/L		100	63 - 124	8	25
n-Butylbenzene			10.0	9.96		ug/L		100	71 - 120	4	15
N-Propylbenzene			10.0	10.2		ug/L		102	76 - 120	4	15
o-Xylene			10.0	9.96		ug/L		100	80 - 120	2	25
p-Isopropyltoluene			10.0	10.0		ug/L		100	77 - 120	3	15
sec-Butylbenzene			10.0	10.3		ug/L		103	74 - 121	4	15
Styrene			10.0	9.77		ug/L		98	73 - 120	3	15
tert-Butylbenzene			10.0	10.4		ug/L		104	79 - 120	1	15
Tetrachloroethene			10.0	9.23		ug/L		92	71 - 132	5	15
Toluene			10.0	9.91		ug/L		99	80 - 123	3	25
trans-1,2-Dichloroethene			10.0	10.0		ug/L		100	75 - 124	2	25
trans-1,3-Dichloropropene			10.0	10.0		ug/L		100	70 - 121	4	15
Trichloroethene			10.0	10.1		ug/L		101	75 - 129	2	25
Trichlorofluoromethane			10.0	10.4		ug/L		104	60 - 140	1	25
Vinyl chloride			10.0	10.1		ug/L		101	42 - 150	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 125*
4-Bromofluorobenzene (Surr)	*98*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8151A - Herbicides (GC/MS)

Lab Sample ID: MB 580-263609/1-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263609

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
2,4-D	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1
2,4-DB	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dalapon	ND		0.40	0.10	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dicamba	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
Dichlorprop	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
MCPA	ND		0.25	0.040	ug/L		12/18/17 09:34	12/23/17 15:07	1
Silvex (2,4,5-TP)	ND		0.25	0.050	ug/L		12/18/17 09:34	12/23/17 15:07	1
MCPP	ND		0.25	0.020	ug/L		12/18/17 09:34	12/23/17 15:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*116*		*51 - 150*	*12/18/17 09:34*	*12/23/17 15:07*	*1*

Lab Sample ID: LCS 580-263609/2-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263609

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			5.00	4.48		ug/L		90	20 - 150		
2,4-D			5.00	4.80		ug/L		96	20 - 150		
2,4-DB			5.00	5.68		ug/L		114	50 - 150		
Dalapon			5.00	4.01		ug/L		80	20 - 120		
Dicamba			5.00	4.97		ug/L		99	20 - 150		
Dichlorprop			5.00	5.51		ug/L		110	23 - 150		
MCPA			5.00	4.48		ug/L		90	21 - 150		
Silvex (2,4,5-TP)			5.00	5.61		ug/L		112	24 - 150		
MCPP			5.00	5.65		ug/L		113	51 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*118*		*51 - 150*

Lab Sample ID: LCSD 580-263609/3-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263609

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			5.00	4.70		ug/L		94	20 - 150	5	35
2,4-D			5.00	5.46		ug/L		109	20 - 150	13	35
2,4-DB			5.00	5.46		ug/L		109	50 - 150	4	35
Dalapon			5.00	4.67		ug/L		93	20 - 120	15	35
Dicamba			5.00	4.84		ug/L		97	20 - 150	3	35
Dichlorprop			5.00	6.17		ug/L		123	23 - 150	11	35
MCPA			5.00	4.55		ug/L		91	21 - 150	2	35
Silvex (2,4,5-TP)			5.00	6.01		ug/L		120	24 - 150	7	35
MCPP			5.00	5.64		ug/L		113	51 - 150	0	35

Method: 8151A - Herbicides (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263609/3-A
Matrix: Water
Analysis Batch: 264093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263609

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	120		51 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 264116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,2-Dichlorobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,3-Dichlorobenzene	ND		0.40	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
1,4-Dichlorobenzene	ND		0.40	0.060	ug/L		12/14/17 12:44	12/26/17 14:52	1
1-Methylnaphthalene	ND		1.0	0.030	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dichlorophenol	ND		4.0	0.91	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dimethylphenol	ND		4.0	0.83	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,4-Dinitrotoluene	ND		1.0	0.24	ug/L		12/14/17 12:44	12/26/17 14:52	1
2,6-Dinitrotoluene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Chloronaphthalene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Chlorophenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Methylnaphthalene	ND		0.40	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Methylphenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Nitroaniline	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
2-Nitrophenol	ND		1.0	0.24	ug/L		12/14/17 12:44	12/26/17 14:52	1
3 & 4 Methylphenol	ND		0.80	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1
3,3'-Dichlorobenzidine	ND		15	3.1	ug/L		12/14/17 12:44	12/26/17 14:52	1
3-Nitroaniline	ND		3.0	0.73	ug/L		12/14/17 12:44	12/26/17 14:52	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Bromophenyl phenyl ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chloro-3-methylphenol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chloroaniline	ND		10	2.1	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Chlorophenyl phenyl ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Nitroaniline	ND		2.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
4-Nitrophenol	ND		15	3.7	ug/L		12/14/17 12:44	12/26/17 14:52	1
Acenaphthene	ND		0.40	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Acenaphthylene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Anthracene	ND		0.040	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[a]anthracene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[a]pyrene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[b]fluoranthene	ND		1.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[g,h,i]perylene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzo[k]fluoranthene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzoic acid	ND		3.0	0.60	ug/L		12/14/17 12:44	12/26/17 14:52	1
Benzyl alcohol	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Bis(2-chloroethoxy)methane	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 264116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Bis(2-ethylhexyl) phthalate	ND		15	2.2	ug/L		12/14/17 12:44	12/26/17 14:52	1
bis(chloroisopropyl) ether	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Butyl benzyl phthalate	ND		10	0.74	ug/L		12/14/17 12:44	12/26/17 14:52	1
Carbazole	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Chrysene	ND		0.60	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dibenz(a,h)anthracene	ND		0.60	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dibenzofuran	ND		0.40	0.060	ug/L		12/14/17 12:44	12/26/17 14:52	1
Diethyl phthalate	ND		12	2.8	ug/L		12/14/17 12:44	12/26/17 14:52	1
Dimethyl phthalate	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Di-n-butyl phthalate	ND		3.0	0.55	ug/L		12/14/17 12:44	12/26/17 14:52	1
Di-n-octyl phthalate	ND		1.0	0.18	ug/L		12/14/17 12:44	12/26/17 14:52	1
Fluoranthene	ND		3.0	0.010	ug/L		12/14/17 12:44	12/26/17 14:52	1
Fluorene	ND		2.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorobutadiene	ND		1.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachlorocyclopentadiene	ND		2.0	0.39	ug/L		12/14/17 12:44	12/26/17 14:52	1
Hexachloroethane	ND		1.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Isophorone	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Naphthalene	ND		0.40	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Nitrobenzene	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
N-Nitrosodi-n-propylamine	ND		0.60	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
N-Nitrosodiphenylamine	ND		3.0	0.10	ug/L		12/14/17 12:44	12/26/17 14:52	1
Pentachlorophenol	ND		5.0	1.0	ug/L		12/14/17 12:44	12/26/17 14:52	1
Phenanthrene	ND		1.0	0.020	ug/L		12/14/17 12:44	12/26/17 14:52	1
Phenol	ND		4.0	0.050	ug/L		12/14/17 12:44	12/26/17 14:52	1
Pyrene	ND		2.0	0.040	ug/L		12/14/17 12:44	12/26/17 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*46*	*X*	*48 - 125*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
2-Fluorobiphenyl	*82*		*50 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
2-Fluorophenol (Surr)	*60*		*50 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Nitrobenzene-d5 (Surr)	*73*		*52 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Phenol-d5 (Surr)	*64*		*52 - 120*	*12/14/17 12:44*	*12/26/17 14:52*	*1*
Terphenyl-d14 (Surr)	*87*		*49 - 133*	*12/14/17 12:44*	*12/26/17 14:52*	*1*

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.47		ug/L		74	46 - 120
1,2-Dichlorobenzene	2.00	1.47		ug/L		73	44 - 120
1,3-Dichlorobenzene	2.00	1.35		ug/L		67	34 - 121
1,4-Dichlorobenzene	2.00	1.27		ug/L		63	40 - 120
1-Methylnaphthalene	2.00	1.66		ug/L		83	65 - 120
2,4,5-Trichlorophenol	2.00	1.75		ug/L		87	56 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2.00	1.42		ug/L		71	55 - 129
2,4-Dichlorophenol	2.00	1.60	J	ug/L		80	60 - 140
2,4-Dimethylphenol	2.00	1.18	J	ug/L		59	20 - 129
2,4-Dinitrophenol	4.00	3.55	J	ug/L		89	20 - 132
2,4-Dinitrotoluene	2.00	2.06		ug/L		103	53 - 143
2,6-Dinitrotoluene	2.00	2.01		ug/L		100	59 - 134
2-Chloronaphthalene	2.00	1.76		ug/L		88	64 - 125
2-Chlorophenol	2.00	1.94		ug/L		97	69 - 125
2-Methylnaphthalene	2.00	1.63		ug/L		82	56 - 120
2-Methylphenol	2.00	1.70		ug/L		85	53 - 120
2-Nitroaniline	10.0	7.99		ug/L		80	58 - 142
2-Nitrophenol	2.00	1.64		ug/L		82	20 - 143
3 & 4 Methylphenol	2.00	1.45		ug/L		73	54 - 120
3,3'-Dichlorobenzidine	12.0	11.1	J	ug/L		92	20 - 146
3-Nitroaniline	10.0	9.23		ug/L		92	22 - 139
4,6-Dinitro-2-methylphenol	4.00	3.52	J	ug/L		88	20 - 144
4-Bromophenyl phenyl ether	2.00	1.93		ug/L		97	70 - 123
4-Chloro-3-methylphenol	2.00	2.05		ug/L		102	63 - 126
4-Chloroaniline	10.0	6.12	J	ug/L		61	20 - 120
4-Chlorophenyl phenyl ether	2.00	1.84		ug/L		92	69 - 125
4-Nitroaniline	10.0	9.81		ug/L		98	40 - 130
4-Nitrophenol	4.00	6.25	J *	ug/L		156	27 - 150
Acenaphthene	2.00	1.85		ug/L		93	62 - 120
Acenaphthylene	2.00	1.89		ug/L		94	24 - 141
Anthracene	2.00	1.87		ug/L		93	20 - 140
Benzo[a]anthracene	2.00	2.12		ug/L		106	59 - 123
Benzo[a]pyrene	2.00	1.76		ug/L		88	20 - 133
Benzo[b]fluoranthene	2.00	2.10		ug/L		105	72 - 129
Benzo[g,h,i]perylene	2.00	2.26		ug/L		113	67 - 133
Benzo[k]fluoranthene	2.00	2.14		ug/L		107	72 - 120
Benzoic acid	4.00	1.15	J	ug/L		29	20 - 145
Benzyl alcohol	2.00	1.81		ug/L		90	42 - 129
Bis(2-chloroethoxy)methane	2.00	1.82		ug/L		91	59 - 125
Bis(2-chloroethyl)ether	2.00	1.79		ug/L		90	64 - 120
Bis(2-ethylhexyl) phthalate	2.00	ND		ug/L		107	58 - 150
bis(chloroisopropyl) ether	2.00	1.45		ug/L		72	53 - 133
Butyl benzyl phthalate	2.00	2.17	J	ug/L		109	72 - 150
Carbazole	2.00	2.33		ug/L		116	80 - 135
Chrysene	2.00	1.77		ug/L		88	74 - 120
Dibenz(a,h)anthracene	2.00	2.24		ug/L		112	56 - 135
Dibenzofuran	2.00	1.96		ug/L		98	70 - 125
Diethyl phthalate	2.00	ND		ug/L		103	66 - 139
Dimethyl phthalate	2.00	2.10		ug/L		105	74 - 128
Di-n-butyl phthalate	2.00	2.06	J	ug/L		103	74 - 140
Di-n-octyl phthalate	2.00	2.20		ug/L		110	65 - 150
Fluoranthene	2.00	1.92	J	ug/L		96	70 - 135
Fluorene	2.00	1.94	J	ug/L		97	70 - 125
Hexachlorobenzene	2.00	1.65		ug/L		83	55 - 122

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	2.00	1.18		ug/L		59	20 - 125
Hexachlorocyclopentadiene	10.0	3.80		ug/L		38	20 - 120
Hexachloroethane	2.00	1.31		ug/L		65	24 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.37		ug/L		119	64 - 133
Isophorone	2.00	1.56		ug/L		78	64 - 125
Naphthalene	2.00	1.52		ug/L		76	56 - 120
Nitrobenzene	2.00	1.98		ug/L		99	54 - 133
N-Nitrosodi-n-propylamine	10.0	9.13		ug/L		91	54 - 120
N-Nitrosodiphenylamine	11.4	8.35		ug/L		73	22 - 135
Pentachlorophenol	4.00	2.43	J	ug/L		61	20 - 135
Phenanthrene	2.00	1.81		ug/L		91	71 - 120
Phenol	2.00	1.58	J	ug/L		79	53 - 126
Pyrene	2.00	1.88	J	ug/L		94	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*89*		*48 - 125*
2-Fluorobiphenyl	*84*		*50 - 120*
2-Fluorophenol (Surr)	*78*		*50 - 120*
Nitrobenzene-d5 (Surr)	*101*		*52 - 120*
Phenol-d5 (Surr)	*96*		*52 - 120*
Terphenyl-d14 (Surr)	*102*		*49 - 133*

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.44		ug/L		72	46 - 120	2	20
1,2-Dichlorobenzene	2.00	1.27		ug/L		63	44 - 120	15	20
1,3-Dichlorobenzene	2.00	1.23		ug/L		61	34 - 121	9	29
1,4-Dichlorobenzene	2.00	1.19		ug/L		59	40 - 120	7	25
1-Methylnaphthalene	2.00	1.63		ug/L		82	65 - 120	1	20
2,4,5-Trichlorophenol	2.00	1.76		ug/L		88	56 - 122	1	25
2,4,6-Trichlorophenol	2.00	1.33		ug/L		66	55 - 129	7	20
2,4-Dichlorophenol	2.00	1.59	J	ug/L		79	60 - 140	1	26
2,4-Dimethylphenol	2.00	1.21	J	ug/L		60	20 - 129	2	35
2,4-Dinitrophenol	4.00	3.63	J	ug/L		91	20 - 132	2	35
2,4-Dinitrotoluene	2.00	2.01		ug/L		101	53 - 143	2	29
2,6-Dinitrotoluene	2.00	1.93		ug/L		96	59 - 134	4	24
2-Chloronaphthalene	2.00	1.68		ug/L		84	64 - 125	4	20
2-Chlorophenol	2.00	1.76		ug/L		88	69 - 125	10	20
2-Methylnaphthalene	2.00	1.62		ug/L		81	56 - 120	1	20
2-Methylphenol	2.00	1.63		ug/L		81	53 - 120	4	33
2-Nitroaniline	10.0	7.42		ug/L		74	58 - 142	7	20
2-Nitrophenol	2.00	1.67		ug/L		84	20 - 143	2	35
3 & 4 Methylphenol	2.00	1.40		ug/L		70	54 - 120	4	20
3,3'-Dichlorobenzidine	12.0	10.9	J	ug/L		91	20 - 146	2	35
3-Nitroaniline	10.0	8.62		ug/L		86	22 - 139	7	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	4.00	3.61	J	ug/L		90	20 - 144	2	35
4-Bromophenyl phenyl ether	2.00	1.90		ug/L		95	70 - 123	2	20
4-Chloro-3-methylphenol	2.00	2.02		ug/L		101	63 - 126	1	20
4-Chloroaniline	10.0	5.76	J	ug/L		58	20 - 120	6	35
4-Chlorophenyl phenyl ether	2.00	1.79		ug/L		89	69 - 125	3	20
4-Nitroaniline	10.0	9.26		ug/L		93	40 - 130	6	35
4-Nitrophenol	4.00	6.02	J *	ug/L		151	27 - 150	4	23
Acenaphthene	2.00	1.78		ug/L		89	62 - 120	4	20
Acenaphthylene	2.00	1.80		ug/L		90	24 - 141	5	20
Anthracene	2.00	1.80		ug/L		90	20 - 140	4	26
Benzo[a]anthracene	2.00	2.19		ug/L		109	59 - 123	3	20
Benzo[a]pyrene	2.00	1.98		ug/L		99	20 - 133	12	35
Benzo[b]fluoranthene	2.00	2.35		ug/L		117	72 - 129	11	20
Benzo[g,h,i]perylene	2.00	2.55		ug/L		127	67 - 133	12	20
Benzo[k]fluoranthene	2.00	2.44	*	ug/L		122	72 - 120	13	20
Benzoic acid	4.00	1.41	J	ug/L		35	20 - 145	20	35
Benzyl alcohol	2.00	1.36		ug/L		68	42 - 129	28	35
Bis(2-chloroethoxy)methane	2.00	1.65		ug/L		82	59 - 125	10	26
Bis(2-chloroethyl)ether	2.00	1.66		ug/L		83	64 - 120	8	20
Bis(2-ethylhexyl) phthalate	2.00	2.49	J	ug/L		124	58 - 150	15	35
bis(chloroisopropyl) ether	2.00	1.29		ug/L		64	53 - 133	12	20
Butyl benzyl phthalate	2.00	2.14	J	ug/L		107	72 - 150	2	20
Carbazole	2.00	2.32		ug/L		116	80 - 135	0	20
Chrysene	2.00	1.75		ug/L		87	74 - 120	1	20
Dibenz(a,h)anthracene	2.00	2.49		ug/L		125	56 - 135	11	20
Dibenzofuran	2.00	1.90		ug/L		95	70 - 125	3	20
Diethyl phthalate	2.00	ND		ug/L		92	66 - 139	11	20
Dimethyl phthalate	2.00	1.99		ug/L		99	74 - 128	6	20
Di-n-butyl phthalate	2.00	1.96	J	ug/L		98	74 - 140	5	20
Di-n-octyl phthalate	2.00	2.49		ug/L		125	65 - 150	13	20
Fluoranthene	2.00	1.90	J	ug/L		95	70 - 135	1	20
Fluorene	2.00	1.85	J	ug/L		92	70 - 125	5	20
Hexachlorobenzene	2.00	1.65		ug/L		83	55 - 122	0	20
Hexachlorobutadiene	2.00	1.23		ug/L		61	20 - 125	4	31
Hexachlorocyclopentadiene	10.0	3.55		ug/L		36	20 - 120	7	35
Hexachloroethane	2.00	1.14		ug/L		57	24 - 125	14	35
Indeno[1,2,3-cd]pyrene	2.00	2.71	*	ug/L		136	64 - 133	13	20
Isophorone	2.00	1.33		ug/L		66	64 - 125	16	20
Naphthalene	2.00	1.53		ug/L		77	56 - 120	1	20
Nitrobenzene	2.00	1.85		ug/L		92	54 - 133	7	20
N-Nitrosodi-n-propylamine	10.0	8.07		ug/L		81	54 - 120	12	20
N-Nitrosodiphenylamine	11.4	8.10		ug/L		71	22 - 135	3	29
Pentachlorophenol	4.00	2.48	J	ug/L		62	20 - 135	2	35
Phenanthrene	2.00	1.78		ug/L		89	71 - 120	2	20
Phenol	2.00	1.50	J	ug/L		75	53 - 126	5	26
Pyrene	2.00	1.86	J	ug/L		93	64 - 128	1	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	89		48 - 125
2-Fluorobiphenyl	81		50 - 120
2-Fluorophenol (Surr)	78		50 - 120
Nitrobenzene-d5 (Surr)	97		52 - 120
Phenol-d5 (Surr)	89		52 - 120
Terphenyl-d14 (Surr)	95		49 - 133

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-263471/1-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.10	0.011	ug/L		12/14/17 12:44	12/19/17 13:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		59 - 120	12/14/17 12:44	12/19/17 13:33	1
Terphenyl-d14	83		17 - 149	12/14/17 12:44	12/19/17 13:33	1
2-Fluorobiphenyl	72		50 - 120	12/14/17 12:44	12/19/17 13:33	1
2,4,6-Tribromophenol	68		43 - 122	12/14/17 12:44	12/19/17 13:33	1

Lab Sample ID: LCS 580-263471/2-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263471

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.67		ug/L		83	40 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	77		59 - 120
Terphenyl-d14	83		17 - 149
2-Fluorobiphenyl	74		50 - 120
2,4,6-Tribromophenol	92		43 - 122

Lab Sample ID: LCSD 580-263471/3-A
Matrix: Water
Analysis Batch: 263710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263471

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.71		ug/L		86	40 - 140	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	76		59 - 120
Terphenyl-d14	81		17 - 149
2-Fluorobiphenyl	74		50 - 120
2,4,6-Tribromophenol	90		43 - 122

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-15046/1023
Matrix: Water
Analysis Batch: 15046

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.039	mg/L			12/13/17 21:45	1

Lab Sample ID: LCS 590-15046/1022
Matrix: Water
Analysis Batch: 15046

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.01		mg/L		100	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: LCS 580-263724/6-A
Matrix: Water
Analysis Batch: 263918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263724

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0988		mg/L		99	85 - 115
Antimony	0.100	0.102		mg/L		102	85 - 115
Barium	0.100	0.102		mg/L		102	85 - 115
Beryllium	0.100	0.101		mg/L		101	85 - 115
Cadmium	0.100	0.101		mg/L		101	85 - 115
Chromium	0.100	0.0996		mg/L		100	85 - 115
Copper	0.100	0.0975		mg/L		98	85 - 115
Iron	10.0	9.78		mg/L		98	85 - 115
Lead	0.100	0.0989		mg/L		99	85 - 115
Manganese	0.100	0.0973		mg/L		97	85 - 115
Nickel	0.100	0.0984		mg/L		98	85 - 115
Selenium	0.100	0.0953		mg/L		95	85 - 115
Silver	0.100	0.100		mg/L		100	85 - 115
Thallium	0.100	0.0945		mg/L		95	85 - 115
Vanadium	0.100	0.0993		mg/L		99	85 - 115
Zinc	0.100	0.0957		mg/L		96	85 - 115

Lab Sample ID: LCSD 580-263724/7-A
Matrix: Water
Analysis Batch: 263918

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 263724

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.101		mg/L		101	85 - 115	2	20
Antimony	0.100	0.103		mg/L		103	85 - 115	0	20
Barium	0.100	0.101		mg/L		101	85 - 115	1	20
Beryllium	0.100	0.103		mg/L		103	85 - 115	2	20
Cadmium	0.100	0.101		mg/L		101	85 - 115	0	20
Chromium	0.100	0.100		mg/L		100	85 - 115	0	20
Copper	0.100	0.0985		mg/L		99	85 - 115	1	20
Iron	10.0	9.91		mg/L		99	85 - 115	1	20
Lead	0.100	0.101		mg/L		101	85 - 115	2	20
Manganese	0.100	0.0978		mg/L		98	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-263724/7-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 263918 — **Prep Batch: 263724**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nickel	0.100	0.0994		mg/L		99	85 - 115	1	20
Selenium	0.100	0.0972		mg/L		97	85 - 115	2	20
Silver	0.100	0.101		mg/L		101	85 - 115	1	20
Thallium	0.100	0.0971		mg/L		97	85 - 115	3	20
Vanadium	0.100	0.0997		mg/L		100	85 - 115	0	20
Zinc	0.100	0.0999		mg/L		100	85 - 115	4	20

Lab Sample ID: MB 580-264059/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 264199 — **Prep Batch: 264059**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/22/17 14:21	12/27/17 11:21	1
Antimony	ND		0.00040	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Barium	ND		0.0012	0.000054	mg/L		12/22/17 14:21	12/27/17 11:21	1
Beryllium	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Cadmium	ND		0.00040	0.00010	mg/L		12/22/17 14:21	12/27/17 11:21	1
Chromium	ND		0.00040	0.00014	mg/L		12/22/17 14:21	12/27/17 11:21	1
Copper	ND		0.0020	0.00060	mg/L		12/22/17 14:21	12/27/17 11:21	1
Iron	ND		0.20	0.036	mg/L		12/22/17 14:21	12/27/17 11:21	1
Lead	ND		0.00080	0.00020	mg/L		12/22/17 14:21	12/27/17 11:21	1
Manganese	ND		0.0020	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Nickel	ND		0.0030	0.00011	mg/L		12/22/17 14:21	12/27/17 11:21	1
Selenium	ND		0.0080	0.0021	mg/L		12/22/17 14:21	12/27/17 11:21	1
Silver	ND		0.00040	0.000043	mg/L		12/22/17 14:21	12/27/17 11:21	1
Thallium	ND		0.0010	0.000065	mg/L		12/22/17 14:21	12/27/17 11:21	1
Vanadium	ND		0.0040	0.00046	mg/L		12/22/17 14:21	12/27/17 11:21	1
Zinc	ND		0.0070	0.0019	mg/L		12/22/17 14:21	12/27/17 11:21	1

Lab Sample ID: LCS 580-264059/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 264199 — **Prep Batch: 264059**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	85 - 115
Antimony	0.100	0.0987		mg/L		99	85 - 115
Barium	0.100	0.0996		mg/L		100	85 - 115
Beryllium	0.100	0.0997		mg/L		100	85 - 115
Cadmium	0.100	0.0972		mg/L		97	85 - 115
Chromium	0.100	0.100		mg/L		100	85 - 115
Copper	0.100	0.100		mg/L		100	85 - 115
Iron	10.0	10.0		mg/L		100	85 - 115
Lead	0.100	0.102		mg/L		102	85 - 115
Manganese	0.100	0.0954		mg/L		95	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Selenium	0.100	0.0955		mg/L		96	85 - 115
Silver	0.100	0.100		mg/L		100	85 - 115
Thallium	0.100	0.0959		mg/L		96	85 - 115
Vanadium	0.100	0.0977		mg/L		98	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-264059/14-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.100	0.0991		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-264059/15-A
Matrix: Water
Analysis Batch: 264199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 264059

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.100	0.0973		mg/L		97	85 - 115	3	20
Antimony	0.100	0.0983		mg/L		98	85 - 115	0	20
Barium	0.100	0.0989		mg/L		99	85 - 115	1	20
Beryllium	0.100	0.0955		mg/L		95	85 - 115	4	20
Cadmium	0.100	0.0971		mg/L		97	85 - 115	0	20
Chromium	0.100	0.0980		mg/L		98	85 - 115	2	20
Copper	0.100	0.0981		mg/L		98	85 - 115	2	20
Iron	10.0	9.66		mg/L		97	85 - 115	4	20
Lead	0.100	0.101		mg/L		101	85 - 115	1	20
Manganese	0.100	0.0937		mg/L		94	85 - 115	2	20
Nickel	0.100	0.0982		mg/L		98	85 - 115	2	20
Selenium	0.100	0.0960		mg/L		96	85 - 115	1	20
Silver	0.100	0.0995		mg/L		99	85 - 115	0	20
Thallium	0.100	0.0947		mg/L		95	85 - 115	1	20
Vanadium	0.100	0.0959		mg/L		96	85 - 115	2	20
Zinc	0.100	0.0967		mg/L		97	85 - 115	2	20

Lab Sample ID: MB 580-263509/2-B
Matrix: Water
Analysis Batch: 263918

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 263724

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00027	mg/L		12/19/17 11:54	12/20/17 12:33	1
Antimony	ND		0.00040	0.00011	mg/L		12/19/17 11:54	12/20/17 12:33	1
Barium	ND		0.0012	0.000054	mg/L		12/19/17 11:54	12/20/17 12:33	1
Beryllium	ND		0.00040	0.000043	mg/L		12/19/17 11:54	12/20/17 12:33	1
Cadmium	ND		0.00040	0.00010	mg/L		12/19/17 11:54	12/20/17 12:33	1
Chromium	ND		0.00040	0.00014	mg/L		12/19/17 11:54	12/20/17 12:33	1
Copper	ND		0.0020	0.00060	mg/L		12/19/17 11:54	12/20/17 12:33	1
Iron	ND		0.20	0.036	mg/L		12/19/17 11:54	12/20/17 12:33	1
Lead	ND		0.00080	0.00020	mg/L		12/19/17 11:54	12/20/17 12:33	1
Manganese	ND		0.0020	0.00046	mg/L		12/19/17 11:54	12/20/17 12:33	1
Nickel	ND		0.0030	0.00011	mg/L		12/19/17 11:54	12/20/17 12:33	1
Selenium	ND		0.0080	0.0021	mg/L		12/19/17 11:54	12/20/17 12:33	1
Silver	ND		0.00040	0.000043	mg/L		12/19/17 11:54	12/20/17 12:33	1
Thallium	ND		0.0010	0.000065	mg/L		12/19/17 11:54	12/20/17 12:33	1
Vanadium	ND		0.0040	0.00046	mg/L		12/19/17 11:54	12/20/17 12:33	1
Zinc	ND		0.0070	0.0019	mg/L		12/19/17 11:54	12/20/17 12:33	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7713-1 MS
Matrix: Water
Analysis Batch: 263918

Client Sample ID: MW-9A:121317
Prep Type: Dissolved
Prep Batch: 263724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0022		0.100	0.103		mg/L		100	70 - 130
Antimony	0.00015	J	0.100	0.105		mg/L		104	70 - 130
Barium	0.060		0.100	0.165		mg/L		105	70 - 130
Beryllium	ND		0.100	0.105		mg/L		105	70 - 130
Cadmium	ND		0.100	0.102		mg/L		102	70 - 130
Chromium	0.00016	J	0.100	0.0999		mg/L		100	70 - 130
Copper	0.0019	J	0.100	0.0982		mg/L		96	70 - 130
Iron	ND		10.0	9.88		mg/L		99	70 - 130
Lead	ND		0.100	0.102		mg/L		102	70 - 130
Manganese	ND		0.100	0.0973		mg/L		97	70 - 130
Nickel	0.0011	J	0.100	0.0976		mg/L		97	70 - 130
Selenium	ND		0.100	0.0973		mg/L		97	70 - 130
Silver	ND		0.100	0.101		mg/L		101	70 - 130
Thallium	ND		0.100	0.0981		mg/L		98	70 - 130
Vanadium	0.0066		0.100	0.107		mg/L		100	70 - 130
Zinc	ND		0.100	0.0968		mg/L		97	70 - 130

Lab Sample ID: 590-7713-1 MSD
Matrix: Water
Analysis Batch: 263918

Client Sample ID: MW-9A:121317
Prep Type: Dissolved
Prep Batch: 263724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0022		0.100	0.0984		mg/L		96	70 - 130	4	20
Antimony	0.00015	J	0.100	0.102		mg/L		102	70 - 130	2	20
Barium	0.060		0.100	0.163		mg/L		103	70 - 130	1	20
Beryllium	ND		0.100	0.0981		mg/L		98	70 - 130	7	20
Cadmium	ND		0.100	0.101		mg/L		101	70 - 130	1	20
Chromium	0.00016	J	0.100	0.0958		mg/L		96	70 - 130	4	20
Copper	0.0019	J	0.100	0.0947		mg/L		93	70 - 130	4	20
Iron	ND		10.0	9.44		mg/L		94	70 - 130	5	20
Lead	ND		0.100	0.0968		mg/L		97	70 - 130	5	20
Manganese	ND		0.100	0.0936		mg/L		94	70 - 130	4	20
Nickel	0.0011	J	0.100	0.0932		mg/L		92	70 - 130	5	20
Selenium	ND		0.100	0.0919		mg/L		92	70 - 130	6	20
Silver	ND		0.100	0.0982		mg/L		98	70 - 130	2	20
Thallium	ND		0.100	0.0935		mg/L		94	70 - 130	5	20
Vanadium	0.0066		0.100	0.104		mg/L		97	70 - 130	3	20
Zinc	ND		0.100	0.0935		mg/L		93	70 - 130	4	20

Lab Sample ID: 590-7713-1 DU
Matrix: Water
Analysis Batch: 263918

Client Sample ID: MW-9A:121317
Prep Type: Dissolved
Prep Batch: 263724

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0022		0.00216		mg/L		1	20
Antimony	0.00015	J	0.000159	J	mg/L		4	20
Barium	0.060		0.0609		mg/L		2	20
Beryllium	ND		ND		mg/L		NC	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-7713-1 DU — **Client Sample ID: MW-9A:121317**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 263918 — **Prep Batch: 263724**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.00016	J	0.000181	J	mg/L		11	20
Copper	0.0019	J	0.00192	J	mg/L		4	20
Iron	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20
Nickel	0.0011	J	0.00106	J	mg/L		0.09	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Vanadium	0.0066		0.00698		mg/L		6	20
Zinc	ND		ND		mg/L		NC	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 490-483863/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 484498 — **Prep Batch: 483863**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		12/16/17 15:23	12/19/17 15:41	1

Lab Sample ID: LCS 490-483863/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 484498 — **Prep Batch: 483863**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.0998		mg/L		100	90 - 110

Client Sample ID: MW-9A:121317

Lab Sample ID: 590-7713-1

Date Collected: 12/13/17 12:34

Matrix: Water

Date Received: 12/13/17 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 19:44	MRS	TAL SPK
Total/NA	Prep	8151A			895 mL	10 mL	263609	12/18/17 09:34	NDB	TAL SEA
Total/NA	Analysis	8151A		1			264093	12/23/17 19:20	ERZ	TAL SEA
Total/NA	Prep	3520C			1022.1 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D		1			264116	12/26/17 19:42	ERZ	TAL SEA
Total/NA	Prep	3520C			1022.1 mL	2 mL	263471	12/14/17 12:44	MRG	TAL SEA
Total/NA	Analysis	8270D SIM		1			263710	12/19/17 22:59	W1T	TAL SEA
Total/NA	Analysis	300.0		1			15046	12/13/17 21:09	CBW	TAL SPK
Dissolved	Filtration	FILTRATION			200 mL	200 mL	263509	12/15/17 08:39	ASJ	TAL SEA
Dissolved	Prep	200.8			50 mL	50 mL	263724	12/19/17 11:54	ASJ	TAL SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	263918	12/20/17 12:36	FCW	TAL SEA
Total/NA	Prep	200.8			50 mL	50 mL	264059	12/22/17 14:21	ASJ	TAL SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	264199	12/27/17 12:09	FCW	TAL SEA
Total/NA	Prep	Distill/CN			50.0 mL	50.0 mL	483863	12/16/17 15:23	RSB	TAL NSH
Total/NA	Analysis	335.4		1	50 mL	50 mL	484498	12/19/17 15:48	SDL	TAL NSH

Client Sample ID: MW-5A:121317

Lab Sample ID: 590-7713-2

Date Collected: 12/13/17 14:19

Matrix: Water

Date Received: 12/13/17 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 20:06	MRS	TAL SPK

Client Sample ID: MW-16:121317

Lab Sample ID: 590-7713-3

Date Collected: 12/13/17 15:36

Matrix: Water

Date Received: 12/13/17 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 20:27	MRS	TAL SPK

Client Sample ID: Trip Blank

Lab Sample ID: 590-7713-4

Date Collected: 12/13/17 00:01

Matrix: Water

Date Received: 12/13/17 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	15078	12/15/17 20:49	MRS	TAL SPK

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Laboratory: TestAmerica Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-071	12-31-17
Oregon	NELAP Primary AB	10	4137	12-07-18
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C789	07-19-18

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C553	02-17-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Iron
8270D	3520C	Water	1,2,4-Trichlorobenzene
8270D	3520C	Water	bis(chloroisopropyl) ether
8270D SIM	3520C	Water	1,4-Dioxane

Method Summary

Client: GeoEngineers Inc
Project/Site: Marshall 0504-104-00

TestAmerica Job ID: 590-7713-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
8151A	Herbicides (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SPK
200.8	Metals (ICP/MS)	EPA	TAL SEA
335.4	Cyanide, Total	MCAWW	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: MJP	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3303-1080.1
Client Contact: Josh Lee	Phone: 425-293-9560	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: GeoEngineers Inc				Job #:

Address: 523 East Second Ave	Due Date Requested: Std.
City: Spokane	TAT Requested (days): Std.
State, Zip: WA, 99202	
Phone:	PO #: Purchase Order not required
Email: jmlee@geoengineers.com	WO #:
Project Name: Marshall 0504-104-00	Project #: 59000577
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time (1234)	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4 - Total Cyanide	200.8_CWA - Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8151A_MS, 8270D	8270D_SIM_AK - 1,4-Dioxane only	200.8_CWA - Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	300_ORGFMS - Nitrate only	8260C - 8260C - Volatiles	Total Number of containers	Special Instructions/Note:
			Preservation Code:				B	D	N	N	N	N	A		
MW-9A:121317	12/13/2017	[illegible]	G	Water	N		X	X	X	X	X	X	X	12	
MW-5A:121317	↓	1419	↓	Water									X	2	
MW-16:121317	↓	1536	↓	Water									X	2	
Trip Blank				Water									X	1	

590-7713 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if sa...
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: [signature]	Date/Time: 12-13-17 1610	Company: GEI	Received by: [signature]	Date/Time: 12/13/17 1610	Company: TA Spok
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.2°C IR004

Ver: 08/04/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-7713 Chain of Custody

Cooler Received/Opened On 12/14/17 @ 9:40

Time Samples Removed From Cooler 8:49 Time Samples Placed In Storage 8:56 (2 Hour Window)

1. Tracking # 4977 (last 4 digits, FedEx) Courier: _FedEx_

IR Gun ID 97310166 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 1.3 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: None

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) J.J

7. Were custody seals on containers: YES NO and intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) J.J

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) JJ

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) JJ

I certify that I attached a label with the unique LIMS number to each container (intial) JJ

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

Loc: 590
7713

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-3267.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-7713-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/26/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-9A:121317 (590-7713-1)	12/13/17	12:34 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Athena Kat	12/13/17 1605	TAN	[illegible]	12/14/17 09:40	TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3

Ver: 09/20/2016

12/28/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

590-7713 Chain of Custody

Cooler Received/Opened On 12/14/17 @ 9:40

Time Samples Removed From Cooler 8:49 Time Samples Placed In Storage 8:56 (2 Hour Window)

1. Tracking # 9977 (last 4 digits, FedEx) Courier: _FedEx_

IR Gun ID 97310166 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 1.3 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: None

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JJ

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) JJ

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) JJ

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) JJ

I certify that I attached a label with the unique LIMS number to each container (intial) JJ

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

Loc: 590
7713

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		COC No: 590-3267.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-7713-1
Address: 2960 Foster Creighton Drive, ,	Due Date Requested: 12/26/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	335.4/Distill_CN Total Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-9A:121317 (590-7713-1)	12/13/17	12:34 Pacific		Water			X	1	

Note. Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 12/13/17 1615	Company TAL	Received by:		Date/Time: 12/14/17 09:40	Company TAL	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3

Ver: 09/20/2016

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3268.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-7713-1
Address: 5755 8th Street East,	Due Date Requested: 12/26/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall 0504-104-00	Project #: 59000577			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/FILTRATION Diss Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se	200.8_CWA/200.8_P_TOT Tot Sb,As,Ba,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,	8270D_SIM_AK/3520C (MOD) 1,4-Dioxane only	8151A_MS/8151A_AP Herbicide (Aqueous)	8270D/3520C Semivolatiles, standard list								Total Number of containers	Special Instructions/Note:
			Preservation Code:																	
MW-9A:121317 (590-7713-1)	12/13/17	12:34 Pacific		Water			X	X	X	X	X								8	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Kratz	12/13/17 1615	TAS PDX	[signature]	12-14-17 0620	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

IR 5-1.4

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7713-1

Login Number: 7713

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7713-1

Login Number: 7713
List Number: 2
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 12/14/17 11:28 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.4c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX H
Terrestrial Ecological Evaluation

APPENDIX H
TERRESTRIAL ECOLOGICAL EVALUATION

GeoEngineers conducted a terrestrial ecological evaluation (TEE) at the Marshall Landfill Site (Site) consistent with Model Toxics Control Act (MTCA) requirements (WAC 173-340-7490 through 7494). The goal of the MTCA TEE is the protection of plants, soil invertebrates, and wildlife. The MTCA TEE process includes three tiers: Tier 1 (WAC 173-340-7491; Exclusions from a TEE), Tier 2 (WAC 173-340-7492; Simplified TEE), and Tier 3 (WAC 173-340-7493; Site-specific TEE). Based on conditions at the Site, a Tier 3 evaluation (Site-specific TEE) is required.

The Site consists of two waste disposal areas: an approximately 25-acre "Main Landfill," which operated from 1970 through 1990, and an approximately 5-acre area known as the "Five-Acre Landfill," which operated from 1980 through 1984. The thicknesses of landfilled waste have been estimated at 100 feet in the Main Landfill and 45 feet in the Five-Acre Landfill. After disposal operations ceased in 1990, the Main Landfill was reportedly covered with a layer of fine to medium sand. A passive landfill gas venting system and a compacted-clay cap was installed in 1990 at the Five-Acre Landfill; however, the as-built condition of the clay cap is not well documented. Observations of the clay cap over the Five-Acre Landfill during recent Site visits indicate that the cap is not intact over the entire area of the landfill and some waste is exposed.

Tier 1 - Exclusions Evaluation

MTCA provides four criteria that, if any are met, result in no further evaluation of terrestrial ecological risk. The four criteria are as follows:

- **Criterion 1: All affected soil is, or will be, located below the point of compliance (POC).** Not met. Site-related contaminants are detected within the standard POC (ground surface to a depth of 15 feet below ground surface [bgs]). Only one soil sample (LFB-9) collected in 2015 was within the standard POC; however, landfill waste was identified within the standard POC in numerous landfill borings completed in 2015. Also, for the purpose of this TEE, we assumed the soil analytical results from the 2015 sampling, which are from soil samples generally collected between 30 and 100 feet below ground surface, are representative of soil within the standard POC. This assumption is discussed further in the hazard characterization section.
- **Criterion 2: All affected soil is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent ecological exposure to the contaminated soil.** Not met**.** Site use plans do not include barriers over affected soil at the Site that would prevent potential ecological receptor exposure. However, as mentioned above and discussed in Section 3.2 of the Remedial Investigation (RI) report, the two landfills are generally covered with sand or clay caps a minimum of 1 to 4 feet thick.
- **Criterion 3: Undeveloped land on or within 500 feet of the site is less than a quarter of an acre if any highly-toxic constituents are detected in soil, or less than 1½ acres if highly toxic constituents are not detected in soil.** Not met. More than 1½ acres of undeveloped land are on or within 500 feet of the Site.

- **Criterion 4: Concentrations of constituents in the soil do not exceed natural background levels.** Not met. Contaminants are detected in soil at concentrations greater than natural background levels.

Because none of the four exclusion criteria are met, the Site does not qualify for a TEE exclusion.

Simplified TEE Qualification Evaluation

Once it has been determined that a site does not qualify for a TEE exclusion, the next step is to determine if the site qualifies for a simplified TEE, or if a site-specific TEE is required. MTCA provides four criteria for evaluating whether a site qualifies for a simplified TEE. If any of the four criteria are met, a site-specific TEE is required. The four criteria are as follows:

- **Criterion 1: The site is located on, or directly adjacent to, an area where management or land use plans will maintain or restore native or semi-native vegetation.** Met. According to the Generalized Zoning Map produced by Spokane County Building and Planning, the Marshall Landfill Site is in an area zoned as Rural Conservation (RCV). According to Spokane County Zoning Code (adopted 2004), the RCV zone applies to "environmentally sensitive areas, including critical areas and wildlife corridors." The RCV "encourages low-impact uses and utilizes rural clustering to protect sensitive areas and preserve open space."
- **Criterion 2: The site is used by: (a) a threatened or endangered species (T&E species); (b) a Washington State wildlife priority species or species of concern; or (c) a Washington State endangered, threatened, or sensitive plant species.** Not met. According to the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) website (www.wdfw.wa.gov/conservation/phs/), there are no endangered, threatened, sensitive or candidate wildlife species identified in the Site vicinity. The PHS website does indicate that the Site is in an area that may be used by the Rocky Mountain Elk (*Cervus ellaphus nelson*). However, multiple factors indicate that if the Rocky Mountain Elk were to use the Site, the amount of time on site and subsequent exposure to landfill materials, would be minimal. These factors include the size of the Site relative to the elk's home range (30 acres versus 2,500 to 10,000 acres), the disturbed nature of the Site, the proximity of people or human activities (residents, gravel pit, vehicle traffic, etc.) and the presence of superior habitats in the area, including the Turnbull National Wildlife Refuge and multiple conservation areas. In addition, the Washington Department of Natural Resources' Natural Heritage Program (www.dnr.wa.gov/natural-heritage-program) does not identify any endangered, threatened or sensitive plant species in Township 24N, Range 42E, Section 21, which includes the Marshall Landfill Site.
- **Criterion 3: The site is located on a property that contains at least ten acres of native vegetation within 500 feet of the site.** Met. There are more than 10 acres of native vegetation, primarily lodgepole pine (*Pinus contorta*), east of both landfills.
- **Criterion 4: Ecology determines that the site may present a hazard to significant wildlife populations.** Likely not met. Based on site conditions and chemical analytical results for soil, it is unlikely that Ecology would make such a determination.

Because Criteria 1 and 3 are met, a site-specific TEE is required to assess ecological hazards.

Site-specific Terrestrial Ecological Evaluation

The site-specific TEE focuses on the identification of contaminants of potential ecological concern (COPECs), potentially complete exposure pathways, terrestrial receptors of concern and hazard characterization.

Contaminants of Potential Ecological Concern

COPECs in soil are identified in Tables H-1 and H-2. In Table H-1, the maximum detected concentrations of individual analytes are compared to soil screening levels protective of plants, soil biota and wildlife. Maximum detected concentrations were compiled from soil collected at all depths sampled at the site, because only one sample was collected within the POC. Analytes are considered preliminary COPECs if the maximum detected concentration in soil is greater than at least one screening level. Preliminary COPECs are evaluated further in Table H-2. Final COPECs are identified using exposure point concentrations (EPCs), which are discussed below.

The primary source for screening levels are the site-specific TEE indicator soil concentrations (ISCs) from MTCA Table 749-3. Screening levels for analytes without ISCs in MTCA Table 749-3 were identified as follows:

- Soil screening values from EPA Region 4's "Ecological Risk Assessment Supplemental Guidance, Interim Draft" dated December 2015 (interim draft ERA guidance).
- Surrogate compounds were used for compounds with similar structure and/or toxicity. For example, endrin was used as a surrogate for endrin aldehyde.

Six volatile organic compounds (VOCs) and two herbicides do not have soil screening levels. The VOCs are benzene- or toluene-based compounds with maximum detected concentrations ranging from 0.16 micrograms per kilogram (µg/kg) to 14 µg/kg. As a means of comparison, the screening levels for the other VOCs detected at the Site range from 120 µg/kg to 200,000 µg/kg. Based on these available screening levels, which include screening levels for benzene and toluene, it is unlikely that the six VOCs without screening levels are a potential hazard to ecological receptors at the Site. Dichlorprop (2,4-DP-p) and 2,4-DB are two herbicides detected in soil at the site. No screening levels are available for these two compounds; however, data compiled as part of the pesticide registration process suggest they have limited potential for toxicity to non-target species (EPA 2005 and 2007). Both chemicals are non-persistent, having half-lives on the order of weeks in aerobic surface soil. Neither chemical sorbs strongly to soil and both undergo rapid microbial and photo-degradation. In most cases, the recommended rate and interval of application would not result in an environmental concentration posing a risk to these receptors.

The EPA Region 4 soil screening values in Table H-1 are based on no-observed-adverse-effects-levels (NOAEL). These values were used to identify preliminary COPECs because they are conservative and are readily available in EPA Region 4's 2015 interim draft ERA guidance. EPA Region 4 obtained the NOAEL screening values from the Los Alamos National Laboratory's (LANL) ECORISK Database Release 3.2.

MTCA's site-specific TEE guidance (WAC 173-340-7493[4]) calls for the use of soil levels based on lowest-observed-adverse-effect-levels (LOAEL). Therefore, LOAEL-based soil screening values obtained from LANL's ECORISK Database Release 3.3 for bis(2-ethylhexyl)phthalate, dibutyl phthalate, endrin (to evaluate endrin aldehyde) and cyanide were used in Table H-2 to identify and evaluate site COPECs.

Final COPECs were identified in Table H-2 by comparing the EPC to the site-specific screening level for each preliminary COPEC. The EPC is the lowest of the maximum detected concentration and the 95 percent upper confidence limit of the mean (95 percent UCL). The 95 percent UCLs were calculated using US Environmental Protection Agency's (EPA) ProUCL version 5.0 software. Analytical data for bis(2-ethylhexyl)phthalate, dibutyl phthalate and endrin aldehyde were reported down to method detection limits, which were used in the 95 percent UCL calculations. Analytes are considered Final COPECs and are discussed below if the EPC is greater than the lowest applicable screening level. The following analytes are considered COPECs:

- Semi-volatile organic compounds: dibutyl phthalate
- Nitriles: cyanide
- Total petroleum hydrocarbons: lube oil-range hydrocarbons
- Metals: selenium and vanadium

Exposure Pathways and Receptors of Concern

The Site is situated northwest of Cheney-Spokane Road about one mile southwest of the town of Marshall, Washington and seven miles southwest of the city of Spokane, Washington. The Site is bounded on the east by South Cheney-Spokane Road, on the south by a former landfill property owned by Spokane County, and on the west and north by vacant land. The site consists of mixture of disturbed grassland habitat with lodgepole pine (*Pinus contorta*) forest. Surrounding land use includes industrial and transportation uses.

Terrestrial ecological receptors include plants, soil biota and wildlife. The MTCA site-specific TEE process focuses on mammalian and avian wildlife (specifically, shrews, voles and robins) based on the greater availability of toxicity information for these receptors. The shrew and robin are insectivorous species and vole is herbivorous; all three are exposed to soil-borne constituents. The shrew, robin, and vole are expected to occur on the Site due to the type of available habitat and their tolerance for disturbance and are identified as receptors of concern for this site-specific TEE. However, adjacent human activities likely restrict the natural wildlife density and diversity of larger animal species at this Site.

COPECs may be absorbed by plants, soil biota and wildlife. Plants are potentially exposed through direct contact with the soil. Soil biota are potentially exposed through direct contact with soil, ingestion of soil, and ingestion of plant and other soil biota. Wildlife are potentially exposed through ingestion of plants and soil biota, and incidental ingestion of soil. Exposure media for the TEE; therefore, include soil, plants and soil biota.

The shrew, vole and robin are target receptors for the site. Other species may occur at the site, but would likely be less exposed due to their greater home ranges. Specifically, resident predatory bird species such as red-tailed hawk (*Buteo jamaicensis*) and bald eagle (*Haliaeetus leucocephalus*) may occur at the site. There are also numerous other resident and migratory birds common within the Spokane area; however, the robin conservatively assesses their potential exposure. Smaller mammals likely present at the site, such as squirrels and chipmunks, are effectively assessed by the vole surrogate. Larger mammals that could use the site are not directly represented by use of a surrogate; however, mammals such as coyote (*Canis latrans*), porcupine (*Erethizon dorsatum*), white-tailed deer (*Odocoileus virginianus*), and Rocky Mountain elk (*Cervus elaphus nelson*) require large tracks of land for foraging, wintering, breeding and nesting such that their use of the site would be infrequent or unlikely. The home ranges of these species

would be an order of magnitude greater than that of the surrogates and therefore, the selected receptors represent a conservative assessment of potential risks at the site. Thus, no further evaluation is needed for assessment of these additional receptors.

Hazard Characterization

Potential ecological hazards are characterized by comparing the soil EPC to the site-specific screening levels for each analyte. A hazard quotient (HQ) is calculated by dividing the EPC by the lowest screening level for each analyte. An HQ greater than one indicates a potential ecological hazard. This evaluation is presented in Table H-2.

The HQs for the five COPECs identified for the Site range from 1.1 to 24. These HQs are based on potential exposures of birds to dibutyl phthalate and cyanide; potential soil biota exposures to lube oil-range hydrocarbons; potential exposures of wildlife (shrew) to selenium and potential exposures of plants to vanadium. The HQs for dibutylphthalate (HQ = 1.3), cyanide (HQ = 3.4), lube oil-range petroleum hydrocarbons (HQ = 2.3) and selenium (HQ = 2.9) are low and do not suggest significant ecological hazards at the site from these five COPECs. The HQ for vanadium (HQ = 24) is higher; however, as discussed below the vanadium concentrations detected are likely representative of background conditions.

The six COPECs are discussed below:

- **Dibutylphthalate (HQ = 1.3)**: Dibutyl phthalate was only detected in 2 of 19 soil samples at concentrations of 77 µg/kg and 140 µg/kg; the method detection limits for the other 17 sample ranged from 50 to 69 µg/kg. Only the maximum detected concentration is greater than the lowest screening level of 110 µg/kg. Dibutyl phthalate was identified as a COPEC because the EPC for was set at the maximum detected concentration due to the limited number of detections. The mean dibutylphthalate soil concentration, calculated using ProUCL and Kaplan_Meier, is 56.2 µg/kg. Based on the entire dibutyl phthalate soil data set, dibutyl phthalate does not appear to pose a threat to ecological receptors at the site.
- **Cyanide (HQ = 3.4)**: Cyanide was only detected in 1 of 19 soil samples at a concentration of 3.4 milligrams per kilogram (mg/kg), which is greater than the lowest screening level of 1.0 mg/kg. Cyanide was not detected in 18 of 19 soil samples with reporting limits ranging from 1.9 to 2.2 mg/kg. The cyanide EPC of 3.4 mg/kg, set at the maximum detected concentration due to the single cyanide detection, overestimates potential exposures and potential hazards to ecological receptors. Cyanide is unlikely to pose a risk to ecological receptors at the site.
- **Lube Oil-Range Petroleum Hydrocarbons (HQ = 2.3)**: Lube oil-range petroleum hydrocarbons were only detected in 1 of 19 soil samples. The EPC for lube oil-range petroleum hydrocarbons is, therefore, the maximum detected concentration of 450 mg/kg. The lube oil-range petroleum hydrocarbons reporting limits for the other 18 samples ranges from 93 mg/kg to 100 mg/kg, which are less than the soil screening level of 200 mg/kg. The EPC of 450 mg/kg overestimates the lube oil-range petroleum hydrocarbons concentrations at the Site and the potential hazards to ecological receptors at the site. Petroleum hydrocarbons are unlikely to pose a risk to ecological receptors at the site.
- **Selenium (HQ = 2.9)**: Selenium was detected in 19 of 19 soil samples collected at concentrations ranging from 0.51 mg/kg to 2 mg/kg. The selenium EPC is 1.2 mg/kg, which is greater than the lowest selenium screening level of 0.41 mg/kg. Ecology developed a statewide selenium background value based on a limited data set, but has not developed regional background values selenium

(Ecology 1994; Figure 47). The statewide background value is 0.78 mg/kg; detected selenium concentrations from the limited background data set range from 0.4 mg/kg to 0.84 mg/kg. The selenium background data set was limited because the detection limits for one of the methods were elevated (ranging from 5 mg/kg to 15 mg/kg). The selenium concentrations detected at the site are slightly higher than the background concentrations, but may still be representative of background conditions. As a comparison, selenium background concentrations were developed for 10 regions in Oregon (DEQ 2013). These regional selenium background concentrations, which are 95 percent upper prediction limits, range from 0.41 mg/kg to 1.5 mg/kg.

- **Vanadium (HQ = 24)**: Vanadium was detected in 19 of 19 soil samples collected at concentrations ranging from 25 to mg/kg to 85 mg/kg. The vanadium EPC is 47 mg/kg, which is greater than the lowest vanadium screening level of 2 mg/kg. Ecology has not developed statewide and regional background values for vanadium, except for the Spokane Basin region (Ecology 1994; Figure 47). The Spokane Basin vanadium background level is 45 mg/kg; detected vanadium concentrations from the regional background data set range from 8.23 mg/kg to 80.5 mg/kg. The vanadium concentrations detected at the Site are greater than the lowest screening level, but are consistent with the range of Spokane Basin background vanadium concentrations.

The results of this site-specific TEE suggest that the soil contaminants detected at the Site are not expected to pose a significant hazard to ecological receptors. In addition to the reasons discussed above, the presence of the sand or clay caps at the two landfills will significantly reduce any potential exposure by terrestrial ecological receptors to site-related contamination

REFERENCES

EPA. 2005. Reregistration Eligibility Decision (RED) for 2,4-DB. Prevention, Pesticides and Toxic Substances. EPA 738-R-05-001. January 2005

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Table H-1

Preliminary Identification of Contaminants of Potential Ecological Concern

Marshall Landfill Site

Spokane County, Washington

Analyte	Samples	Detects	NDs	FOD	Units	Maximum Detected Concentration	Background[1]	Model Toxics Control Act Site-Specific Indicator Soil Concentrations[2]			EPA Region 4 Soil Screening Values[3]				Lowest Screening Level[4]	Screening Results[5]
								Plants	Soil Biota	Wildlife	Plants	Invertebrates	Birds	Mammals		
Volatile Organic Compounds																
1,2,4-Trimethylbenzene	19	1	18	5.30%	ug/Kg	0.65	--	--	--	--	--	n/a	--	--	--	No SL
1,3,5-Trimethylbenzene	19	1	18	5.30%	ug/Kg	0.16	--	--	--	--	--	n/a	--	--	--	No SL
Benzene	19	1	18	5.30%	ug/Kg	0.4	--	--	--	--	--	n/a	--	24,000	24,000	--
cis-1,2-Dichloroethene	19	1	18	5.30%	ug/Kg	0.2	--	--	--	--	--	n/a	--	23,000	23,000	--
Ethylbenzene	19	1	18	5.30%	ug/Kg	0.3	--	--	--	--	--	n/a	--	--	--	No SL
Isopropylbenzene (Cumene)	19	1	18	5.30%	ug/Kg	0.17	--	--	--	--	--	n/a	--	--	--	No SL
Methylene Chloride	19	18	1	94.70%	ug/Kg	120	--	--	--	--	1,600,000	n/a	--	2,600	2,600	--
Naphthalene	19	1	18	5.30%	ug/Kg	2.3	--	--	--	--	1,000	--	5,700	9,700	1,000	--
n-Butylbenzene	19	2	17	10.50%	ug/Kg	0.67	--	--	--	--	--	--	--	--	--	No SL
p-Isopropyltoluene	19	3	16	15.80%	ug/Kg	14	--	--	--	--	--	n/a	--	--	--	No SL
Tetrachloroethene	19	2	17	10.50%	ug/Kg	1.7	--	--	--	--	10,000	--	--	180	180	--
Toluene	19	4	15	21.10%	ug/Kg	0.57	--	200,000	--	--	NE	n/a	--	NE	200,000	--
Trichlorofluoromethane (CFC-11)	19	1	18	5.30%	ug/Kg	0.42	--	--	--	--	--	--	--	52,000	52,000	--
Vinyl Chloride	19	2	17	10.50%	ug/Kg	3.3	--	--	--	--	--	--	--	120	120	--
Xylene, m-,p-	19	2	17	10.50%	ug/Kg	0.27	--	--	--	--	100,000	--	--	1,400	1,400	--
Xylene, o-	19	1	18	5.30%	ug/Kg	0.83	--	--	--	--	100,000	--	--	1,400	1,400	--
Semivolatile Organic Compounds																
3 & 4 Methylphenol	19	1	18	5.30%	ug/Kg	16	--	--	--	--	690	n/a	--	--	690	--
Acenaphthylene	19	1	18	5.30%	ug/Kg	5.5	--	--	--	--	--	--	--	120,000	120,000	--
Anthracene	19	1	18	5.30%	ug/Kg	13	--	--	--	--	6,800	--	--	210,000	6,800	--
Benzo(a)anthracene	19	7	12	36.80%	ug/Kg	23	--	--	--	--	18,000	--	1,000	3,000	1,000	--
Benzo(a)pyrene	19	6	13	31.60%	ug/Kg	46	--	--	--	12,000	--	--	--	n/a	12,000	--
Benzo(b)fluoranthene	19	6	13	31.60%	ug/Kg	56	--	--	--	--	18,000	--	--	38,000	18,000	--
Benzo(g,h,i)perylene	19	4	15	21.10%	ug/Kg	38	--	--	--	--	--	--	--	24,000	24,000	--
Benzo(k)fluoranthene	19	4	15	21.10%	ug/Kg	15	--	--	--	--	--	--	--	62,000	62,000	--
Benzyl Alcohol	19	3	16	15.80%	ug/Kg	21	--	--	--	--	--	n/a	--	120,000	120,000	--
Bis(2-Ethylhexyl) Phthalate	19	10	9	52.60%	ug/Kg	310	--	--	--	--	--	n/a	20	590	20	Preliminary COPEC
Butyl benzyl Phthalate	19	7	12	36.80%	ug/Kg	88	--	--	--	--	--	n/a	--	90,000	90,000	--
Carbazole	19	2	17	10.50%	ug/Kg	7.5	--	--	--	--	--	n/a	--	80,000	80,000	--
Chrysene	19	6	13	31.60%	ug/Kg	24	--	--	--	--	--	--	--	2,400	2,400	--
Dibenzo(a,h)anthracene	19	1	18	5.30%	ug/Kg	28	--	--	--	--	--	--	--	12,000	12,000	--
Dibutyl Phthalate	19	2	17	10.50%	ug/Kg	140	--	--	--	--	160,000	n/a	11	180,000	11	Preliminary COPEC
Diethyl Phthalate	19	11	8	57.90%	ug/Kg	79	--	--	--	--	100,000	n/a	--	3,600,000	100,000	--
Dimethyl Phthalate	19	1	18	5.30%	ug/Kg	16	--	--	--	--	--	10,000	--	38,000	10,000	--
Di-N-Octyl Phthalate	19	2	17	10.50%	ug/Kg	140	--	--	--	--	--	n/a	--	910	910	--
Fluoranthene	19	8	11	42.10%	ug/Kg	65	--	--	--	--	--	10,000	--	22,000	10,000	--
Fluorene	19	1	18	5.30%	ug/Kg	8.7	--	--	30,000	--	--	n/a	--	n/a	30,000	--
Indeno(1,2,3-c,d)pyrene	19	3	16	15.80%	ug/Kg	38	--	--	--	--	--	--	--	62,000	62,000	--
Phenanthrene	19	5	14	26.30%	ug/Kg	43	--	--	--	--	--	5,500	--	10,000	5,500	--
Pyrene	19	7	12	36.80%	ug/Kg	51	--	--	--	--	--	10,000	34,000	22,000	10,000	--

Analyte	Samples	Detects	NDs	FOD	Units	Maximum Detected Concentration	Background[1]	Model Toxics Control Act Site-Specific Indicator Soil Concentrations[2]			EPA Region 4 Soil Screening Values[3]				Lowest Screening Level[4]	Screening Results[5]
								Plants	Soil Biota	Wildlife	Plants	Invertebrates	Birds	Mammals		
Polychlorinated Biphenyls																
PCB-Aroclor 1248	18	1	17	5.60%	ug/Kg	31	--	40,000	--	650	--	--	NE	NE	650	--
PCB-Aroclor 1254	18	2	16	11.10%	ug/Kg	190	--	40,000	--	650	--	--	NE	NE	650	--
Pesticides/Herbicides																
4,4'-DDD	17	1	16	5.90%	ug/Kg	0.21	--	--	--	--	--	n/a	6.3	4,100	6.3	--
Endrin Aldehyde[6]	17	2	15	11.80%	ug/Kg	14	--	--	--	--	3.4	n/a	1.4	23	1.4	Preliminary COPEC
2,4-DB	17	2	15	11.80%	ug/Kg	12	--	--	--	--	--	--	--	--	--	No SL
Dichlorprop	17	1	16	5.90%	ug/Kg	6.9	--	--	--	--	--	--	--	--	--	No SL
Nitriles																
Cyanide	19	1	18	5.30%	mg/kg	3	--	--	--	--	--	n/a	0.1	--	0.1	Preliminary COPEC
Total Petroleum Hydrocarbons																
Lube Oil-range Hydrocarbons	19	1	18	5.30%	mg/kg	450	--	--	200	6,000	--	--	--	--	200	Preliminary COPEC
Metals																
Antimony	19	19	0	100%	mg/kg	0.87	--	5	--	--	NE	NE	--	NE	5	--
Arsenic	19	19	0	100%	mg/kg	12	9	10	60	7	NE	NE	NE	NE	9	Preliminary COPEC
Barium	19	19	0	100%	mg/kg	170	--	500	--	102	NE	NE	NE	NE	102	Preliminary COPEC
Beryllium	19	19	0	100%	mg/kg	0.87	0.8	10	--	--	NE	NE	--	NE	10	--
Cadmium	19	19	0	100%	mg/kg	0.42	1	4	20	14	NE	NE	NE	NE	4	--
Chromium	19	19	0	100%	mg/kg	37	18	42	42	67	--	NE	NE	NE	42	--
Copper	19	19	0	100%	mg/kg	86	22	100	50	217	NE	NE	NE	NE	50	Preliminary COPEC
Iron	19	19	0	100%	mg/kg	48,000	25,000	--	--	--	--	--	--	--	25,000	Preliminary COPEC
Lead	19	19	0	100%	mg/kg	24	15	50	500	118	NE	NE	NE	NE	50	--
Manganese	19	19	0	100%	mg/kg	720	700	1,100	--	1,500	NE	NE	NE	NE	1,100	--
Mercury	19	18	1	94.70%	mg/kg	0.042	0.02	0.3	0.1	5.5	NE	NE	NE	NE	0.1	--
Nickel	19	19	0	100%	mg/kg	15	16	30	200	980	NE	NE	NE	NE	30	--
Selenium	19	19	0	100%	mg/kg	2	--	1	70	0.3	NE	NE	NE	NE	0.3	Preliminary COPEC
Silver	19	17	2	89.50%	mg/kg	2.2	--	2	--	--	NE	--	NE	NE	2	Preliminary COPEC
Thallium	19	5	14	26.30%	mg/kg	0.24	--	1	--	--	NE	--	NE	NE	1	--
Vanadium	19	19	0	100%	mg/kg	85	--	2	--	--	NE	--	NE	NE	2	Preliminary COPEC
Zinc	19	19	0	100%	mg/kg	110	66	86	200	360	NE	--	NE	NE	86	Preliminary COPEC

Notes:

[1] Washington State background soil metals concentrations (Ecology 1994) for the Spokane Basin.

[2] WAC 173-340-900, Table 749-3.

[3] EPA Region 4 Ecological Risk Assessment, Supplemental Guidance, Interim Draft (EPA 2015), Table 3. Screening levels are based on no-observed-adverse-effect-levels (NOAELs).

[4] Values presented are the lowest available screening levels, adjusted for background.

[5] Analytes are identified as COPCs if the maximum detected concentrations is greater than the lowest screening level. Analytes without a screening level (No SL) are discussed in the text.

[6] Endrin used as surrogate for endrin aldehyde.

COPEC = Contaminant of potential ecological concern

FOD = Frequency of detection

n/a = not appropriate, soil screening values were calculated using equilibrium partitioning theory and water quality benchmarks (EPA 2015).

NE = not evaluated, Oregon and EPA Region 4 values were not evaluated for analytes with MTCA site-specific indicator soil concentrations.

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

Shading identifies lowest applicable screening level, which were exceeded by the maximum detected concentrations.

Table H-2

Identification of Contaminants of Potential Ecological Concern

Marshall Landfill Site

Spokane County, Washington

Analyte	Units	Maximum Detected Concentration	95% UCL[1]	Exposure Point Concentration[2]	Lowest Screening Level[3]	Screening Results[4]	Hazard Quotient[5]	Notes
Semivolatile Organic Compounds								
Bis(2-Ethylhexyl) Phthalate	ug/Kg	310	142	142	200	--	--	
Dibutyl Phthalate	ug/Kg	140	n/a	140	110	COPEC	1.3	Evaluated further in TEE
Pesticides/Herbicides								
Endrin Aldehyde	ug/Kg	14	n/a	14	14	--	--	
Nitriles								
Cyanide	mg/kg	3.4	n/a	3.4	1.0	COPEC	3.4	Evaluated further in TEE
Total Petroleum Hydrocarbons								
Lube Oil-range Hydrocarbons	mg/kg	450	n/a	450	200	COPEC	2.3	Evaluated further in TEE
Metals								
Arsenic	mg/kg	12	8.4	8.4	9	--	--	
Barium	mg/kg	170	100	100	102	--	--	
Copper	mg/kg	86	27	27	50	--	--	
Iron	mg/kg	48,000	30,100	30100	42,100	--	--	
Selenium	mg/kg	2.0	1.2	1.2	0.41	COPEC	2.9	Evaluated further in TEE
Silver	mg/kg	2.2	0.87	0.87	2	--	--	
Vanadium	mg/kg	85	47	47	2	COPEC	24	Evaluated further in TEE
Zinc	mg/kg	110	66	66	86	--	--	

Notes:

[1] 95 percent upper confidence limit on the arithmetic mean (95% UCL) calculated using EPA's ProUCL software Version 5.0.

[2] Exposure point concentrations are the lowest of the maximum detected concentration and the 95% UCL.

[3] Values presented are the lowest available screening levels, adjusted for background. Screening levels for bis(2-ethylhexyl)phthalate, dibutyl phthalate, endrin aldehyde and cyanide in this table are based on lowest-observed-adverse-effect-levels (LOAEL); see text for additional discussion.

[4] Analytes are identified as COPCs if the lowest of the maximum detected concentration and 95% UCL (if available) is greater than the lowest screening level.

[5] Hazard quotient is the lowest of the maximum detected concentration and 95% UCL (if available) divided by the lowest screening level.

COPEC = Contaminant of potential ecological concern

TEE = Terrestrial ecological evaluation; mg/kg = milligrams per kilogram; ug/kg = microgram per kilogram

Shading identifies screening levels that were exceeded by the lowest of the maximum detected concentrations and 95% UCL.

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Marshall Landfill	
Facility/Site Address: Spokane County, Washington	
Facility/Site No:	VCP Project No.: Not applicable

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Neil Morton		Title: Senior Toxicologist	
Organization: GeoEngineers, Inc.			
Mailing address: 600 Stewart Street, Suite 1700			
City: Seattle	State: WA	Zip code: 98101	
Phone: 206-239-3238	Fax:	E-mail: nmorton@geoengineers.com	

ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2**.*

☒ No or Unknown *If you answered **"NO" or "UKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☒ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

■ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

☒ No issues were identified during the problem formulation step.

☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*

☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

☐ Literature surveys.

☐ Soil bioassays.

☐ Wildlife exposure model.

☐ Biomarkers.

☐ Site-specific field studies.

☐ Weight of evidence.

☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

☐ Confirmed there was no problem.

☐ Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

■ Yes If so, please identify the Ecology staff who approved those steps:
Huckleberry Palmer

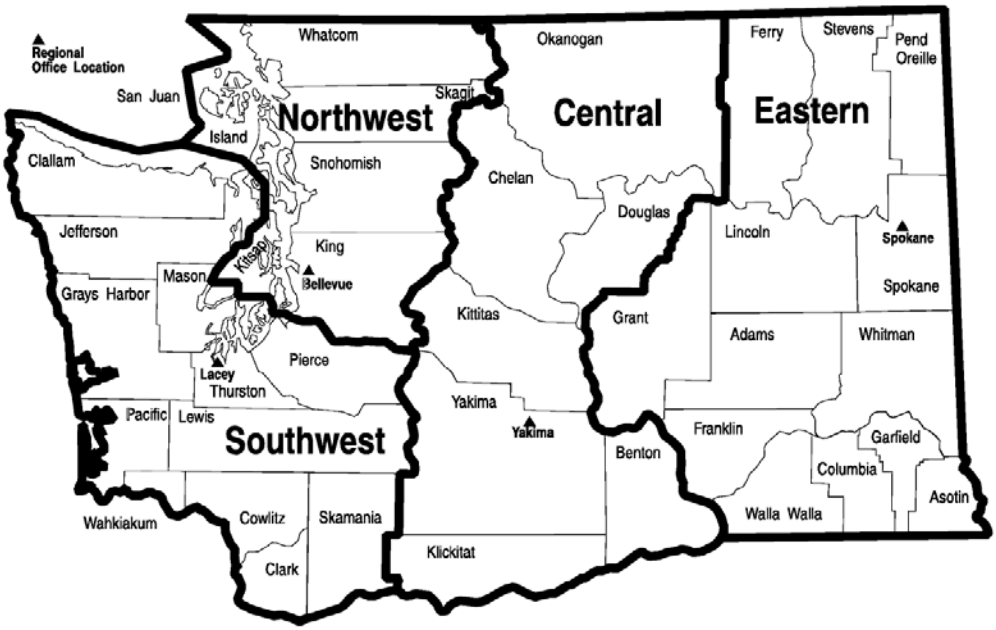
☐ No

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Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295



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APPENDIX I
Survey Monument Locations

Table I-1

Survey Monument Locations

Marshall Landfill Site

Spokane County, Washington

Survey Monument Number	Northing [1] (feet)	Easting [1] (feet)	Top of Monument Elevation [2] (feet NAVD 88)
SM-1	219011.46	2461030.87	2310.80
SM-2	218955.41	2461269.70	2237.53
SM-3	219399.87	2461265.92	2295.82
SM-4	219309.96	2461490.34	2227.03
SM-5	219550.16	2461580.76	2242.20
SM-6	219473.96	2461674.34	2189.68

Notes:

1. Northings and eastings are referenced to US State Plane 1983, NAD 1983 (Conus), Washington North 4601, GEOID12A (Conus).
2. Top of monument elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

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Legend

- LFB-3 — Existing Landfill Gas Monitoring Well Number and Approximate Location
- SM-1 — Survey Monument Number and Approximate Location
- Approximate Limits of Adjacent Landfill or Mining Land Use
- Approximate Landfill Boundaries

N
W E
S

300 0 300

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: 2016 Aerial from ESRI Data Online.
Water features from PNW Hydrography.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Installed Survey Monuments

Marshall Landfill
Spokane County, Washington

GeoEngineers

Figure I-1

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